

2021-2022 Academic Catalog



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(575) 234-9200

CARLSBAD

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Carlsbad Academic Catalog

New Mexico State University Carlsbad

Catalog 2021-2022

Academic programs at New Mexico State University Carlsbad are available to all students without regard to age, ancestry, color, disability, gender, national origin, race, religion, sexual orientation or veteran status. Any item in this catalog is subject to modification at any time by proper administrative procedure.

Catalog effective summer 2021 through spring semester 2029.

Welcome

Welcome to the New Mexico State University at Carlsbad campus. We are extremely pleased that you are devoting your time and energy to researching the college's diversified events and programs. All of the NMSU Carlsbad staff is very proud of our college and we would relish the opportunity to have you join the college as a student or as an employee. As you peruse the information in the catalog, please be sure to pay particular attention to the variety and quality of associate degree and certificates offered at the college. NMSU Carlsbad has experienced continuing growth over the past few semesters and the college plans to continue that growth by increasing course offerings and expanding dual credit, academic, and vocational programs.

NMSU Carlsbad was among the first community colleges in New Mexico, established in 1950 as the Carlsbad Instructional Center. In 1953 NMSU Carlsbad became a part of the NMSU system, which was at the time known as the College of Agriculture and Mechanical Arts. Since that date, NMSU Carlsbad has increased in size, currently serving more than 2,000 students throughout Eddy County and employing approximately 105 full-time and 60 part-time employees.

NMSU Carlsbad is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools and was one of the first institutions to be admitted to the HLC's Academic Quality Improvement Program (AQIP) which is a unique accreditation approach focused on continuous quality improvement. Due to our commitment to quality and continuing improvement, NMSU Carlsbad has been recognized on three separate occasions by Quality New Mexico and the college has been recognized for the past three years as a Top College and University in New Mexico.

NMSU Carlsbad's vision is to become "a diverse and community-centered institution dedicated to excellence and student success through transformative discovery." The college will strive to accomplish this vision by focusing on our mission which is "to provide students the resources necessary for them to fulfill their educational potential so that they may help meet the needs of their community as well-trained, well-educated, and productive citizens."

In order to accomplish this mission, quality must be stressed in all college operations and services. As a comprehensive community college, we strive to meet the needs of all of our service area constituents by providing a broad spectrum of resources including academic and vocational training, dual credit programs of study, non-credit continuing education training, workforce development and contract training, small business development assistance, and online learning programs. The college is committed to providing these opportunities which are vital to the success of Eddy County and southeastern New Mexico.

Thank you for visiting and please feel free to contact our HR Department at (575) 234 – 9208 or one of our Counseling and Student Development staff at (575) 234 – 9337 if you have any questions or need additional information.

Andrew I. Nwanne, Ph.D.

VPAA & Associate Campus Director

Administration

VPAA & Associate Campus Director

Andrew I. Nwanne, Ph.D.

Board of Advisors - NMSU Carlsbad

David Shoup (District II), President

Ron Singleton (District III), Vice President

Simon Rubio District I, Secretary

Robbie Chacon (District V), Board Member

Open (District IV), Board Member

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Christopher T. Saucedo, Member

Neal Bitsie, (Student Regent)

NMSU Carlsbad Departments

Academics

Chief Academic Officer/Provost

(575) 234-9215

Admissions, Registration and Student Services

(575) 234-9222

Adult Education

(575) 234-9250

NMSU Carlsbad Bookstore

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Business Office

(575) 234-9200

Counseling/Student Development Center

(575) 234-9337

Information Systems

(575) 234-9448

Institutional Research Coordinator

(575) 234-9237

Library Services

(575) 234-9330

Learning Technology Center (LTC)

Canvas Support

(575) 234-9261

Manufacturing Sector Development Program/Apprenticeships/Craft Skills

Training Programs Program Coordinator

(575) 234-9271

Public Relations

(575) 234-9414

Inquiries about New Mexico State University Carlsbad and requests for additional information are welcome.

Write or telephone

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Website: carlsbad.nmsu.edu (<https://carlsbad.nmsu.edu>)

History of NMSU Carlsbad

New Mexico State University Carlsbad “NMSU Carlsbad” was established in 1950 as the State’s first Community College and was named the Carlsbad Instructional Center. Ten years later, the Center was renamed as a branch campus of New Mexico State University System. In 1980, the campus was relocated to a new building, which was expanded with an additional wing of classrooms in 1987. In 1996, computer facility wing for occupational programs was added to the existing facilities. The newest building, the Allied Health Center was completed in 2011 to house programs in Nursing and Allied Health.

The College celebrated its 70th year record of accomplishments on October 2, 2020. Throughout its existence, the College has helped shape lives and in turn, shape the community of Carlsbad. The College appreciate the continued support of Carlsbad and Eddy County community. Effective July 1, 2021, NMSU Carlsbad starts another phase of its rich history by transitioning from NMSU Carlsbad to Southeast New Mexico College as an independent Community College.

Mission of the College

The mission of New Mexico State University Carlsbad is to provide students the resources necessary for them to fulfill their educational potential so that they may help meet the needs of their community as well-trained, well-educated, and productive citizens.

Vision Statement

NMSU Carlsbad, a diverse and community-centered institution dedicated to excellence and student success through transformative discovery.

Institutional Values

New Mexico State University Carlsbad is committed to and demonstrates:

- Diversity and Inclusion
- Accountability
- Excellence
- Discovery
- Engagement

Accreditation

NMSU Carlsbad is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools and in 2018 the college was transitioned from the Academic Quality Improvement Program (AQIP) to the Open Pathway model of accreditation. The associate degree program in nursing offered by NMSU Carlsbad is accredited fully by the Accreditation Commission for Education in Nursing. Both the certificate and associate degree programs in nursing are approved by the State of New Mexico Board of Nursing. All vocational programs offered by NMSU Carlsbad are reviewed and approved by the New Mexico State Department of Education’s Division of Vocational, Technical and Adult Education.

Professional Associations

The college holds membership in the New Mexico Community College Association, the American Association of Community Colleges and the American Association of Higher Education. In addition, courses offered by NMSU Carlsbad have been approved for enrollment by those veterans and dependents that qualify for higher education benefits under the various sections of the Veterans’ Education Assistance Act.

NMSU Carlsbad Graduation and Retention Rates

These rates may be found on the NMSU Institutional Research web site at: <https://oia.nmsu.edu/data-reports/natrept/ipeds/>.

Operating Agreement

The Board of Regents of New Mexico State University, hereafter called “Regents” and the Board of Education of the Carlsbad Municipal Schools District have entered into the following agreement concerning the operation of NMSU Carlsbad.

1. Act in an advisory capacity to the Regents in all matters relating to the conduct of NMSU Carlsbad.
2. Approve an annual budget for NMSU Carlsbad for recommendation to the Regents.
3. Certify to the County commissioners the tax levy.
4. Conduct the election for tax levies for NMSU Carlsbad.

The Regents, through appropriate representatives, shall have full authority in relation to all academic and administrative matters at NMSU Carlsbad, although the Board of Education will serve in an advisory capacity in such matters.

Why Students Choose NMSU Carlsbad

Most students choose to attend NMSU Carlsbad because the campus is close to their homes. In contrast to attendance at larger institutions, students attending NMSU Carlsbad receive more individual attention from faculty and staff to encourage their academic success, and they can earn credit in lower-division courses—equivalent to those offered by NMSU Las Cruces—at a lower cost. Many students also have the opportunity to complete their high school instruction, and to complete their college education at an associate level on the same campus. The college offers classes at times convenient to full-time as well as part-time students. Academic programs and related services are expanding regularly to meet the demands of the changing student body and local community. Students have access to a multitude of valuable services offered on-campus to meet their educational and career goals. Entertainment and cultural events are sponsored regularly. Students are equipped with the knowledge, competencies and skills to enter the work force immediately or to transfer to baccalaureate-granting institutions anywhere in the country.

Become a Part of the University

NMSU Carlsbad is the principal public institution for associate-level study in Eddy County. Our foremost purpose is to provide quality academic programs, facilities, and resources to accommodate the needs of our richly diverse student body. Here students have the opportunity to learn from a dedicated and diverse group of faculty and college instructors who regard excellence in teaching as their principal goal. The campus' low student-to-faculty ration encourages the individual attention and personalized instruction often unavailable at larger institutions. The low tuition associated with enrollment at NMSU Carlsbad, compared to costs to attend larger campuses, often permits students to economize the cost of higher education.

Students who need to complete their high-school equivalency requirements can attend special courses at NMSU Carlsbad through the Adult Education "A E" and General Educational Development "GED" preparation programs. Students who are still enrolled in high school can take college courses at NMSU Carlsbad through special articulation and advanced placement programs. Students who are working either full-time or part-time can still attend NMSU Carlsbad because classes are offered fourteen hours per day, Monday through Friday, and additional classes are offered on Saturdays as well as online. Students may also pursue their post-secondary education and job training through special courses contracted with industries and businesses in the regions.

A variety of resources and services are made available to students who attend NMSU Carlsbad. These include the assessment of academic preparation for college-level instruction, placement in courses intended to address academic weaknesses, tutorial assistance, financial assistance, career guidance and wellness programs.

Most academic credit courses offered at NMSU Carlsbad duplicate those offered at NMSU Las Cruces, and may be used for the total credit requirements for baccalaureate graduation. Academic programs at NMSU Carlsbad are expanding continually in response to the needs of our students and in reflection of the changing world in which our graduates will live, work and contribute to global welfare. The campus' excellent certificate and associate programs and faculty are supported by state-of-the-art technology, including computer-assisted instruction in specific liberal arts and vocational-technical courses, as well as access to the Internet. Students benefit by gaining access to these technologies as well as to the campus library, which serves as a hub to connect students to global and local resources in digital and print formats.

NMSU Carlsbad also provides excellent fine arts facilities for instruction and accommodates several entertainment and cultural events annually. Drama students enroll at NMSU Carlsbad participate in Carlsbad's community theatre. Students who have recently moved to the region will find numerous recreational activities and facilities associated with the Pecos River and park system. In addition, Carlsbad hosts a number of art galleries, the Carlsbad Museum and Art Center and the Living Desert Zoo and Gardens State Park. The city has a regional airport and is located ten miles from the entrance to the *world's eighth wonder*, the Carlsbad Caverns National Park. Residents are also within driving distance of a number of other national parks and sightseeing areas, which are accessible nearly all year due to the region's mild and pleasant winters and its warm and dry summers.

Placement of our graduates in meaningful careers is important to the economic stability of the region. Our Counseling and Student Development Center announces opportunities for students to engage in cooperative education and internship experiences; it also provides job information and related services to students who seek help defining and choosing their careers.

Essential Information for Students

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Academic Programs

NMSU awards both designated and undesignated associate degrees following completion of at least 60 semester credits (excluding "N" suffix courses). The last 15 to 30 credits, depending on the requirements of the department in which the degree is pursued, must be completed at New Mexico State University Carlsbad. (Service personnel enrolled under the two-year Servicemembers Opportunity College program may be exempt from this requirement.)

The designation Meritorious Graduate is awarded to the top 15 percent of the students receiving associate degrees within each college in any one academic year; the students must have completed 45 or more credits with computable grades at NMSU. See Fields of Study (p. 73) section for a listing of certificates and degrees offered.

Community Colleges

Many of the associate degrees offered on Las Cruces campus, as well as other programs, are available at NMSU's four community college campuses. For more information on community college campus offerings, refer to the "Community Colleges" chapter in this catalog and to their respective catalogs or admissions offices.

Please see the Community College Catalogs for more information about the Associate Degree Programs.

Alamogordo Catalog (<http://catalogs.nmsu.edu/alamogordo/>)

Dona Ana Catalog (<http://catalogs.nmsu.edu/dona-ana/>)

Carlsbad Catalog (p. 8)

Grants Catalog (<http://catalogs.nmsu.edu/grants/>)

Admissions

A student may be accepted for undergraduate admission to NMSU Carlsbad as:

1. A degree-seeking student or
2. A non-degree student under the policies and conditions as set forth in this section.

Demonstration of Academic Competencies upon Entrance to NMSU Carlsbad

All entering students must complete required basic skills placement exams to determine their competency levels in Math, English and Reading prior to receiving course advisement or registering for classes. Based upon these scores and other relevant information (i.e. recent ACT scores, H.S. records), students are advised into the appropriate courses needed or required to address any academic skill weaknesses directly and as soon as possible after a student is admitted. All degree or certificate-seeking students are required to prove or establish basic skills competency before any official program degree or certificate may be awarded. Therefore, students who place into any developmental course upon completion of entry testing are encouraged to take and complete any required basic skills courses during their first year of enrollment at NMSU Carlsbad. Note that developmental educational courses are designated with the letter N and are calculated as part of a student's academic grade point, but though required, developmental courses may not be counted for credit toward an official degree or certificate plan.

New Student Orientation

All new, first-time degree seeking students and transfer students with fewer than 30 credits are required to complete Aggie Welcome & Orientation prior to advising and registration. Readmit students and transfer students with more than 30 credits are invited to attend if they wish. For information, please contact the Counseling & Student Development Center at (575) 234-9238.

How to Apply as a First Time Student

Qualifications for undergraduate admission to NMSU Carlsbad include the following:

Graduation from any U.S. high school or academy that is accredited by a regional accrediting association or approved by a state department of education or state universities.

Students who pass the GED test after January 1, 2002, need a score of 450 or higher. Students who passed the GED test between January 1, 1997 and January 1, 2002, need a score of 45 or higher. Students who passed the GED test prior to January 1, 1997, need a score of 40 or higher.

Students are required to submit applications for admission prior to registration. If transcripts are not received by the completion of registration, students must sign a "Non-Degree Conditional Agreement" to allow additional time for transcripts to be received. If transcripts are not received by the date set for conditional enrollment, the student will remain in non-degree status.

Students are encouraged to apply for admission to NMSU. When reviewing the admissibility of students, we consider many factors, including: High school GPA, test scores, dual credit coursework, leadership experience, community involvement, and other accomplishments. Applicants may be asked for additional information, including academic letters of recommendation, in support of their application.

Students graduating high school in 2016 or later.

Minimum high school requirements:

| Subject | Units |
|-------------------------------|--------------------------------|
| English | 4 units ¹ |
| Science | 2 units beyond general science |
| Mathematics | 4 units ² |
| Foreign Language or fine arts | 1 unit |

¹ Must include at least 2 units of writing-intensive courses one of which must be a junior or senior level course.

² Completion of Algebra 1, Geometry, Algebra 2, and one additional math course.

How to Apply as GED or HiSet student

A student who is 16 years of age and has satisfactorily passed the GED is eligible for admission to NMSU Carlsbad. The student must provide an original transcript of the GED scores and go through the regular admission process.

How to Apply as a Home-School Student

Students enrolled in a home school program may be accepted to NMSU if they meet the requirements for regular or provisional admission as previously stated. In addition, the home school educator must submit a signed transcript or document that lists the courses completed and grades earned by the student as well as indicate the date the student completed or graduated from the home school program. Home school students who are New Mexico residents and wish to participate in the Lottery Success Scholarship program are required to submit official New Mexico GED test results in English.

How to Apply for the Aggie Pathway Program

Student Applicants who do not meet NMSU Las Cruces admission requirements may apply to participate in the Aggie Pathway to the baccalaureate program at any of the NMSU community colleges. Aggie Pathway students may transition to the NMSU Las Cruces campus after successful completion of any required developmental education courses and 24 degree credits with a 2.5 cumulative college GPA. Each student will follow an individualized study plan developed in partnership with an academic advisor that typically includes study skills courses, developmental education courses, and/or general education courses. For more information, go to <http://aggiepathway.nmsu.edu/> or call (575) 646-8011.

How to Apply as a Non-degree Seeking Student

Non-degree admission is designed to meet the needs of mature, part-time students who do not wish to pursue a degree at this university. Courses taken in this status may not be used to meet university admission requirements. Students interested in using a non-degree credit for initial teacher certification or recertification in a new field need to contact the College of Education. Also students who wish to take a course without a graded credit may choose to audit courses with the consent of the instructor, provided the facilities are not required for regular students.

Students on non-degree status are ineligible to receive financial aid or student employment; nor are they eligible to participate in student government or intercollegiate athletics. They are also ineligible to receive benefits from any veteran's program.

Transcripts from previous institutions, high school, and/or results of college entrance exams may be required to assure readiness for university-level courses. A \$20 nonrefundable, non-degree application fee is required. Non-degree students are subject to the same university regulations as regular students.

How to Apply to the Nursing Program

Entrance and enrollments to the nursing programs are limited. Special applications are required and may be obtained from the offices of the Nursing Program. In addition to meeting regular undergraduate admissions requirements, students must be selected into these programs. Nursing students are also required to take the HESI A2 and successfully complete a certified nursing assistant program to be eligible for entry into the program. Nursing majors must earn satisfactory grades.

Changing from Non-Degree Status

A non-degree student in good academic standing at NMSU must submit a formal application for a change of status from non-degree to degree seeking. Requirements to regular admission must be met. Non-degree students may not transfer more than 30 credits from this status to any undergraduate degree program with the exception of students participating in a high school concurrent enrollment program.

How to Apply for Readmission

Former students of NMSU, who have been out of school for more than two consecutive terms are required to make a formal application for readmission. Applications should be submitted to the Admissions Office at least 30 days before the opening of the semester or summer session for which the student plans to enroll.

A student who has attended other institutions during an absence must have official transcripts forwarded directly to the Admissions Office by the Registrar of each Institution and must be eligible to return to the college or university last attended. Transcripts must be received prior to the date of registration. Admission status at the time of readmission will normally be determined by previous NMSU academic standing. However, academic performance at other institutions attended during the applicant's absence from NMSU may be taken into consideration in determining the student's admission status.

Opportunities for High School Students

How to Apply as a Dual Credit High School Student

The dual credit program is designed to give high school students an opportunity to earn both high school and college credit through NMSU Carlsbad. Under the Dual Credit Master Agreement between NMSU Carlsbad and the local school districts, students enrolled in approved dual credit courses are eligible to have the full cost of tuition waived. Dual Credit participants do not have to pay for tuition or textbooks; however, students are responsible for any course-specific fees, such as lab or online fees. They may take a college level, career-technical course that will simultaneously count toward high school graduation and a certificate or associate degree.

To qualify for dual credit, students must be enrolled at Artesia, Carlsbad, Jefferson Montessori Academy or Loving High School at least half time. Students must have a minimum high school GPA of a 2.0. Sophomores and students with a lower GPA may be considered on a case by case basis.

To enroll students must submit a dual credit packet during the college registration period that consists of an NMSU Carlsbad admission application (required only for students who have not attended in a semester or more), dual credit form with course request and all necessary signatures and submit a high school transcript.

For additional information on dual credit please contact the dual credit coordinator at (575) 234-9276.

Early College High School

The Early College High School Initiative is designed to allow students to simultaneously earn a high school diploma while earning up to two years (60 hours) of college credit, which might result in a college certificate or associate degree by the time they graduate from high school. The facilities usually located on a college or university campus makes higher education more accessible and also helps students become more comfortable in a higher education environment. For further information on the admission requirements for early college high school contact the Carlsbad Early College High School directly (575) 234-9415.

Early Admission

The early admit program gives student the opportunity to take college courses that are non-approved dual credit courses. Students must meet the same eligibility requirements as dual credit students. However, students will be required to pay course specific fees and purchase the book for the class. Students who are at or below freshman standing in the high school may not take academic courses at NMSU Carlsbad.

Admission Application Materials

All documents submitted as part of the admission process become property of NMSU and will not be returned to the student. Application materials are retained for one calendar year for students who apply but do not attend.

Admission Application Deadlines

The deadline for application to the Nursing Program is February 1st for the fall semester and September 1st for the Spring semester.

Out-of-State Student and Legal Jurisdiction

By applying for admission/enrollment, both the student and parents agree that New Mexico law prevails and all litigation will be in federal or state court in New Mexico.

Admissions Office Contact Information

For more information, contact:

University Admissions Office, Room 111
New Mexico State University
1500 University Drive
Carlsbad, NM 88220

Enrollment in Graduate Courses

Undergraduates who wish to enroll in a graduate-level course numbered 450 or higher for undergraduate credit must secure prior written permission from the instructor and course dean. Enrollment is by petition only and is limited to outstanding juniors and seniors.

Financial Aid & Scholarship Services for the NMSU System

New Mexico State University Carlsbad "NMSU Carlsbad" Financial Aid and Scholarship Services administers a broad spectrum of loans, grants, scholarships and work-study funding in an attempt to meet the financial need of the NMSU Carlsbad's students.

NMSU Carlsbad Financial Aid and Scholarship Services awards financial aid to students according to their individual calculated need. Parents of students are expected to contribute to their child's education according to their ability; taking into account their income, assets, number of dependents and other relevant information. Students themselves are expected to contribute from their own assets and earnings, including appropriate borrowing against future income. All information provided to NMSU Carlsbad Financial Aid and Scholarship Services is regarded as confidential in accordance with Family Educational Rights and Privacy Act (FERPA) and Gramm-Leach-Bliley Act (GLBA).

Students applying for financial aid must complete a Free Application for Federal Student Aid (FAFSA) designed to determine, in accordance with state and federal guidelines, the difference between what the student or family is expected to contribute and the cost of attending NMSU Carlsbad.

Among the factors that determine the family's Expected Family Contribution (EFC) are

1. Annual adjusted gross income as reported to the Internal Revenue Service;
2. Savings, stocks, and/or bonds;
3. Other assets in the form of a business, farm or real estate;
4. Non-taxable income and benefits; and
5. Student's prior-year income and assets.

Students applying for financial aid should complete a FAFSA by visiting <https://studentaid.ed.gov/sa/fafsa> (<https://studentaid.ed.gov/sa/fafsa/>).

Please refer to the NMSU Carlsbad Financial Aid and Scholarship Services website for more information on available financial aid. A complete listing of programs and policies are available at <https://carlsbad.nmsu.edu/financial-aid> (<https://carlsbad.nmsu.edu/financial-aid/>).

General Eligibility Requirements

To receive financial aid you must be enrolled as a degree seeking student in an eligible degree or certificate program and demonstrate the following:

That you are qualified to obtain an education by:

- Having a high school diploma or a recognized equivalent such as a General Educational Development (GED) certificate or
- Completing a high school education in a home-school setting approved under state law.

If you were enrolled in college in an eligible program or career school prior to July 2, 2012, you may show you are qualified to obtain a higher education by:

- Having passed an approved ability-to-benefit (if you don't have a diploma or GED, a college can administer a test to determine whether you can benefit from the education offered at that school);
- Completing six credit hours or equivalent course work toward a degree or certificate (you may not receive aid while earning the six credit hours)
- Be enrolled or accepted for enrollment as a regular student working toward a degree or certificate in an eligible program.

To be eligible for financial aid, you must also:

- Be a U.S. citizen or eligible non-citizen (state funded scholarships are available to undocumented students).
- Have a valid Social Security number or Alien registration number as shown on a Government-issued naturalization certificate.
- Be in good academic standing and meeting satisfactory academic progress (SAP).
- Sign a statement on the FAFSA certifying that you will use Federal student aid only for educational purposes.
- Sign a statement on the FAFSA certifying that you are not in default on a federal student loan and that you do not owe money back on a federal student grant.
- Register with the Selective Service, if required.

Financial Aid Awards

All financial aid awards are based on information provided by the student and/or parents, availability of funds and eligibility requirements. Any award may be revised based on changes in enrollment, cost of attendance, application for graduation, family contribution or failure to meet satisfactory academic

progress. Withdrawals or reductions in enrollment may affect an award or any future awards. Financial Aid will not pay for audited courses or some repeats.

Grants

The Federal Pell Grant is a federal grant available to undergraduate students with documented financial need. If the Pell Grant is insufficient to pay educational expenses, the student may be eligible to receive other types of aid, including a Federal Supplemental Educational Opportunity Grant (SEOG) or Leveraging Education Assistance Partnership Program Grant (LEAP), and/or other miscellaneous grants. These grants are awarded to undergraduate students who demonstrate exceptional financial need. For more information, contact NMSU Carlsbad Financial Aid and Scholarship Services or visit the university's financial aid website at: <https://carlsbad.nmsu.edu/financial-aid/>. Generally, grants do not have to be repaid.

Federal Direct Subsidized Loans

The Federal Direct Subsidized Loan is a loan program for eligible undergraduate students who demonstrate financial need. The U.S. Department of Education pays the interest on a Direct Subsidized Loan while the student is enrolled in school at least half-time.

Eligible first time undergraduate student loan borrowers are subject to a maximum time period to receive Federal Direct Subsidized Loan. Students may not receive Federal Direct Subsidized Loans for more than 150% of the published length of their academic program (measured in academic years). A complete explanation of Subsidized Loan usage limits is available at <https://fa.nmsu.edu/loans/federal-direct-loans/>.

Federal Direct Unsubsidized Loans

The Federal Direct Unsubsidized Loan is a loan program for eligible undergraduate students that do not demonstrate financial need. Unlike other federal loans, interest accrues while the student is attending school.

Federal Direct Loan Requirements

Students receiving a subsidized or unsubsidized Federal Direct Loan, must complete an online entrance counseling session and a master promissory note before NMSU Carlsbad will issue the funds. In addition, students must complete an exit interview upon graduation or withdrawal from the university.

Repayment of a Federal Direct loan begins six months after graduation or six months after enrollment drops below 6 credits or less than half time for undergraduate students.

Work-Study Programs

The Federal Work-Study Program provides employment opportunities for eligible students.

For more information on the U.S. Department of Education student aid programs, go to <http://studentaid.ed.gov/> (<https://studentaid.ed.gov/sa/>) or see the NMSU Carlsbad Financial Aid website at <https://carlsbad.nmsu.edu/financial-aid> (<https://carlsbad.nmsu.edu/financial-aid/>).

Withdrawals

Recipients of financial aid grants and loans who drop credits or withdraw may be required to return all or a portion of awarded Title IV funds. Further information regarding the return of Title IV funds is available on the NMSU website at <https://fa.nmsu.edu/return-of-title-iv-funds/>.

Financial Aid Satisfactory Academic Programs

Federal regulations require that financial aid recipients meet certain academic standards to be eligible for federal financial aid. To ensure that financial aid recipients are making satisfactory academic progress, academic transcripts are reviewed at the end of each term to determine eligibility for the next term. All terms of attendance are reviewed, including periods in which the student did not receive financial aid. All transfer credit hours are taken into account when satisfactory progress is reviewed. The Financial Aid SAP standards are not the same as NMSU Carlsbad's Academic Standards of Progress criteria.

Elements of Financial Aid Satisfactory Academic Progress:

- **Qualitative Progress:** Undergraduate students must maintain a cumulative GPA of at least 2.0 (a C- average).
- **Completion Rate:** Students must complete a minimum of 70 percent of all coursework (registered credit hours) attempted at NMSU Carlsbad. Any course with a grade of withdraw (W), incomplete (I), repeats (RR), failure (F), audit (AU), or no credit (NC) are considered as attempted but not considered completed coursework. Repeated courses are included in the calculation.
- **Maximum Time Frame:** Undergraduate students must complete their program within 150 percent of the published length required by the program. Students who have reached the maximum allowable time will be suspended from receiving financial aid. Limited developmental/remedial hours are excluded from this calculation. Total attempted hours including repeated courses and transfer coursework are included in the student's maximum time frame calculation.

Financial Aid Warning

"Warning" is a status assigned to a student the first semester they fail to meet the standard of satisfactory academic progress measured as Qualitative Progress and Completion Rate. If the student has not returned to satisfactory standing after this warning semester, he or she will be suspended from further financial assistance until the satisfactory progress standards are met.

Financial Aid Suspension

Students are suspended from receiving financial aid if they do not meet satisfactory academic progress standards for financial aid purposes. Students on financial aid suspension will not receive any form of federal or state financial aid (grants, loans, work study). Financial aid eligibility is reinstated when all standards of satisfactory progress are met.

The Appeals Process

Students suspended from financial aid may appeal the suspension if there are extenuating circumstances affecting their progress. Students who would like to appeal the suspension must submit an appeal form, available at <https://fa.nmsu.edu/forms/>. They must also submit all supporting documentation to NMSU Carlsbad Financial Aid and Scholarship Services.

A committee will review the appeal and may grant reinstatement of financial aid based on the extenuating circumstances that directly contributed to deficient academic performance. Appeals are evaluated on a term-by-term basis. All appeals, including relevant documentation, must be submitted by the semester deadline based on the current semester of enrollment. A student may *appeal the termination of eligibility only twice during his or her career* within the NMSU System.

Scholarships and Other Aid

Many students finance part of their education with scholarships, which may be awarded for academic achievement, special skills, talent and/or based on the applicants calculated financial need.

NMSU Carlsbad has a variety of scholarships that are offered to incoming freshman, transfer, and continuing students. State, institutional and private scholarships may also be available but amounts, deadlines and eligibility requirements vary. For more information, contact NMSU Carlsbad University Financial Aid and Scholarship Services or visit the NMSU Carlsbad's scholarship website at <https://carlsbad.nmsu.edu/financial-aid/scholarships/>.

To be considered for most scholarships at NMSU for which you may be eligible you are required to apply online through Scholar Dollar\$, at <https://scholarships.nmsu.edu/>. One scholarship application serves all NMSU students regardless of campus.

Office of Financial Aid and Scholarship Services Contact Information

Office of Financial Aid and Scholarship Services, Room 107
1500 University Drive
Carlsbad, NM, 88220
Phone: (575) 234-9225
carlsbad_finaid@nmsu.edu

General Education Courses

Associates Degree

The New Mexico General Education Requirements

General Education at NMSU provides all students with a broad foundation and common framework upon which to develop knowledge and skills, social consciousness and respect for self and others, thus enabling them to function responsibly and effectively now and in the future. General education courses at NMSU can be identified by the G suffix.

In accordance to state law (Post-Secondary Education Articulation Act) (<https://www.srca.nm.gov/parts/title05/05.055.0006.html>), the New Mexico Higher Education Department has established a state-wide model for General Education. Within the General Education model, is nine credits of electives that will be determined at an institutional level. The current approved NMSU General Education courses are listed below under each of the six general education areas.

| Prefix | Title | Credits |
|--|----------------------------|-----------|
| Area I: Communications | | 10 |
| Select one course from each sub group: | | |
| <i>English Composition-Level 1</i> | | |
| ENGL 1110G | Composition I | |
| ENGL 1110H | Composition I Honors | |
| ENGL 1110M | Composition I Multilingual | |
| <i>English Composition-Level 2</i> | | |

| | |
|---|---|
| ENGL 2130G | Advanced Composition |
| ENGL 2210G | Professional & Technical Communication |
| ENGL 2210H | Professional and Technical Communication Honors |
| ENGL 2210M | Professional and Technical Communication for Multilingual Students |
| ENGL 2215G | Advanced Technical and Professional Communication |
| ENGL 2221G | Writing in the Humanities and Social Science |
| <i>Oral Communication</i> | |
| AXED 2120G | Effective Leadership and Communication in Agriculture |
| COMM 1115G | Introduction to Communication |
| COMM 1130G | Public Speaking |
| HNRS 2175G | Introduction to Communications Honors |
| Area II: Mathematics | |
| MATH 1130G | Survey of Mathematics |
| MATH 1220G | College Algebra |
| MATH 1250G | Trigonometry & Pre-Calculus |
| MATH 1350G | Introduction to Statistics |
| MATH 1430G | Applications of Calculus I |
| MATH 1511G | Calculus and Analytic Geometry I |
| MATH 1521G | Calculus and Analytic Geometry II |
| MATH 1521H | Calculus and Analytic Geometry II Honors |
| MATH 2134G | Fundamentals of Elementary Math II |
| MATH 2350G | Statistical Methods |
| MATH 2530G | Calculus III |
| Area III/IV: Laboratory Sciences and Social/Behavioral Sciences ¹ | |
| <i>Area III: Laboratory Sciences</i> | |
| AGRO 1110G/HORT 1115G | Introduction to Plant Science (Lecture & Lab) |
| ANTH 1135G & ANTH 1135L | Introduction to Biological Anthropology and Introduction to Biological Anthropology Lab |
| ASTR 1115G | Introduction Astro (lec+lab) |
| ASTR 1120G | The Planets |
| BIOL 1120G & BIOL 1120L | Human Biology and Human Biology Laboratory |
| BIOL 1130G | Introductory Anatomy & Physiology (non-majors) |
| BIOL 1190G | Contemporary Problems in Biology |
| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory |
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory |
| C S 171G | Introduction to Computer Science |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors |
| CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors |
| ENVS 1110G | Environmental Science I |
| FSTE 2110G | Food Science I |
| FWCE 1110G | Introduction to Natural Resources Management |
| GEOG 1110G | Physical Geography |
| GEOL 1110G | Physical Geology |
| HNRS 1135G & HNRS 1135L | Introduction to Biological Anthropology and Introduction to Biological Anthropology Lab |
| HNRS 2116G | Earth, Time and Life |
| PHYS 1115G | Survey of Physics with Lab |
| PHYS 1125G | Physics of Music |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab |
| PHYS 1240G & PHYS 1240L | Algebra-Based Physics II and Algebra-Based Physics II Lab |
| PHYS 1310G & PHYS 1310L | Calculus -Based Physics I and Calculus -Based Physics I Lab |

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| | |
|----------------------------|--|
| PHYS 1320G & PHYS 1320L | Calculus -Based Physics II and Calculus -Based Physics II Lab |
| PHYS 2230G & PHYS 2230L | General Physics for Life Science I and Laboratory to General Physics for Life Science I |
| PHYS 2240G & PHYS 2240L | General Physics for Life Science II and Laboratory to General Physics for Life Science II |

Area IV: Social/Behavioral Sciences

| | |
|-----------------|---|
| AEEC/FSTE 2130G | Survey of Food and Agricultural Issues |
| ANTH 1115G | Introduction to Anthropology |
| ANTH 1137G | Human Ancestors |
| ANTH 1140G | Introduction to Cultural Anthropology |
| ANTH 1160G | World Archaeology |
| ANTH 2140G | Indigenous Peoples of North America |
| CEPY 1120G | Human Growth and Behavior |
| CJUS 1110G | Introduction to Criminal Justice |
| ECON 1110G | Survey of Economics |
| ECON 2110G | Macroeconomic Principles |
| ECON 2110H | Principles of Macroeconomics Honors |
| ECON 2120G | Microeconomics Principles |
| ECON 2120H | Principles of Microeconomics Honors |
| GEOG 1120G | World Regional Geography |
| GEOG 1130G | Human Geography |
| GNDR 2110G | Introduction to Women, Gender, and Sexuality Studies |
| GNDR 2120G | Representing Women Across Cultures |
| HNRS 2161G | Window of Humanity |
| HNRS 2170G | The Human Mind |
| HNRS 2172G | Archaeology: Search for the Past |
| HNRS 2174G | American Politics in a Changing World |
| HNRS 2180G | Citizen and State Great Political Issues |
| HRTM 1120G | Introduction to Tourism |
| JOUR 105G | Media and Society |
| LING 2110G | Introduction to the Study of Language and Linguistics |
| PHLS 1110G | Personal Health & Wellness |
| POLS 1110G | Introduction to Political Science |
| POLS 1120G | American National Government |
| POLS 1130G | Issues in American Politics |
| POLS 2120G | International Relations |
| PSYC 1110G | Introduction to Psychology |
| SOCI 1110G | Introduction to Sociology |
| SOCI 2310G | Contemporary Social Problems |
| SOWK 2110G | Introduction to Human Services & Social Work |

Area V: Humanities**3**

| | |
|------------|-------------------------------------|
| AFST 1110G | Introduction to Africana Studies |
| AFST 2110G | African American History |
| AFST 2140G | Black Women in the African Diaspora |
| ENGL 1410G | Introduction to Literature |
| ENGL 2520G | Film as Literature |
| ENGL 2650G | World Literature I |
| HIST 1105G | Making History |
| HIST 1110G | United States History I |
| HIST 1120G | United States History II |
| HIST 1130G | World History I |
| HIST 1140G | World History II |
| HIST 1150G | Western Civilization I |
| HIST 1160G | Western Civilization II |
| HIST 2245G | Islamic Civilizations to 1800 |
| HIST 2246G | Islamic Civilizations since 1800 |

| | |
|--|---|
| HIST 2250G | East Asia to 1600 |
| HIST 2251G | East Asia since 1600 |
| HNRS 2110G | The Present in the Past: Contemporary Issues and their Historical Roots |
| HNRS 2117G | The World of the Renaissance: Discovering the Modern |
| HNRS 2120G | Foundations of Western Culture |
| HNRS 2140G | Plato and the Discovery of Philosophy |
| HNRS 2141G | Bamboo and Silk: The Fabric of Chinese Literature |
| HNRS 2145G | Celtic Literature |
| HNRS 2160G | New Testament as Literature |
| HNRS 2171G | The Worlds of Arthur |
| HNRS 2173G | Middle Ages |
| HNRS 2185G | Democracies, Despots and Daily Life |
| HNRS 2190G | Claiming a Multiracial Past |
| PHIL 1115G | Introduction to Philosophy |
| PHIL 1120G | Logic, Reasoning, & Critical Thinking |
| PHIL 1140G | Quest for God |
| PHIL 1145G | Philosophy, Law, and Ethics |
| PHIL 1155G | Philosophy of Music |
| PHIL 2110G | Introduction to Ethics |
| PHIL 2230G | Philosophical Thought |
| Area VI: Creative and Fine Arts | |
| ARTH 1115G | Orientation in Art |
| ARTH 2110G | History of Art I |
| ARTH 2120G | History of Art II |
| ARTS 1145G | Visual Concepts |
| DANC 1110G | Dance Appreciation |
| ENGL 2310G | Introduction to Creative Writing |
| HNRS 2114G | Music in Time and Space |
| HNRS 2115G | Encounters with Art |
| HNRS 2130G | Shakespeare on Film |
| HNRS 2178G | Theatre: Beginnings to Broadway |
| MUSC 1110G | Music Appreciation: Jazz |
| MUSC 1130G | Music Appreciation: Western Music |
| THEA 1110G | Introduction to Theatre |
| THEA 1210G | Acting for Non-Majors |
| General Education Elective | |
| This requirement can be met with any "G" course in any area, excluding Area I: Communications and any crosslisted courses, that exceeds the minimum requirement. | |
| or | |
| ENGR 100G | Introduction to Engineering |
| or ENGR 100GH | Introduction to Engineering Honors |

Total Credits**32-35**

- ¹ For Area III: Laboratory Sciences and Area IV: Social/Behavioral Sciences, students **must** take one course from each for a total of 7 credits. Students will then take an additional course in either Area III or Area IV for 3-4 credits depending on the students selection (i.e. Area III is 4 credits, Area IV is 3 credits).

Alternatives for Meeting General Education Requirements (9 credit hour rule)

Students taking nine or more credits in a specific subject area, even though the courses are not designated as General Education courses, will have met the general education requirements for that subject area. The courses can meet both major and general education requirements for the degree. For example, a student may complete ARTS 2610 Drawing II, ARTS 1240 Design I and ARTS 1250 Design II (9 hours) and thereby satisfy one course from the Area VI: Creative and Fine Arts category even though none of those courses carries a G suffix. Please check with the Center for Academic Advising and Student Support.

Applied Associate Degree

The New Mexico General Education Requirements

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In accordance to state law (Post-Secondary Education Articulation Act) (<https://www.srca.nm.gov/parts/title05/05.055.0006.html>), the New Mexico Higher Education Department has established a state-wide model for General Education. Within the General Education model, is nine credits of electives that will be determined at an institutional level. The current approved NMSU General Education courses are listed below under each of the six general education areas.

| Prefix | Title | Credits |
|--|---|--------------|
| Select one course from four of the following six content areas for a total of 12-14 credits | | 12-14 |
| Each course selected must be from a different area and students cannot take multiple courses in the same area. | | |
| <i>Area I: Communications</i> | | |
| AXED 2120G | Effective Leadership and Communication in Agriculture | |
| COMM 1115G | Introduction to Communication | |
| COMM 1130G | Public Speaking | |
| ENGL 1110G | Composition I | |
| ENGL 1110H | Composition I Honors | |
| ENGL 1110M | Composition I Multilingual | |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2210H | Professional and Technical Communication Honors | |
| ENGL 2210M | Professional and Technical Communication for Multilingual Students | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| HNRS 2175G | Introduction to Communications Honors | |
| <i>Area II: Mathematics</i> | | |
| MATH 1130G | Survey of Mathematics | |
| MATH 1220G | College Algebra | |
| MATH 1250G | Trigonometry & Pre-Calculus | |
| MATH 1350G | Introduction to Statistics | |
| MATH 1430G | Applications of Calculus I | |
| MATH 1511G | Calculus and Analytic Geometry I | |
| MATH 1521G | Calculus and Analytic Geometry II | |
| MATH 1521H | Calculus and Analytic Geometry II Honors | |
| MATH 2134G | Fundamentals of Elementary Math II | |
| MATH 2350G | Statistical Methods | |
| MATH 2530G | Calculus III | |
| <i>Area III: Laboratory Sciences</i> | | |
| AGRO 1110G/HORT 1115G | Introduction to Plant Science (Lecture & Lab) | |
| ANTH 1135G & ANTH 1135L | Introduction to Biological Anthropology and Introduction to Biological Anthropology Lab | |
| ASTR 1115G | Introduction Astro (lec+lab) | |
| ASTR 1120G | The Planets | |
| BIOL 1120G & BIOL 1120L | Human Biology and Human Biology Laboratory | |
| BIOL 1130G | Introductory Anatomy & Physiology (non-majors) | |
| BIOL 1190G | Contemporary Problems in Biology | |
| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | |
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | |
| C S 171G | Introduction to Computer Science | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | |
| CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors | |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | |

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| CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors |
| ENVS 1110G | Environmental Science I |
| FSTE 2110G | Food Science I |
| GEOG 1110G | Physical Geography |
| GEOL 1110G | Physical Geology |
| HNRS 1135G & HNRS 1135L | Introduction to Biological Anthropology and Introduction to Biological Anthropology Lab |
| HNRS 2116G | Earth, Time and Life |
| PHYS 1115G | Survey of Physics with Lab |
| PHYS 1125G | Physics of Music |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab |
| PHYS 1240G & PHYS 1240L | Algebra-Based Physics II and Algebra-Based Physics II Lab |
| PHYS 1310G & PHYS 1310L | Calculus -Based Physics I and Calculus -Based Physics I Lab |
| PHYS 1320G & PHYS 1320L | Calculus -Based Physics II and Calculus -Based Physics II Lab |
| PHYS 2230G & PHYS 2230L | General Physics for Life Science I and Laboratory to General Physics for Life Science I |
| PHYS 2240G & PHYS 2240L | General Physics for Life Science II and Laboratory to General Physics for Life Science II |
| <i>Area IV: Social/Behavioral Sciences</i> | |
| AEEC/FSTE 2130G | Survey of Food and Agricultural Issues |
| ANTH 1115G | Introduction to Anthropology |
| ANTH 1137G | Human Ancestors |
| ANTH 1140G | Introduction to Cultural Anthropology |
| ANTH 1160G | World Archaeology |
| ANTH 2140G | Indigenous Peoples of North America |
| CEPY 1120G | Human Growth and Behavior |
| CJUS 1110G | Introduction to Criminal Justice |
| ECON 1110G | Survey of Economics |
| ECON 2110G | Macroeconomic Principles |
| ECON 2110H | Principles of Macroeconomics Honors |
| ECON 2120G | Microeconomics Principles |
| ECON 2120H | Principles of Microeconomics Honors |
| GEOG 1120G | World Regional Geography |
| GEOG 1130G | Human Geography |
| GNDR 2110G | Introduction to Women, Gender, and Sexuality Studies |
| GNDR 2120G | Representing Women Across Cultures |
| HNRS 2161G | Window of Humanity |
| HNRS 2170G | The Human Mind |
| HNRS 2172G | Archaeology: Search for the Past |
| HNRS 2174G | American Politics in a Changing World |
| HNRS 2180G | Citizen and State Great Political Issues |
| HRTM 1120G | Introduction to Tourism |
| JOUR 105G | Media and Society |
| LING 2110G | Introduction to the Study of Language and Linguistics |
| PHLS 1110G | Personal Health & Wellness |
| POLS 1110G | Introduction to Political Science |
| POLS 1120G | American National Government |
| POLS 1130G | Issues in American Politics |
| POLS 2120G | International Relations |
| PSYC 1110G | Introduction to Psychology |
| SOCI 1110G | Introduction to Sociology |
| SOCI 2310G | Contemporary Social Problems |
| SOWK 2110G | Introduction to Human Services & Social Work |
| <i>Area V: Humanities</i> | |

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| AFST 1110G | Introduction to Africana Studies |
| AFST 2110G | African American History |
| AFST 2140G | Black Women in the African Diaspora |
| ENGL 1410G | Introduction to Literature |
| ENGL 2310G | Introduction to Creative Writing |
| ENGL 2520G | Film as Literature |
| ENGL 2650G | World Literature I |
| HIST 1105G | Making History |
| HIST 1110G | United States History I |
| HIST 1120G | United States History II |
| HIST 1130G | World History I |
| HIST 1140G | World History II |
| HIST 1150G | Western Civilization I |
| HIST 1160G | Western Civilization II |
| HIST 2245G | Islamic Civilizations to 1800 |
| HIST 2246G | Islamic Civilizations since 1800 |
| HIST 2250G | East Asia to 1600 |
| HIST 2251G | East Asia since 1600 |
| HNRS 2110G | The Present in the Past: Contemporary Issues and their Historical Roots |
| HNRS 2117G | The World of the Renaissance: Discovering the Modern |
| HNRS 2120G | Foundations of Western Culture |
| HNRS 2140G | Plato and the Discovery of Philosophy |
| HNRS 2141G | Bamboo and Silk: The Fabric of Chinese Literature |
| HNRS 2145G | Celtic Literature |
| HNRS 2160G | New Testament as Literature |
| HNRS 2171G | The Worlds of Arthur |
| HNRS 2173G | Middle Ages |
| HNRS 2185G | Democracies, Despots and Daily Life |
| HNRS 2190G | Claiming a Multiracial Past |
| PHIL 1115G | Introduction to Philosophy |
| PHIL 1120G | Logic, Reasoning, & Critical Thinking |
| PHIL 1140G | Quest for God |
| PHIL 1145G | Philosophy, Law, and Ethics |
| PHIL 1155G | Philosophy of Music |
| PHIL 2110G | Introduction to Ethics |
| PHIL 2230G | Philosophical Thought |

Area VI: Creative and Fine Arts

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| ARTH 1115G | Orientation in Art |
| ARTS 1145G | Visual Concepts |
| ARTH 2110G | History of Art I |
| ARTH 2120G | History of Art II |
| DANC 1110G | Dance Appreciation |
| HNRS 2114G | Music in Time and Space |
| HNRS 2115G | Encounters with Art |
| HNRS 2130G | Shakespeare on Film |
| HNRS 2178G | Theatre: Beginnings to Broadway |
| MUSC 1110G | Music Appreciation: Jazz |
| MUSC 1130G | Music Appreciation: Western Music |
| THEA 1110G | Introduction to Theatre |
| THEA 1210G | Acting for Non-Majors |

General Education Elective**3-4**

This requirement can be met with any "G" course in any area, excluding any crosslisted courses.

or

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| ENGR 100G | Introduction to Engineering |
| or ENGR 100GH | Introduction to Engineering Honors |

Total Credits**15-18**

Alternatives for Meeting General Education Requirements (9 credit hour Rule)

Students taking nine or more credits in a specific subject area, even though the courses are not designated as General Education courses, will have met the general education requirements for that subject area. The courses can meet both major and general education requirements for the degree. For example, a student may complete ARTS 2610 Drawing II, ARTS 1240 Design I and ARTS 1250 Design II (9 hours) and thereby satisfy one course from the Area VI: Creative and Fine Arts category even though none of those courses carries a G suffix. Please check with the Center for Academic Advising and Student Support.

Graduation Requirements

Certificate of Achievement

The Certificate of Achievement is a program of study less than 16 credits and is not eligible for Federal financial aid. This Certificate provides employment related and/or career enhancing skills necessary to succeed in a job or a chosen field of study. These courses can be a subset of those required for a corresponding Certificate of Completion or Applied Associates Degree. These certificates are recorded on the student's transcript. The following requirements apply to all certificates of achievements:

1. **Minimum Credit Hours:** The number of credit hours varies from certificate to certificate but must be fewer than 16 credits. Students must successfully complete the total number of credit hours as outlined in the respective catalogs and sections describing these certificates.
2. **GPA requirement:** Students must successfully complete all courses for the certificate as outlined in the catalog and have a cumulative GPA of 2.0 or greater in all courses required for the certificate, but may have a cumulative GPA of less than 2.0 for courses taken outside of the certificate.
3. **Residency:** A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Certificate of Completion

The Certificate of Completion requires a minimum of 16 credits (other Title IV requirements must be met to be eligible for financial aid) and has been approved through the academic review process. These courses can be a subset of those required for a corresponding Applied Associates Degree. These certificates are recorded on the student's transcript.

Requirements for certificates are found in the respective catalogs and sections concerning these programs. The following requirements apply to all certificates.

1. **Minimum Credit Hours:** The number of credit hours varies from certificate to certificate. Students must successfully complete the total number of credit hours as outlined in the respective catalogs and sections describing these certificates.
2. **GPA requirement:** Students must successfully complete all courses for the certificate as outlined in the catalog. In addition, students must have a cumulative GPA of 2.0 or better in all courses taken at NMSU or one of its community colleges.
3. **Residency:** A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges.

Associate's Degree

Associate's degrees are of two types. The academic associate's degree prepares students to transfer to a baccalaureate program and generally includes credits toward the first two years of a four-year degree. Academic associate's degrees include the Associate of Arts, the Associate of Science, and other named degrees that link to a specific major (the Associate of Education, for example). Other associate degrees, typically called Associate of Applied Science, prepare students for entry into the workforce. Credits for these programs may or may not apply toward a four-year degree. Associate degree seeking students who are interested in a dual degree should consult with their academic advisor. The Associate of Arts and the Associate of Science degrees cannot be earned together. The Associate of General Studies degree may not be earned with other associate degrees.

Students interested in transferring to NMSU or another four-year institution should check the appropriate sections of the university catalog for more information.

Requirements for the two-year associate degrees are found in the respective catalogs and sections concerning these degrees. The following requirements apply to all associates degrees:

1. **Minimum Credit Hours:** a minimum of 60 credits (excluding "N" suffix courses). Some programs of study require coursework in excess of the 60 credit-hour minimum.
2. **New Mexico General Education-** state mandated general education courses (as specified in General Education section); such course are designed with a "G"
 - a. For Associates Degrees: 32-35 credits
 - b. For Applied Associates Degrees: 15-18 credits
3. **GPA requirement:** Students must have a cumulative GPA of 2.0 or better in all courses taken at NMSU or one of its community colleges.
 - a. For Associates Degrees: students must earn a C- or better in classes they take to meet the Basic Skills requirement (ENGL 1110G and one of several math course options).

- b. For Applied Associate Degrees: Basic Skills requirements do not apply, but if the student plans to pursue a Bachelor's degree at any point in the future it would be highly recommended.
4. **Residency** - A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.
5. **Major**: All requirements for at least one major field of study as specified in the college and departmental sections of the respective catalog.

Associate Major

An associate major, consisting of at least 18 credits, may include courses from more than one department. Requirements for the Associate Majors are specified in the respective Community College Catalogs.

Graduate Outcomes

Upon graduation, students of NMSU Carlsbad will be able to satisfactorily demonstrate:

- Effective communication skills in reading, writing, listening, and speaking.
- Basic critical thinking skills including problem identification, evidence acquisition, evidence evaluation, and reasoning/conclusion.
- An understanding of personal and social responsibility.
- An ability to apply the fundamental concepts of quantitative reasoning in mathematics and science.
- Appropriate information and digital literacy, and skills for personal and professional use.
- An understanding of the fundamental concepts for analyzing significant primary texts and/or works of art, including fine arts, literature, music, theater and film.

ETS Proficiency Profile Exit Test Requirement

To evaluate its graduate outcomes, NMSU Carlsbad has chosen the ETS Proficiency Profile. This exam measures students' proficiency in reading, writing, mathematics, science and critical thinking. **All students who are graduating with an associate degree should take this exam within the last two semesters of their program.** Some courses have incorporated this exam into the required coursework. Students will be given information about the exam site and date at the time that they apply for graduation.

International Students

The general policies of the university as outlined in this catalog apply to international as well as domestic students. However, some special policies are required by federal laws applicable only to international students.

An international student is any individual attending NMSU while present in the United States on a non-immigrant student visa. Legal immigrants or refugees must present documentation of their status either to University Admissions or to the International Student & Scholar Services (ISSS) Office.

U.S. Citizenship and Immigration Services (USCIS)

The United States Department of Homeland Security has established rules for students in non-immigrant status, such as those with F-1 or J-1 visa types. Some of these rules include:

1. Each student must maintain full-time student status for both the fall and spring semesters.
2. International students may not work off campus without authorization. On-campus employment may be authorized under certain conditions.
3. All international students must maintain an up-to-date record in the ISSS Office. This record must indicate the student's current living address and local phone number.
4. Prior to admission, a prospective international student must demonstrate the following:
5. Academic ability to succeed in the chosen course of study
6. Adequate financial support to complete the chosen course of study
7. Adequate command of the English language to maintain legal status as a full-time student for the fall and spring semesters.

University Procedures for International Students

Regular Undergraduate Admission and English Requirements

After regular and full admission to an NMSU degree program, each international undergraduate student is administered an English Language Proficiency Test (ELPT). Based on the results, the student is either assigned to ENGL 1105M Intermediate ESL Composition and Grammar Review (a bridge course designed to ensure success in ENGL 1110M Composition I Multilingual), or allowed to enroll directly into ENGL 1110G Composition I. International students excused from ENGL 1105M Intermediate ESL Composition and Grammar Review will be required to take ENGL 1110G Composition I, including students whose native language is English. The student may then be required to complete one or more regular English classes as required for a particular degree. Completion of basic English courses at other U.S. institutions does not automatically satisfy this requirement. Equivalencies for ENGL 1105M Intermediate ESL Composition and Grammar Review is determined by CELP, and equivalencies for ENGL 1110M Composition I Multilingual and ENGL 1110G Composition I are determined by the English department.

Students who fail to achieve an adequate score on the ELPT may be denied admission into their program of study and will not be allowed to continue their study in a degree program at New Mexico State University. The Center for English Language Programs (CELP) and the English Department reserve the right to require additional testing for any student completing the ELPT for verification of language proficiency. Students required to complete additional testing will be handled on a case-by-case basis. All additional testing will be completed via Institutional TOEFL (pBT).

English Language Proficiency

NMSU requires a score of 520 paper-based or 68 internet-based or better on the Test of English as a Foreign Language (TOEFL), or a score of 6.0 on the International English Language Testing System (IELTS), for all international students, both nondegree and degree seeking. International students may also demonstrate English proficiency by satisfactorily completing NMSU's Center for English Language Programs (CELP). A waiver of the TOEFL requirement may be considered for

1. Students who are native speakers of English.
2. Students completing high school in the United States who
 - a. have attended the high school for at least two full semesters and
 - b. have scored in at least the 75th percentile in English on the ACT.
3. Students transferring from a junior college, or university in the United States who have earned a minimum of 30 acceptable semester credits (45 acceptable quarter credits) with a GPA of 2.0 or better (acceptable credit means classes that require a high proficiency in both written and oral English).
4. Students demonstrating English-language proficiency using methods accepted by the Undergraduate Admissions Office.
5. Students enrolling in certain programs where English language proficiency is not required.
6. Students completing coursework in CELP. Satisfactory completion requires a final grade of no less than 70% in all courses. Visit <http://celp.nmsu.edu/> (<http://celp.nmsu.edu/>) for full details.

The university reserves the right to require any prospective international student to meet the TOEFL requirement.

Conditional CELP Admission and English Requirements

NMSU, via CELP, conducts an Intensive English Language Program (IELP) for undergraduate and graduate students prior to pursuing their degree programs at NMSU. Subject to all other admission requirements, international students in this program are admitted to the university for the sole purpose of studying English, with a guarantee of full admission to the university upon completion of the CELP program. Only undergraduate students who are conditionally admitted and complete the full sequence of IELP courses will be admitted directly into ENGL 1110M Composition I Multilingual. Placing out of levels by retaking the TOEFL is not allowable once conditional admission status has been granted. Visit <http://celp.nmsu.edu/> (<http://celp.nmsu.edu/>) for full details.

Financial Support

No financial aid is available from NMSU for international students. The university reserves the right to require advance deposit of funds for any period deemed reasonable prior to granting admission. An international student can never qualify for residency and must pay nonresident fees. Each prospective international student must submit a current financial support document with his/her application. This document must show that:

1. The person providing the financial support has the necessary funds.
2. The funds can be transferred from the student's home country to the United States.

Admission Restrictions

International student admission may be prohibited based on one of the following conditions:

1. The dean of a chosen college and the department head of a chosen major or the President of a Community College campus may refuse to grant admission.
2. There may be a disproportionate number of international students or a disproportionate number of a particular nationality in one department, college or community college.
3. Academic advisors may not be available.
4. International students may be nondegree if admitted as exchange students, or as part of a special program, or as holders of visas that allow incidental studies related to their current non-immigrant status. (e.g., J-2 or H-1B).
5. Non-native speakers of English are not normally admitted, or allowed to begin studies, in the summer sessions. There are some exceptions such as students admitted to NMSU's Center for English Language Programs (CELP).
6. University Community College campuses reserve the right to refuse admission to international students if the necessary immigration and English-language support services are not available.

All application material, including the application for admission, letters of recommendation, transcripts or national examination scores and/or transcripts from colleges or universities (with an English translation), test scores including the TOEFL or IELTS, should be sent to the University Admissions Office by the following recommended dates. Proof of adequate financial support should be sent directly to International Student & Scholar Services.

March 1¹

for fall semester

October 1¹

for spring semester

¹ Contact the academic department for specific deadlines. Contact the Office of Study Abroad for exchange program admission deadlines.

Miscellaneous Regulations

1. All international students are required to have coverage at the Student Health Center except when the Las Cruces campus Student Health Center is not available to them.

2. All international students are required to purchase health insurance at the Student Health Center. Exceptions for alternate health insurance plans must be pre-approved by the ISSS Office. Students without insurance will not be allowed to register.

3. New international students are not permitted to register until all ISSS requirements are met, including attending orientation and taking the English Language Placement Test. All international students, are therefore, required to report to the office to which they were admitted. The following are the offices that a student may need to report to:

- Las Cruces campus: International Student & Scholar Services, Garcia Annex, room 246 (exchange students need to report to the Office of Study Abroad)
- Doña Ana Community College: International Student & Scholar Services, Garcia Annex, room 246 (exchange students need to report to the Office of Study Abroad)
- Alamogordo Community College: Office of Student Services, Student Services Building, second floor
- Carlsbad Community College: Office of Student Services, 1500 University Drive, Room 111
- Grants Community College: Office of Student Services, Walter Martinez Building, Main Office Complex

4. Undergraduate students are required to carry at least 12 credits per semester. Students in non-degree exchange J-1 visa status must be engaged full time in a prescribed course of study as determined by the NMSU Responsible or Alternate Responsible Officer (RO/ARO).

Military and Veterans Programs (MVP)

NMSU is a veteran and military friendly university which strives to provide the best possible service to our current and former service members as they pursue their educational goals. NMSU Military and Veterans Programs promotes lifelong learning and professional development for veterans, active-duty military and their families, assisting them in their higher education goals by offering:

- Affordable, in-state tuition rates for active-duty military personnel and dependents living at a regional military installations
- Affordable, in-state tuition rates for veterans receiving U.S. Department of Veterans Affairs education benefits
- Easily transferable credits that count toward degrees at NMSU Carlsbad
- Facilitation of all Department of Defense Tuition Assistance (TA) Benefits
- Courses taught online and at locations on and near regional military installations
- Innovative technology and course delivery methods
- Internships for veterans
- Student advocacy at every level, from admissions to graduation
- Resource materials from a variety of veteran and military service organizations
- Priority registration for all military and veteran students
- Veterans on Campus Training by Kognito, training faculty and staff on our student veterans and the unique value they bring to campus
- Salute Honor Society for student veterans
- Connect with student organizations
- A tradition of quality education.

NMSU degree programs are approved by the State Approving Agency Director at the New Mexico Higher Education Department. Eligible students may receive education benefits from the U.S. Department of Veterans' Affairs. For further information, contact the Military and Veterans Program by contacting the Carlsbad Student Services Office.

Costs

Active-Duty

Active-duty military personnel (Armed Forces), stationed in New Mexico or at Fort Bliss, Texas may complete a Resident Tuition Application for Active Duty Military waiver to qualify for in-state tuition. Spouses and minor children of active duty personnel who are stationed in New Mexico and Fort Bliss, Texas who are not otherwise entitled to claim in-state residency, may apply for in-state tuition by submitting a Resident Tuition Application for Active-

Duty Military waiver to the Military and Veterans Programs office. Applications are available through the University Student Records Office, online at <http://mvp.nmsu.edu> or by contacting the Carlsbad Student Services Office.

Dependents Receiving VA Educational Benefits

Per NM 2015 HB 427:

A spouse or child of a veteran of the armed forces is entitled to pay tuition and fees at the rate provided for New Mexico residents; provided that the spouse or child is eligible for benefits pursuant to the federal Post-9/11 Veterans Educational Assistance Act of 2008 or any other federal law authorizing educational benefits for a veteran and the dependents of a veteran. Applications are available by contacting the Carlsbad Student Services Office.

Veterans

Veterans receiving U.S. Department of Veterans Affairs education benefits are eligible for in-state tuition through the Veterans In-State Tuition Act by submitting a Non-Residency Tuition Application for Veterans of the U.S. Armed Forces waiver. For further information concerning approved programs and application process, eligible persons should contact the Carlsbad Student Services Office.

Veteran students enrolled under the following programs are responsible for their tuition and fees in the same manner as a non-veteran student.

- Montgomery GI Bill[®] Active Duty (CH30)
- Dependents (CH35)
- Montgomery GI Bill[®] Selected Reserve (CH1606)
- Reserve Educational Assistance Program (REAP) Tuition and fees of students enrolled under the Vocational Rehabilitation Program (CH31) will be paid by the U.S. Department of Veterans Affairs under contract with the university.

Regulations

Note: These regulations apply to all campuses of NMSU and are effective with the publication of this catalog. Tuition amounts, fees and similar items subject to annual review and change are all effective with the current catalog.

The Veterans' Administration (VA) has approved NMSU Carlsbad courses for study by veterans and others who qualify for veteran's educational assistance. Processing of applications and certifications takes from 4 to 6 weeks and should, therefore, be initiated well in advance of course registration. Veterans must bring their course schedule to the NMSU Carlsbad Student Services Office each semester for continued certification. The Veterans' Administration toll free number is 1(888) 442-4551.

Veterans must maintain satisfactory attendance, conduct and progress. If the veteran does not meet the standards set by NMSU Carlsbad, the certifying official must notify the VA, at which time the VA will discontinue benefits.

If the university has liability claims filed against it as a result of a veteran failing to meet compliance requirements of the VA, the university will not release any academic records on the veterans until such time as the veteran has reimbursed the federal government for funds drawn in violation of those requirements.

Credit for Military Service

New Mexico State University will award academic credit to United States military personnel for courses and Military Occupational Specialties (MOS), based on the American Council of Education Guide (ACE) as well as through national standardized tests, such as CLEP, AP, PEP and DANTES. Credit for military-training is in accordance with NMSU Faculty Senate Legislation Proposition 24-07/08, which was passed in May 2008. Military Training and Military Occupational Specialties (MOS) must have a recommendation evaluation by ACE (in the ACE Guide) for credit to be awarded. Courses accepted for transfer credit become part of the student's official NMSU transcript and academic record. If a student wishes to appeal a decision regarding the acceptance of military training/education and/or MOS for academic credit, the student must submit a written statement of appeal to the CAO/Provost. The CAO/Provost will review the merits of the appeal and render a decision. The decision of the CAO/Provost is final.

Only Primary MOS(s) are eligible for academic credit in the initial review and evaluation. Credit for Duty and/or Secondary MOS may be eligible for academic credit if the student petitions the CAO/Provost. Primary MOS is the primary specialty of a soldier and reflects the broadest and most in-depth scope of military experience. Veterans, active-duty personnel, National Guard and Reservists who are current students or students applying for admission to New Mexico State University may be granted academic credit on a case-by-case basis upon evaluation of military transcripts – the Joint Service Transcript (jst.doded.mil) and the Community College of the Air Force transcripts. Course equivalencies and credit hours awarded for a particular NMSU degree are determined by college and/or academic departments. Credit hours may be awarded for specific courses toward degree requirement or as elective credit. The number of credit hours awarded will be determined by the college and/or academic department.

NOTE: Students submitting military transcripts for credit evaluation must keep in mind the Maximum Time Frame policy. See Financial Aid Section.

Tuition Assistance

Tuition Assistance (TA) is a benefit paid to eligible active duty members of the Air Force, Army, Coast Guard, Marines and Navy. The Department of Defense (DoD) has given each service the ability to pay up to \$250 per semester credit hour of the actual cost of tuition (no fees) during the fiscal year

(Oct. 1 - Sept. 30). TA will pay for up to 13- semester hours of a bachelor's degree and up to 39 semester hours of a master's degree. TA must be requested and approved prior to the start date of the course.

Service members must first be admitted to NMSU before they may enroll in any classes at NMSU.

Please be aware of our admission and registration process:

1. Service members must apply online to be admitted,
2. login to my.NMSU.edu (<http://my.nmsu.edu>) to register for classes, and
3. create an account and Request TA through their service online portal. Each service has its own criteria for eligibility, application process and restrictions. Refer to our website for service login information: <http://mvp.nmsu.edu/tuition-assistance> (<http://mvp.nmsu.edu/tuition-assistance/>)

It is important to request TA for the same class and section number as enrolled in NMSU for tuition and grading purposes. Only enrollments requested and approved through their service online portal will be eligible for TA. Refer to our website for further information at <http://mvp.nmsu.edu/tuition-assistance> (<http://mvp.nmsu.edu/tuition-assistance/>) or contact the Military Programs Coordinator for assistance at mvp@nmsu.edu or (575) 646-4524.

Military/Veteran Graduate Student Status

Veteran benefits are determined by the number of graded graduate credits of enrollment for a given semester or summer session. Listed below are the credit hours that determine student status for military veterans.

Fall and Spring semester: full-time enrollment includes 9 or more graded credit hours. Students are considered three-fourths time if they are enrolled in 7 to 8 credit hours. Half time enrollment is 5 hours. Veterans enrolled in less than 5 credit hours are reimbursed for tuition and allowable fees only.

There are several sessions within the summer term. For the 10 week summer session, full-time enrollment is 6 credit hours and half time enrollment is 3 credit hours. During the five week sessions, full-time enrollment is 4 graded credit hours.

Military Withdrawal

The following steps must be taken by all New Mexico State University students called up for active duty who wish to withdraw from their classes:

1. Military and Veterans Programs: VA student ordered to Active Duty must provide a copy of orders to the Carlsbad Office of Student Services. To assist in reporting accurate information to the VA Regional Office, student should also provide, in writing, the last day of class attendance.
2. Carlsbad Office of Student Services: All students presenting their orders to the Carlsbad Office of Student Services will receive a military withdrawal from classes and a full tuition and fees refund for that semester.
3. Bookstore: Students who still have their receipts for textbooks purchased the semester in which they are called to active duty will be given a full refund for these textbook purchases when they present their orders.

Veterans' Attendance and Satisfactory Progress

The U.S. Department of Veterans Affairs requires all veterans receiving VA education benefits to make satisfactory progress and systematic advancement toward an educational objective or be liable for over-payments. Satisfactory progress and regular class attendance are expected of such students.

If a veteran receiving benefits is suspended for academic reasons, benefits are terminated and will be restored only after readmission to NMSU.

If the university has liability claims filed against it as a result of a veteran failing to meet compliance requirements of the U.S. Department of Veterans Affairs, the university will not release any academic records on the veteran until such time as the veteran has reimbursed the federal government for funds drawn in violation of those requirements.

A student receiving VA education benefits who is pursuing a degree program offered by New Mexico State University should adhere to the curriculum of that program. Failure to do so will result in the student being certified for less than full-time status or becoming liable for an over-payment.

Resources for Students

Responsibility of Veteran Students

Students must be pursuing a degree in a specific program to be eligible for benefits. Admission procedures for veterans and other eligible persons are the same as for all students. Academic advisors must submit degree plans to the Carlsbad Office of Student Services prior to certification. For continued certification, students must submit a Concise Student Schedule to the Carlsbad Office of Student Services every semester.

Veterans must notify the Carlsbad Office of Student Services when any of the following occurs:

- Dropping or adding course(s)
- Withdrawing from course(s)
- Discontinuing regular class attendance
- Changing programs (academic majors)

VA education benefits are payable for regular attendance in courses that are part of the veteran's program (major) curriculum. VA educational benefits are not payable for:

- Classes not attended regularly
- Repeating a course for which a passing grade was received
- Classes for which credit is received through successful completion of a proficiency test or grade by examination
- Classes taken on an audit basis
- Classes that are dropped or withdrawn from
- Classes that are not part of the veteran's program (major) curriculum

Allowing Veterans to Attend or Participate in Courses Pending VA Payment

Background

Section 103 of Public Law (PL) 115-407, 'Veterans Benefits and Transition Act of 2018,' amends Title 38 US Code 3679 by adding a new subsection (e) that requires disapproval of courses of education, beginning August 1, 2019, at any educational institution that does not have a policy in place that will allow an individual to attend or participate in a course of education, pending VA payment, providing the individual submits a certificate of eligibility for entitlement to educational assistance under Chapter 31 or 33.

Pending Payment Compliance

In accordance with Title 38 US Code 3679(e), New Mexico State University adopts the following additional provisions for any students using U.S. Department of Veterans Affairs (VA) Post-9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation & Employment (Ch. 31) benefits, while payment to the institution is pending from VA. New Mexico State University will not:

- Prevent the student's enrollment;
- Assess a late penalty fee to the student;
- Require the student to secure alternative or additional funding;
- Deny the student access to any resources (access to classes, libraries, or other institutional facilities) available to other students who have satisfied their tuition and fee bills to the institution.

However, to qualify for this provision, such students may be required to:

- Produce the VA Certificate of Eligibility (COE) by the first day of class;
- Provide a written request to be certified;
- Provide additional information needed to properly certify the enrollment as described in other institutional policies

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at <https://www.benefits.va.gov/gibill> (<http://www.benefits.va.gov/gibill/>).

Recognition of Academic Achievement

Degrees and Certificates earned are recorded on the student's academic record.

Attendance at Commencement

The Vice President for Student Services "VPSS" will confirm eligibility to participate in commencement exercises held at the close of the spring semester. Eligible candidates (registered for final degree requirements, as certified by the VPSS) and degree recipients from the previous summer and fall sessions will participate in the spring ceremony.

Commencement is a symbolic ceremony. Participation in commencement does not, in itself, mean that a student is considered a NMSU graduate. In order to be awarded a degree, a student must fulfill university requirements as determined by academic colleges. The degree will reflect the graduation date from the application for degree in which all degree requirements were determined by the academic colleges.

Applying for One-Year Certificate or Two-Year Associate Degree

Eligible students are required to submit an application for a certificate or associate degree by the deadline and pay applicable fees as published in the Schedule of Classes for the semester. The certificate application forms are available in the Student Services Office and information regarding the online degree application process is available at <http://registrar.nmsu.edu/registrar-services-online/>. It is recommended that students print a certificate or degree audit through their my.nmsu.edu (<http://my.nmsu.edu>) account and have it reviewed by an academic advisor in Counseling and Student Development Center at least one semester prior to registration for their last semester and also give a copy of the audit to Student Services Office staff for the student file. If certificate or degree requirements are not completed during the semester for which the student applied, the student must reapply and pay applicable fees.

The earliest catalog you may select is the catalog in effect the first semester you attended college, or any subsequent catalog, provided it is not more than six years old when requirements are met.

Recognition of Academic Achievement

NMSU has a number of university-wide programs that recognize academic achievement. These include the Honors College, the Crimson Scholars Program, the dean's report of academic achievement and graduation with honors. In addition, many colleges and departments have their own programs and awards that recognize the academic achievement of their students.

Crimson Scholar Programs

Crimson Scholars is a recognition program for academically superior students. You do not need to apply to be Crimson Scholar. At the beginning of each semester that you qualify as a Crimson Scholar, you will receive an email message confirming your status. Crimson Scholars receive a number of benefits, including:

Privileges

- You become automatically eligible for all Honors classes;
- Early Registration allows you to have the first choice of classes;
- Library Privileges include being able to check books out for an extended period;
- You may have the opportunity for independent study, research projects and other meaningful work, guided by NMSU faculty;
- Eligible Crimson Scholars receive a lapel pin (Crimson Status for 24 credits), recognition on the commencement program (Crimson Scholar status for 75 credits) and notation on their transcript as a Crimson Scholar Graduate (Crimson Scholar status for 90 credits).

Qualifications

- **Degree seeking undergraduates**, enrolled for three or more credits per semester at NMSU (main campus or one of the branch campuses);
- **New Freshman** (27 credits or less) with an ACT composite score of 26 or better (or an equivalent SAT score), or an ACT score of 24-25 (or an equivalent SAT score) and a 3.75 or higher High School GPA are eligible. These students must maintain a 3.5 minimum cumulative GPA to continue in the program;
- **Transfer Students** must have a 3.5 minimum cumulative GPA at their previous institution(s) to be eligible and must maintain a 3.5 cumulative GPA to continue in the program;
- **Sophomores, Juniors and Seniors** must have a 3.5 minimum cumulative GPA to continue in the program;
- **Currently enrolled** Crimson Scholars whose cumulative GPA drops below the required 3.5 will be dropped from the program. If the student's cumulative GPA again meets minimum requirements the following semester, the student will **automatically** be reinstated.

Dean's Report of Academic Achievement

Following the close of the semester, the Carlsbad Office of Student Services publishes a list of students who have achieved honor standing in grades for the previous semester. To be eligible, a student must have been enrolled in 12 or more semester credits with a computable grade in each. The top 15 percent of eligible students by college for that semester will be named to the Dean's Honor list.

Graduation with Honors

To be eligible for a four-year degree with honors, a student must have earned at least 60 semester credits in computable grades while in residence at New Mexico State. The number of students at graduation receiving degrees with honors in any one year shall not exceed 15 percent. To receive high honors, a student must be in the top 1.5 percent of the graduating class by college. One person from each college will receive highest honors. In case of a tie, the student with the greatest numbers of credits earned at NMSU with computable grades will be awarded highest honors for each college. Of the students receiving highest honors from the fall and spring commencements, the student with the highest grade-point average and the greatest number of credits earned at NMSU with computable grades will be awarded the Class of 1919 Scholarship Plaque.

Registration

Ongoing registration for Fall semester is scheduled April through August, prior to the first day of instruction and registration for Spring semester is scheduled November through January, again prior to the first day of instruction.

Repeating Courses

A student may repeat a course in which a D or F grade has been earned. A computable grade (excluding I, W, RR, AU, CR, S or U) in a repeated course may be submitted in the calculation of the grade point average, though the original grade also remains on the transcript. The first occurrence with a C- or better grade will count in earned/passed hours. Future attempts will not count in earned/passed hours. If a student repeats a course eligible for grade substitution in which he has earned a D and fails the course, the second grade of F may be substituted for the original grade.

Neither credits nor grade points may be earned by repeating a course for which a grade of C or higher has already been received. Repeat options applies only to eligible courses that were completed prior to the time a student was awarded a degree at NMSU.

Resources for Students

Advising

Individual academic advising is available to all current and potential students. Advisors help individuals understand and utilize placement test results, set and reach academic goals, decide upon a major course of study, select appropriate courses and facilitate successful transfer to a four-year institution. To make an appointment, go to <https://carlsbad.nmsu.edu/advising/>, visit Student Services in Room 111 of the main building, or call (575) 234-9221.

Pursue Your Ambitions Through Distance Education

Get ahead in your career with a nationally recognized and affordable education from New Mexico State University. Our expert faculty members deliver knowledge at your convenience. Our distance education programs are designed to serve students who may not be able to pursue an education through traditional means. Many programs are 100% online and our distance education courses are delivered using the most innovative technology and methods available, including web-based technologies, Interactive Television, faculty exchanges, and off-site classes.

Online Education that Works for You

NMSU offers 70+ online programs which include a variety of bachelor's, master's and doctoral programs, as well as certificate and licensure options. View [here](http://distance.nmsu.edu/) to learn more about distance education (<http://distance.nmsu.edu/>) at NMSU.

Online Courses at NMSU

NMSU offers online and weekend courses every semester. The Las Cruces campus courses are available online to meet most of the general education requirements for bachelor's degrees at NMSU. Additional general elective courses may be available on nights, weekends or online from other NMSU campuses. Search the course schedule (<https://courselookup.nmsu.edu/>) for a complete list of online course offerings by semester.

Note: If you are an international student interested in online courses please consult with the Office of International Student and Scholar Services (<http://iss.nmsu.edu/>) for guidance that may affect your eligibility to take online courses.

Degree Audit

Students have access to Degree Audit System (STAR) available through their student online account at <http://my.nmsu.edu> (<https://idp.quicklaunchsso.com/authenticationendpoint/login.do?commonAuthCallerPath=%2Fpassivests&forceAuth=false&passiveAuth=false&tenantDomain=nmsu.edu&wa=wsignin1.0&wct=2019-05-13T22%3A56%3A11Z&wctx=rm%3D0%26id%3Dpassive%26ru%3D%252fcas%252flogin%253fservice%253dhttps%25253A%25252F%25252Fmy.nmsu.edu%25252Fc%25252Fportal%25252Flogin%25252Fwtrealm=https%3A%2F%2Fcps55.quicklaunchsso.com%2F&sessionDataKey=fcff5a1-94c0-47f7-9a25-82ac3755be44&relyingParty=https%3A%2F%2Fcps55.quicklaunchsso.com%2F&type=passivests&sp=cps55.quicklaunchsso.com&isSaaSApp=false&authenticators=BasicAuthenticator:LOCAL>). To self-check progress toward a degree, students must select the college, the degree and the year they met the requirements. The reports are self-explanatory. See an advisor for assistance, if necessary.

Technology-Based Programs

Distance Education programs listed under this category are delivered primarily using distance learning technologies. In some cases, programs may require brief residencies on the Las Cruces campus for orientation, assessment, or other activities. Technologies used to deliver distance learning education include:

- Instructor Canvas – the learning management system, enables instructors to utilize the Internet in the delivery of a course
- Adobe Connect – the web-conferencing system, offers a synchronous Web delivery solution for conducting virtual or live classroom events through the Web
- Instructional Media Services – provides course delivery through a variety of synchronous and asynchronous technologies. Courses may use what is known as a “blended approach” to instruction by integrating two or more types of technologies shown above to promote engaging and effective learning.

ID Card Services

The NMSU Aggie ID Card is the primary source of student identification for the campus. The Aggie ID Card serves as a membership card for meals, Aggie Cash, as a key in some residential buildings, carries proof of eligibility for access to athletic events and allows for other student services. This information is added to your card after registration for classes and financial arrangements have been completed. Please visit idcard.nmsu.edu (<http://idcard.nmsu.edu>) for more information.

Aggie Cash is a pre-paid account that allows you to use your Aggie ID Card to make purchases at locations all over campus. The NMSU Enhanced Aggie ID Card allows your student card to also be your Wells Fargo debit card. The Business Office has the information you will need. For more information please contact us at (575) 234-9200.

Information and Communication Technologies

Information and Communication Technologies (ICT) provides the university community with the computing resources and services that support the educational, research, and public service missions of the university. The resources include NMSU's central computing systems, the network that supports the systems and the wired and wireless functionality through which the internet is accessed. ICT also provides support for NMSU technology users through its Help Desk. For further information, contact ICT at (575) 234-9448.

Student Accessibility Services

For a complete listing of services offered, please see section in Academic Support Services, Costs, Campus Resources, Student Activities. (<https://catalogs.nmsu.edu/carlsbad/academic-support-services-student-activities/>)

Student Life and Government

Although NMSU Carlsbad does not maintain dormitories, the Student Services Office can be instrumental in helping students locate suitable housing.

Academic programs and student activities at NMSU Carlsbad are available to all students without regard to race, ethnic origin, creed, religion, gender, sexual orientation, disability or national origin. Students who possess a disability that impacts a major life activity may request and receive academic accommodation assistance as appropriate.

To begin the process of securing academic accommodations, students must first self-identify with the Student Accessibility Services Coordinator in the Counseling and Student Development Center. Visit room 111 or call 234-9321 to make an appointment.

The provisions of this catalog are not regarded as a contract between the students and NMSU Carlsbad. The college reserves the right to alter, amend or revoke any rule or regulation and to otherwise change any provision or requirements when such action will serve the interests of the student or the college. Our policy is to give advance notice of such changes whenever feasible. Unless the change in a rule or regulation specifies otherwise, it shall become effective immediately. Without limiting the extent of its powers to alter, amend or revoke rules and regulations associated with its delivery of instruction and academic support services, NMSU Carlsbad reserves the right to make changes in degree requirements in agreement with NMSU Las Cruces, by:

- **Altering the number of credits and/or courses required in a specific certificate or associated degree program;**
- **Delete courses;**
- **Amending courses by increasing or decreasing the credits of specific courses or varying the content of specific courses;**
- **Offering substitute courses in the same or cognate field; and/or**
- **Adding, altering or deleting academic programs, related offerings and support services.**

Whenever curricular changes alter an enrolled students' program and academic progress toward graduation, NMSU Carlsbad will make every reasonable effort to help that student complete his or her studies in a timely manner. Faculty and academic advisors may assist any enrolled student in planning a program of study. The final responsibility for meeting the requirements for graduation, however, remains with the student.

Testing Services

The Testing and Assessment Center, located in room 221 of the main building, administers the Accuplacer college placement test, the Heath Education Systems, Inc. (HESI) test, and the General Educational Diploma (GED) and High School Equivalency test (HiSET) exams. In addition, the center hosts certification testing by Prometrics for students completing the Certified Nurse Assistant Theory class. Test proctoring for students taking classes at other colleges or universities may be arranged pending staff availability and could include a fee. For more information about services, contact the Testing and Assessment Center at (575) 234-9322.

Transfer Students

Transfer students from other colleges or universities may be accepted for undergraduate studies if they have completed at least 36 credit hours with a cumulative GPA of at least 2.0. Students who have earned 35 or fewer college credits must fulfill the freshman admission requirements and have at least a 2.5 overall grade point average in college.

In applying for admission to NMSU Carlsbad, new and transfer students are advised to follow these procedures.

1. Apply for admission. Forms are available in the Student Services Office or online at <https://app.applyyourself.com/?id=nmsu-u> (<https://apply.nmsu.edu/apply/?sr=f0ef65ec-60a5-445e-abbd-4b9ef76dab10>)
2. Request official transcripts of high school or GED and all previous college course work. All Official transcripts should be mailed directly by the school or college registrar to:
NMSU Carlsbad
ATTN: Admissions Office
1500 University Drive
Carlsbad, NM 88220

3. Take placement tests in certain Math, English and Reading. The test may be waived for students who have taken the ACT within the last year, are transferring in Math, Reading or English courses or pursuing certain vocational program.
4. Meet with an advisor in the Counseling and Student Development Center before registering to receive assistance with choice or major, course information, degree plans and proper course selection.

Enter registration information by web (<https://my.nmsu.edu> (

Community/Junior College Transfers

Community/Junior college transfer students may be admitted and classified on the basis of acceptable credits earned at a two-year institution. However, transfer students are subject to the same graduation requirements as all NMSU Las Cruces campus baccalaureate seeking students. This includes the required minimum number of 48 upper division credits from courses numbered 300 or above and the requirement that the last 30 credits must be earned through this university.

NOTE: Students currently enrolled at a NMSU Community College (Alamogordo, Dona Ana, Carlsbad or Grants) are not considered transfer students. If a student wants to change campuses they must submit a **Change of Campus** form.

Transcripts

The transfer student must have official transcripts forwarded directly to the University Admissions Office by the Registrar of each college or educational institution previously attended. A student who conceals the fact that he or she has attended another college or university, and who has not had the Registrar submit a transcript for each institution whether or not credit was earned, will be subject to immediate suspension. Transcripts must be received before the date of registration. NMSU will uphold academic and judicial suspensions from other colleges and universities.

Transfer of Credits at NMSU

NMSU evaluates courses from post-secondary institutions that are regionally accredited or are candidates for regional accreditation. Provided the classes are similar or equivalent to courses offered at NMSU, credits will be matched for coursework completed with a grade of D or better. However, departments may choose to accept only courses graded C- or higher within their programs. Each college determines which transferred courses are applicable toward a degree or a minor. Grades earned in courses taken at other institutions are not included in the calculation of the NMSU GPA, except for grades earned by approved National Student Exchange students.

Transcripts may need to be re-evaluated when students transfer from one NMSU college to another.

Evaluation of Transfer Credits

Once a student has been admitted to NMSU, an evaluation of credits on a course-by-course basis is submitted to the college (by the University Student Records Office) to which the student is admitted. The student's academic dean approves those transfer courses that are acceptable toward a degree or a minor.

Credits from non-accredited institutions may be evaluated by the student's academic dean after the student has completed two semesters in full-time status with satisfactory grades. Currently enrolled students must obtain prior approval from their academic dean before work taken at another institution may apply toward meeting graduation requirements.

Transferring Courses to Fulfill the New Mexico General Education Common Core

During the 2005 New Mexico Legislative session, Senate Bill 161, consistent with requirements of state law (Chapter 224 of the Laws of New Mexico, 1995 as amended) was signed into law to further enhance and facilitate the articulation of general education courses among New Mexico's colleges and universities. In accordance with policies established by the New Mexico Higher Education Department, designated general education core courses successfully completed at any regionally accredited public institution of higher education in New Mexico are guaranteed to transfer to any New Mexico public institution. Students who have decided on a major and/or an institution at which to complete their studies should consult with an academic advisor at that particular institution to determine the most appropriate course selections. Students enrolling for the first year of study at a New Mexico college or university and considering possible transfer into a certificate and/or degree program at another institution are encouraged to take the courses approved for transfer during their freshman and sophomore year of study.

The core matrix of approved courses guaranteed to transfer and meet general education requirements at any New Mexico college or university can be found on the New Mexico Higher Education Department web site at: www.hed.state.nm.us (<http://www.hed.state.nm.us>). Courses are listed by institution, whether university or community college, under each of the five general education areas. The courses for New Mexico State University are listed in the required courses section of this catalog.

Transferring Courses within Degree Programs

To facilitate the transfer of courses within certain degree programs, New Mexico colleges and universities have collaborated to develop transferable discipline modules. These are composed of an agreed upon number of hours and courses. When discipline module courses are taken in addition to the 35-hour general education core, the total number of hours in a transfer module are approximately 64.

Transfer Credit Appeal Process

All New Mexico public post-secondary institutions are required to establish policies and practices for receiving and resolving complaints from students or from other complainants regarding the transfer of coursework from other public institutions in the state. A copy of NMSU's transfer credit policy may be obtained from the University Student Records Office or from the

Deputy Secretary for Academic Affairs
Higher Education Department
2048 Galisteo St.
Santa Fe, New Mexico 87505-2100.

Student Responsibility

Planning for effective transfer within maximum efficiency is ultimately the student's responsibility. Responsible transfer planning includes early and regular consultation with the intended degree-granting institution to assure that all pre-transfer coursework will meet the requirements of the desired degree.

Tuition, Fees and Other Expenses

All costs are given for one term/semester. The university reserves the right to change any of the charges without notice.

Campus Tuition Rates

For a full listing of all tuition rates from the NMSU System please see the University Accounts Receivable (<http://uar.nmsu.edu/tuition-fees/tuition-rates/>) website.

Undergraduate Tuition and Required Fees

Additional Fees

| | |
|------------------------------------|---------|
| Admission application fee | \$20.00 |
| Course Delivery (per credit) | \$25.00 |
| ASNMSU fee | \$33.50 |
| Certificate degree fee | \$25.00 |
| Degree application late filing fee | \$25.00 |
| Late Registration Fee Base Cost | \$25.00 |

Note: A required \$50.00 health care fee is included in full time required fee calculation.

Course Fees (Fees Assessed per Course)

Courses in computer science, physical education, manufacturing and craft skills, nursing, science, welding and other courses, may require students to pay fees to acquire special supplies. Some music courses also require additional fees. These fees are approved by the NMSU Board of Regents and are listed each semester in the Schedule of Classes published by NMSU Carlsbad. See each term's Registration Guide for lists of courses with additional fees.

Payment of Charges

By enrolling in classes at NMSU, a student makes a financial commitment to pay the tuition and fee charges associated with that enrollment. The enrollment action constitutes a financial obligation between the student and NMSU and all proceeds of this agreement will be used for educational purposes and constitute an educational loan pursuant to 11 U.S.C. § 523 (a) (8). Terms and Conditions of Course Registration are posted on the NMSU website and available in each term's registration guide. Payments can be made by mail, web, telephone, or in person at the NMSU Carlsbad Business Office. Cash, checks, money orders and limited types of credit cards are accepted. Term charges can be paid in full or paid by using a payment plan. For payment plan options visit the NMSU website. Fees vary based on the plan. All financial aid received must be paid towards balances owed. Additional penalty charges may be assessed for failure to make payments when due. The University reserves the right to deny a payment plan to any student who has a poor credit rating or who has been negligent in making payments to the University for previous debts. Course reservations may be canceled if payment arrangements for past due dates are not completed by the deadlines as outlined in a term's registration guide. Academic credits, transcripts and diplomas will be withheld until all financial obligations are paid. Students are prohibited from registering for a term until all previous debts are due to the University are paid in full.

Tuition Adjustments, Refunds and Forfeitures

Students official withdrawing or dropping courses during a semester or term are eligible for a 100-percent refund of tuition and fees through the deadlines listed online. Go to <http://registration.nmsu.edu> (<https://registrar.nmsu.edu>), click on the drop-down menu for the appropriate semester or term, and select "Important Dates and Deadlines." Students withdrawing from courses after that deadline will not be eligible for a refund and will remain liable for full tuition and fee charges. Non-attendance does not constitute an official course drop or withdrawal. All charges due to NMSU Carlsbad must be paid before refunds or adjustments will be permitted.

In case of academic or disciplinary suspension, eligibility for tuition refunds and adjustments will depend on the condition of the suspension and will be entirely at the option of the institution. Should unforeseen circumstances beyond the reasonable control of New Mexico State University Carlsbad result in curtailing classes or otherwise withdrawing services that are a normal function of the institution, refunds of any nature will be at the discretion of the college/university administration.

Payment Plan

Tuition, fees and other charges posted to the student account may be deferred and paid over the course of the semester by signing up for a payment plan. Students with an account balance of \$200 or greater must sign up for a payment plan by the "Last Day to Drop a Course and Receive a 100% Refund" date which is also known as the Census date. There is a \$25 non-refundable enrollment fee and a down payment due at the time of enrollment for fall and spring semesters and a down payment for the summer semester. Equal monthly payments are due on the 15th of each month of the semester. A \$10 late fee is assessed to the student account for late, partial or missed payments. Students who are required to sign up for a payment plan and fails to do so by the deadline will have their current semester courses cancelled.

Delinquent and Prior-Term Balances

NMSU reserves the right to cancel the registration of any student who fails to pay, when due, any indebtedness to the institution. Academic credits, transcripts and diplomas will be withheld until all financial obligations are paid.

Dishonored Financial Transactions – Checks, Credit Cards, ACH Transactions

The University charges a penalty on all dishonored cash instruments. Personal checks will not be accepted from students who have had previously dishonored checks.

Late Registration Fee

A late registration fee of \$25 is imposed if registration has not been completed before the late-registration period begins. Failure to make scheduled payments with the Carlsbad Business Office or University Accounts Receivable on due dates may result in additional liability.

Estimating Other Expenses

In addition to the direct costs stated above, other expenses per semester may include such items as textbooks, supplies and personal expenses.

Cooperative Education

Students participating in the Cooperative Education Program who receive academic credit pay the same tuition fees as regularly enrolled students. Work phase students who are assigned to campus or a nearby off-campus workstation may pay for the student wellness/fitness as if they were a part-time student enrolled in 1-5 credits.

Ways to Qualify for Lower Tuition Rates

Resident or nonresident status is determined in accordance to a uniform definition established for all New Mexico institutions by the Higher Education Department, State of New Mexico. The University Student Records Office administers residency. Information on the following programs may be obtained from the University Admissions, the University Financial Aid and Scholarship Services, the NM Administrative Code (NMAC) 5.7.18.

- American Indian Agreement
- Colorado-Arizona Reciprocal Agreement
- Dual Credit
- Fire Fighter and Peace Officer Survivor Scholarship
- Foreign Military Dependent
- Foreign Military Spouse
- Foreign Military Stationed in New Mexico
- Immigrant Student (NM HS GRAD)
- Military Dependent
- Military Spouse
- Military Stationed in New Mexico
- NM Competitive Scholarship

- Part-time Students
- Senior Citizen Waiver
- Summer Session
- Texas 135
- Veteran Waiver
- Western Undergraduate Exchange
- WICHE

Reduced Tuition Rates for Senior Citizens

Senior citizens (persons aged sixty-five years or older) who are New Mexico residents are eligible for reduced tuition under the Senior Citizens Reduced Tuition Act. The cost will be \$5.00 in tuition per semester credit, plus a \$3.00 administrative fee for a total of \$8.00. There may be additional required fees such as course or lab fees. Senior citizens may register for a maximum of 6 semester credits at the reduced rate, on a space available basis.

Contact Information

For more information, contact:

University Accounts Receivable, MSC 4570
New Mexico State University
P O Box 30001
Las Cruces, NM 88003-8001
Phone: (575) 646-4911
<http://uar.nmsu.edu>.

The NMSU System Academic Regulations

The following regulations are effective with the publication of all the NMSU system catalogs, this includes the Las Cruces-Academic Catalog, Alamogordo Community College, Carlsbad Community College, Dona Ana Community College, and the Grants Community College catalogs. All regulations in this section of the catalog pertain to all the campuses housed with the NMSU System, this means that information for students pursuing Associate Degrees/Certificates, Bachelor's Degree, and Graduate Degrees/Certificates is within the section of the catalog.

The regulations section is broken down into different areas:

- Academic Programs of Study
- Registration
- Academic Performance and Progress
- Grading
- Withdrawals
- Degree Applications, Graduation & Commencement
- Academic Standing and Probation
- Academic Misconduct and Grievances
- The University Student Records Office

NMSU offers Associate, Baccalaureate, Master's and Doctoral degrees. NMSU also offers Certificates at the associate and graduate levels.

Requirements for specific degrees and other designations are set forth by this catalog for the NMSU-Las Cruces (main) campus and the corresponding catalogs for the NMSU Community Colleges (Alamogordo, Carlsbad, Dona Ana and Grants).

Additional Degree Designations

As part of a degree program, students may also earn additional degree designations indicating fields of study such as majors, minors or concentrations.

A major is defined as a recognized area of study in which there is an extensive and well-developed curriculum offered at the university, as well as adequate library resources and support services. A minor is based on courses that encompass a recognized field of study outside the student's major. A concentration is based on a collection of coursework in an area that is part of a major program of study. Degrees and additional designations awarded, limited to majors, minors, and concentrations, will be noted on the student's transcript.

Catalog Effective Period

Beginning with 2020-2021 catalog each subsequent annual catalog edition is effective Summer Session I through Spring Semester and is considered active for an eight year period for all campuses. Curricular requirements (course requirements and number of credits required) for a specific degree or other designation may be met by completing all of the course requirements as set forth by the catalog in effect at first matriculation, or any subsequent catalog, provided the selected catalog is considered active when the requirements for graduation are met. For all other matters, the current catalog is controlling. NMSU reserves the right to withdraw courses at any time, change fees, rules, calendar, curriculum, degree programs, degree requirements,

graduation procedures and any other requirements affecting students. Except as otherwise stated here, changes will become effective whenever the proper authorities so determine and will apply to both prospective students and those already enrolled.

Application for Degree/Graduation or Certificate

Upon completion of all requirements for degrees and certificates, students will not receive their degrees automatically. In order to receive the degree or certificate, students must submit an application and pay the required fee in the semester in which the student expects to graduate or complete the degree or certificate requirements. Specified in the academic calendar for each semester is the deadline for all applications. The application must indicate/ note all designations earned. After awarding of the degree, you cannot add any additional designations.

Students who will be completing two degrees/certificates in the same semester must apply for graduation and pay the fee for each degree separately. Students applying for graduate degrees or certificates must satisfy requirements as described in the Master's, Certificates, and Doctoral Degree sections below.

Students who do not meet requirements or elect not to graduate after filing an application need to re-apply in a subsequent semester and pay another fee.

Multiple Degrees and Designations

A student may earn more than one degree or multiple degree designations by completing all of the requirements in an appropriate catalog for each degree or designation. Students completing requirements for more than one degree must apply for and pay the application fee for each degree to be awarded. Upon completion of all requirements, multiple majors for a single degree (e.g., B.A., Major in Art; Major in Anthropology) and multiple bachelor's degrees (e.g., B.A. and B.S.) will be noted on the student's academic record/transcript and may also be granted at one commencement.

Degree Revocation

The Board of Regents reserves the right to revoke a degree should it be determined upon investigation that the degree requirements were not properly met. A degree revocation must be in accordance with NMSU policy and related rules.

Honorary Degrees

Ceremonial Honorary Degrees may be awarded in accordance with NMSU policy and rules as set forth in the NMSU Regents Policy Manual and the related Administrative Rules and Procedures.

Community College Certificate

A Community College may offer two types of certificates, the Certificate of Achievement and/or the Certificate of Completion. Certificates may be awarded independently from any degree program.

Certificate of Achievement

The Certificate of Achievement is a program of study less than 16 credits and is not eligible for Federal financial aid. This Certificate provides employment related and/or career enhancing skills necessary to succeed in a job or a chosen field of study. These courses can be a subset of those required for a corresponding Certificate of Completion or Applied Associates Degree. These certificates are recorded on the student's transcript. The following requirements apply to all certificates of achievements:

1. **Minimum Credit Hours:** The number of credit hours varies from certificate to certificate but must be fewer than 16 credits. Students must successfully complete the total number of credit hours as outlined in the respective catalogs and sections describing these certificates.
2. **GPA requirement:** Students must successfully complete all courses for the certificate as outlined in the catalog and have a cumulative GPA of 2.0 or greater in all courses required for the certificate, but may have a cumulative GPA of less than 2.0 for courses taken outside of the certificate.
3. **Residency:** A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Certificate of Completion

The Certificate of Completion requires a minimum of 16 credits (other Title IV requirements must be met to be eligible for financial aid) and has been approved through the academic review process. These courses can be a subset of those required for a corresponding Applied Associates Degree. These certificates are recorded on the student's transcript.

Requirements for certificates are found in the respective catalogs and sections concerning these programs. The following requirements apply to all certificates.

1. **Minimum Credit Hours:** The number of credit hours varies from certificate to certificate. Students must successfully complete the total number of credit hours as outlined in the respective catalogs and sections describing these certificates.

2. **GPA requirement:** Students must successfully complete all courses for the certificate as outlined in the catalog. In addition, students must have a cumulative GPA of 2.0 or better in all courses taken at NMSU or one of its community colleges.
3. **Residency:** A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges.

Associate's Degree

Associate's degrees are of two types. The academic associate's degree prepares students to transfer to a baccalaureate program and generally includes credits toward the first two years of a four-year degree. Academic associate's degrees include the Associate of Arts, the Associate of Science, and other named degrees that link to a specific major (the Associate of Education, for example). Other associate degrees, typically called Associate of Applied Science, prepare students for entry into the workforce. Credits for these programs may or may not apply toward a four-year degree. Associate degree seeking students who are interested in a dual degree should consult with their academic advisor. The Associate of Arts and the Associate of Science degrees cannot be earned together. The Associate of General Studies degree may not be earned with other associate degrees.

Students interested in transferring to NMSU or another four-year institution should check the appropriate sections of the university catalog for more information.

Requirements for the two-year associate degrees are found in the respective catalogs and sections concerning these degrees. The following requirements apply to all associates degrees:

1. **Minimum Credit Hours:** a minimum of 60 credits (excluding "N" suffix courses). Some programs of study require coursework in excess of the 60 credit-hour minimum.
2. **New Mexico General Education-** state mandated general education courses (as specified in General Education section); such course are designed with a "G"
 - a. For Associates Degrees: 32-35 credits
 - b. For Applied Associates Degrees: 15-18 credits
3. **GPA requirement:** Students must have a cumulative GPA of 2.0 or better in all courses taken at NMSU or one of its community colleges.
 - a. For Associates Degrees: students must earn a C- or better in classes they take to meet the Basic Skills requirement (ENGL 1110G and one of several math course options).
 - b. For Applied Associate Degrees: Basic Skills requirements do not apply, but if the student plans to pursue a Bachelor's degree at any point in the future it would be highly recommended.
4. **Residency** - A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.
5. **Major:** All requirements for at least one major field of study as specified in the college and departmental sections of the respective catalog.

Associate Major

An associate major, consisting of at least 18 credits, may include courses from more than one department. Requirements for the Associate Majors are specified in the respective Community College Catalogs.

Baccalaureate Degree (Bachelor's Degree)

A baccalaureate or bachelor's degree provides students with a broad educational base as well as knowledge in a specific major field. Each college has unique degree requirements that are listed in the college's designated section of this catalog. In addition to the College and Department requirements, students must complete each of the following degree requirements for every Bachelor's Degree awarded by NMSU:

1. **Minimum Credit Hours:** a minimum of 120 credits (excluding "N" suffix courses)
2. **GPA requirement-** a minimum cumulative GPA of 2.0 in all courses taken at NMSU
3. **New Mexico General Education-** 32-35 credits of state mandated general education courses (as specified in General Education section); such course are designed with a "G"
4. **New Mexico State University's Viewing a Wider World-** 6 credits of Viewing a Wider World courses; such courses are designated with a "V", or alternatives as specified in the Viewing a Wider World section
5. **Upper Division Courses-** a minimum of 48 credits in courses numbered 300-499/3000-4999.
6. **Residency** – Of the last 36 credits earned toward award of the degree:
 - a. 30 credits must be completed at NMSU
 - b. 21 credits must be upper division (300/3000 or above) and
 - c. 12 of the 21 upper division credits must be within the student's major.
NOTE: colleges or departments may require that more than 12 upper division credits be within the major and they may direct that a certain number of these credits be course specific.
7. **Major** – all requirements for at least one undergraduate major field of study, other than a supplemental major, as specified in the college and departmental sections of the catalog. As an undergraduate student seeking a baccalaureate degree you are expected to declare a major prior to earning 45 credit hours toward your degree. You should complete your general education requirements within your first 90 credit hours earned

Second Baccalaureate Degree (Bachelor's Degree)

Students seeking a second bachelor's degree must complete all college, department, and major requirements for the second bachelor's degree including residency. General Education requirements, including Viewer a Wider World, are waived for a second bachelor's degree because those requirements are considered completed within the first bachelor's degree earned. Credits earned toward a previous degree may be used to complete those requirements subject to any college and department specific limitations as described in the catalog.

Bachelor's Degree Designations

Undergraduate Major

An undergraduate major consists of 24 or more credits within the major field, of which 18 credits must be upper-division courses, and may include courses from more than one department. Additional requirements for majors are specified in the college and department's designated sections of this catalog.

Supplemental Major

A supplemental major consists of 24 or more credits of interdisciplinary coursework, of which at least 18 credits must be upper-division (300/3000-499/4999), and no more than 9 credits may be from the student's major course of study. Additional requirements for supplemental majors are specified in the catalog listing of the departmental/college sections.

Undergraduate Minor

An undergraduate minor consists of 18 credits of course work, of which 9 credits must be upper-division (300/3000-499/4999). A minor encompasses courses that may be in a single department or interdisciplinary and are in a recognized field of study outside the student's declared major. At least 9 upper-division credits of a minor must be completed at NMSU. Additional requirements for minors are specified in the college and department's designated sections of this catalog. Minors cannot be earned after the degree has been conferred.

Undergraduate Concentration

A concentration consists of 12 or more credits of coursework in a specialty area that is related to a specific major field of study. At least 9 of the 12 credits must be upper-division (300/3000-499/4999), and at least 9 credits must be completed at NMSU. Additional requirements for concentrations are specified in the college and department's designated sections of this catalog.

Distance Education Bachelor's Degree Completion Program

A Bachelor Degree Completion Program allows students who have met the lower division requirements (100/1000 and 200/2000 level) of an undergraduate degree program to complete the remaining upper-division credits (300/3000 and 400/4000 level) through distance delivery courses offered by NMSU Las Cruces. Only selected degrees are available as degree completion programs. Students must complete all required lower-division (100/1000 and 200/2000 level) credits before they can be admitted to the Bachelor's Degree Completion Programs. The program(s) normally require two years of upper division (300 and 400 level) coursework.

Graduating with Honors

For information about graduating with Honors, please refer to the Recognition of Academic Achievement section of this catalog.

Graduate Degrees

All graduate degrees are subject to rules and regulations of the Graduate School. Degrees will be certified by the Graduate School only upon the complete review and clearance of the candidate's program of study.

Graduate Degree Designations

Graduate Major

A graduate major may include courses from more than one department, but as a minimum it must consist of at least 30 graduate credits. Additional requirements may be imposed by the State of New Mexico and New Mexico State University as specified in this Catalog.

Graduate Minor

A graduate minor is based on at least 9 graduate credits in courses that encompass a recognized field of study outside the student's major. Departments may require certain courses be a part of a minor and may exclude other courses.

Graduate Concentrations

A concentration is a collection of coursework in a specific area that is part of a degree program of study at NMSU. At the graduate level at least 9 of these 12 credits must be numbered 500/5000 or above. Only approved concentrations within a students' department or program may be noted on a transcript.

Concentrations will not be added to a transcript after a degree is awarded. In order for the approved concentration to be noted on the student's transcript, the following conditions must be met:

1. Request the concentration at the time they file their official program of study.
2. Identify the concentration on their official Application for Degree.

Graduate Certificates

A Graduate Certificate program requires 12-18 credits of course work that is interrelated and designed to develop a focused skill or area of expertise but does not culminate in the awarding of a degree. Courses that comprise a graduate certificate must be regular approved courses offered by the University and must be numbered 450/4500 or above. A graduate certificate is indicated on the student's transcript.

Master's Degree

New Mexico State University offers both academic and professional master's degrees. A link to the list of all master's degrees is provided in the Graduate School section of this catalog.

Underprepared students may be required to take additional general or discipline-specific undergraduate or graduate courses to prepare them for the advanced academic work necessary for success in graduate level courses in their chosen field.. This may result in an extended graduation date.

Admissions to the Master's Degree

The admission of a student into the Graduate School does not imply admission to candidacy for an advanced degree. The major department in which the student intends to become a candidate for a master's degree must determine the student's ability to pursue studies at the graduate level. Please see the Department(s) for specific requirements.

Program of Study

After the completion of one year of enrollment each new graduate student should prepare a complete program of study in consultation with the student's advisor.

Application to Candidacy

The program of study will formally list the curriculum requirements for degree completion and is required for application to candidacy. The program of study must be approved by the advisor, department, and academic dean and submitted to the Graduate School. The Program of study may specify the Catalog at the time of graduation, as long as the catalog is considered active. Otherwise, the current Catalog will be listed.

An Application for Admission to Candidacy must be filed with the Graduate School. This must be done before the completion of 12 credits of graduate coursework. The student must have a minimum cumulative GPA of 3.0 at the time the application is submitted. The application may specify the Catalog at the time of graduation, as long as the catalog is considered active. Otherwise, the current Catalog will be listed.

The student's program of study must:

1. Meet the requirements of the chosen catalog, including the regulations of the Graduate School and of the major department.
2. Be signed by the student, the student's advisor, department head, minor faculty if applicable, and academic dean.
3. List each course prefix/number, short title, credit hours and grades if available.

If the program of study does not comply with the departmental requirements or the potential degree audit, the program of study must be approved by the Dean of the Graduate School. . The Program of Study is not required for master's programs if defined within the Star Degree Audit.

Credit Hour Requirement

A minimum of 30 credits is required for the master's degree. Most master's degrees require at least 15 credits in courses numbered 500/5000 or above. This includes thesis credits for any master's programs that include a thesis option. Master's programs involving a thesis, must include, either a minimum of 4 credits or a maximum of 6 credits of thesis. Please see the "Thesis" section for more information.

At least 15 credits for the master's degree must be for work in courses within the student's department. Additional credits may be selected from other fields to fit into a logical and justifiable program. However, courses that are used to remove deficiencies or satisfy prerequisites cannot be counted as requirements for a master's degree.

Coursework Requirement

Students must take coursework from a variety of faculty. Students may not take more than half of the minimum credits required for a master's degree with the same professor, excluding thesis credits.

All graduate students are required to register for a minimum of 1 credit of graduate coursework in their final semester. Please see the Tuition, Fees and Other Expenses section for more information.

Thesis Option

A thesis in the major field is recommended and may be required at the discretion of the department. A minimum of 4 credits and a maximum of 6 credits may be counted toward the requirements for a master's degree. The final examination shall consist of an oral defense of the student's thesis as well as a general examination of the candidate's field of study.

- *Continuous Enrollment*- once registered, a student must continue to register for a minimum of 1 credit in thesis or graduate coursework each regular semester until the thesis is approved by the Graduate School and the copies have been accepted by the Branson Library binding section. .

Graduate Committee for Thesis Option

The graduate committee for the master's degree consists of a minimum of three faculty members who hold, at least, a master's degree and meet the following criteria:

1. **Committee chair:**
 - a. Must be from the student's home department
 - b. Must be a graduate faculty member
2. **Committee member(s):**
 - a. May be from outside the student's home department
 - b. Student's with a declared minor- may have the representative from a related area or be appointed by the Dean of the Graduate School.
 - c. Must be a graduate faculty member
3. **Dean's Representative:**
 - a. Must be a representative from a related area or appointed by the Dean of the Graduate School
 - b. Must be a graduate faculty member

Finalizing the Master's Thesis

After successful completion of the final examination, electronic submission of the approved thesis must be submitted to ProQuest ETD, no later than the deadline posted to the Graduate School website. The form and style of the thesis must comply with the guidelines provided in Preparing your manuscript for submission, located at <https://gradschool.nmsu.edu/wp-content/uploads/sites/5/2019/02/2.-Preparing-Your-Manuscript-for-Submission-Revised.pdf>. The guidelines also contain detailed information on the thesis submission and approval process. The thesis is not complete until the Graduate School has accepted it electronically.

Professional Degree and Non-Thesis Final Examination

Each candidate will be given a final examination conducted by their graduate committee in accordance to the schedule provided by the Graduate School. It is the department's responsibility to ensure that the Report of Results for the Master's Professional or Non-Thesis Final Exam form is submitted to the Graduate School no later than ten working days after the exam.

The final examination format for the professional degrees and non-thesis option will be determined by the department, with the approval of the Dean of the Graduate School. If a department does not specify an examination format, the final examination will consist of an oral defense of the candidate's field of study.

At the time of the final examination, a graduate student must have a cumulative GPA of at least a 3.0 and must be enrolled for a minimum of one credit hour in the final semester; or if the student is writing a thesis, he or she must have completed all course work for the master's degree.

NOTE: the cumulative GPA, will be calculated from NMSU graduate coursework only.

Any candidate who fails in the final examination may either:

1. Be granted a second examination, written or oral, after a lapse of at least one semester, only with a recommendation from the student's advisor and approval from the Dean of the Graduate School.
2. Be excluded from further candidacy for the degree.
3. Failure in the second examination disqualifies a candidate from obtaining the degree.

Students in professional or non-thesis options may be required to pay a special exam fee in lieu of registering for 1 credit of graduate coursework. Please see the Tuition, Fees and Other Expenses section for more information.

Time Limit

Students must complete the master's degree program within seven years (or eight successive summers) of the start of the degree, including completion of the master's thesis or final project. Inclusion of any coursework more than seven years old at the time of the final examination will be at the discretion of the department.

Master's Accelerated Program (MAP)

The master's accelerated program provides an opportunity for academically qualified undergraduate students to begin working on a master's degree during their junior and senior years while completing a bachelor's degree. Typically, a bachelor's degree requires four years to complete and a master's degree requires an additional two years. The master's accelerated programs allow students the opportunity to complete a graduate program in an accelerated manner.

Undergraduate students may apply for acceptance to a Master's Accelerated Program available at New Mexico State University after completing 60 semester hours of undergraduate coursework of which a minimum of 25 semester credit hours must be completed at New Mexico State University and apply towards the undergraduate major. The grade point average must be a minimum of 3.0; departments participating in the master's accelerated program may have requirements that exceed these minimum requirements. **It is the student's responsibility to meet with their financial aid advisor. Awards may be adjusted to reflect enrollment in an undergraduate/graduate program.**

Graduate departments within the colleges may allow academically qualified undergraduate students to substitute a maximum of 12 graduate course credits for elective courses in an undergraduate degree program. Graduate programs have the discretion to use up to 12 credits of NMSU coursework (450/4500 level or higher) that can logically be applied towards the completion of master's program of study. A grade of B or higher in this coursework will be required .

Program Participation Requirements:

1. Students must obtain prior approval by the graduate program
2. Student's course work must be general or discipline electives in the student's undergraduate course of study. No required courses from the undergraduate program will be accepted towards the Master's Accelerated Program.
3. Students will enroll in approved graduate level courses. If course(s) requires instructor approval, it is the students responsibility to obtain necessary approval
4. Students participating in MAP are required to submit a completed Master's Accelerated Program Referral Form to the Graduate School by the first Friday of classes, with all required signatures.
5. Students participate in the Developing New Scholars Program (DNSP) through the Graduate School. The DNSP program provides formal mentoring supporting application process to Graduate School. Upon awarding of the Bachelor's degree and formal admissions into a master's/graduate program at NMSU, the approved credits (up to 12) will be recorded on both the undergraduate and the graduate transcript.

Interdisciplinary Master's Degree

Interdisciplinary studies, at New Mexico State University, are intended for individuals specializing in programs that require the integration of more than one discipline to fully engage in the field of study. The programs provide a mechanism to address emerging scholarship, innovation and research, as well as, allow graduate students to engage in emerging technologies that optimize their education outside the traditional disciplinary boundaries. An Interdisciplinary study takes advantage of traditional academic training within specific departments and also allows students to customize their own career preparation. In these programs, a coherent common core is expected and is intended to combine existing courses across disciplines to meet unique objectives.

The interdisciplinary studies option should not be used in cases where the applicants' objectives can be realized by admission to a specific department with a degree program, and inclusion of up to two minor areas in the program of study.

Admission

Students interested in pursuing an Interdisciplinary Master's Degree (IMAS) degree must meet with the Graduate School for advisement. The advisement session will include information on completing the IMAS admission application:

1. Develop a proposal for interdisciplinary studies
2. Create the IMAS graduate committee
3. Once the student's graduate committee is designated, the committee can require additional materials such as a statement of interest, letters of recommendation, GRE or GMAT scores and a personal interview.
4. Complete the IMAS referral form and procure committee members IMAS program approval.
5. Procure academic department head IMAS referral form approval.
6. Submit IMAS referral form and proposal for interdisciplinary studies to Graduate School for admissions.

Degree(s) Awarded

Students receive a Master of Arts (MA) or a Master of Science (MS) and a concentration in the designated interdisciplinary study area.

Other conditions for being awarded a degree within the interdisciplinary studies program are:

1. The student must present a written description of the program concept consisting of the following, as well as, the designated degree being sought and a name of the interdisciplinary area:

- a. The objective of the program of study which should include, proposed areas of skill development and proposed courses in more than one graduate degree granting department at NMSU.
 - b. A justification for not using an existing degree program.
2. The student's program of study must include a minimum of 30 graduate level credits and a maximum of 36 graduate level credits. Students may take six credits in departments that do not grant a graduate degree, but the courses must be numbered 450/4500 or above and be pertinent to the program of study.
3. The majority of the departments involved in the student's program will be master's degree granting departments. The student is expected to take at least 15 credits in the primary area of study within one department. The department selected by the student will receive a copy of the student's application for admissions to the Graduate School. In addition, the student is required to select a minor area of study in another department that consists of at least 9 graduate credit hours.
4. The student will form a committee composed of members of the graduate faculty and select an advisor who will chair the committee. The chair must be from the primary department where the student has taken at least 15 credit hours listed in the proposal submitted. The other committee member must be from the department in which the student has selected a minor area of study from the approved list.
5. The student will be required to submit the Candidacy Form after they have satisfactorily completed 12 credits.
6. The program will meet all requirements of a master's degree, with the interpretation, that "major field" includes courses from two or more departments and in the designated interdisciplinary study area.
7. The program of study will include the completion of a research thesis or project. The work may be submitted in the form of a publishable manuscript, technical report, thesis or creative option.
8. The student may enroll on a part-time basis keeping in mind that coursework cannot be more than seven years old at the time of the final examination.
9. The student will be administered a final comprehensive exam that is consistent with the department selected for the primary area of study. For example, if a department requires a written exam, the student in the interdisciplinary masters will also be required to take a written exam.
10. The final oral comprehensive exam will consist of questions pertinent to the area of study and the defense of the research thesis or project. In both cases, an integrated approach to the areas of study chosen should be followed.
11. All other rules for graduate study at NMSU must be followed.

Thesis/Non-thesis Option

As with any graduate student, the student in interdisciplinary studies can select to follow a thesis or non-thesis option. Students enrolled in the thesis option register for six thesis credits. Students not wishing to follow the thesis option will be required to complete a project report. The project must reflect the interdisciplinary nature of the program which the student is pursuing.

Comprehensive Exam

Students in interdisciplinary studies take a comprehensive exam composed of questions designed by the student's committee. The committee consists of two individuals in the area of study, the dean's representative who must be outside of the department/program/interdisciplinary study option, and a committee chair.

Second Master's Degree

A student who has earned one master's degree at NMSU may be allowed to count a maximum of six semester credits earned on the first degree toward a second master's degree, if those credits fit into a logical graduate program. The number of shared credits may be increased for joint degree programs.

Teacher Licensure

Students wishing to take graduate courses for licensure, renewal of licensure or for personal enrichment must be fully admitted to a department in order to do so. Undeclared students may not register for teacher licensure classes.

Endorsement is available at both the elementary and secondary levels in bilingual education, TESOL (Teaching of English as a Second Language), reading and special education. Endorsement is also available in early childhood education at the elementary level. Contact curric-instr@nmsu.edu for more information.

Specialist in Education

The specialist in education degree is available for experienced members of the education profession who have maintained a 3.3 grade-point average while pursuing this degree or its equivalent. Programs are available in curriculum and instruction, as well as, school psychology. Emphasis is placed on the development of the competencies needed for a professional specialization in a given field. Students must complete the general application for the Graduate School and they should also check with the admitting department for specific departmental requirements.

Residency and Credit Requirements

The specialist in education degree requires a minimum of 30 credits including research, intern experiences and graduate courses. Twenty-four of these credits must be completed at NMSU to meet the campus residency requirements.

Students must maintain a 3.0 GPA, no more than 6 credits of C level work are allowed for this program.

Program of Study

After the completion of one year of enrollment each beginning graduate student should prepare a complete program of study with the student's advisor. The program of study can be tentative, should be kept in the student's file within the department, and is not considered an "Application for Admission to Candidacy."

Major Field

All course work taken for the degree should apply directly, through a logical program of study, to the specialty which candidate has selected. Each department is responsible for defining the required sequence of courses.

Candidacy

Following the successful completion of 12 credits the student is eligible for admission to candidacy. With the achievement of candidacy, a committee is appointed to work with the candidate on the remainder of the program. The committee consists of three members of the graduate faculty in the College of Education.

Internship

Each candidate will earn from three to six semester credits in an internship. This experience will consist of supervised performance of duties related to the candidate's specialty. The student's department will determine the structure of the internship and a research project will be conducted in conjunction with the internship.

Oral Examination

The oral examination committee will consist of the student's committee and a dean's representative appointed from the graduate faculty by the dean of the Graduate School. This committee will conduct an oral examination at the conclusion of the research project and no earlier than the candidate's last semester of enrollment.

The examination will consist of a defense of the project along with general questions on subject matter related to the candidate's field of study. Any candidate who fails the oral examination may upon recommendation of the advisor and with the approval of the graduate dean, be granted a second examination after a lapse of at least one semester. Failure in the second examination disqualifies the candidate from obtaining the degree.

Time Limit

The specialist in education degree must be completed within seven years following admission to the program. Inclusion of any coursework more than seven years old at the time of the final examination will be at the discretion of the department.

Doctoral Degrees

The doctoral degree requires significant scholarly study beyond the master's program.

Prospective candidates are expected to hold bachelors or master's degrees from accredited institutions, based on curricula that include the prerequisites for graduate study in the department of their subject. To be considered for admission to a doctoral program, the applicant must have a grade-point average of at least 3.0. Prospective candidates are urged to consult the department in which they wish to study for information concerning specific requirements.

Professional Doctoral Degrees

Doctor of Economic Development (DED)

Students enrolled in the Doctor of Economic Development are required to complete and pass a comprehensive examination. Since a dissertation is not required, students are expected to complete an internship experience and a project paper as defined by their program. They can embark on the project paper once they have completed and passed their comprehensive examination. Students are not required to take 700/7000 level dissertation hours. However, they are expected to complete at least 12 credits at the 600/6000 level including ECDV 694 Internship and ECDV 699 Doctoral Project.

Doctor of Education (Ed.D)

The degree of Doctor of Education demonstrates proficiency in a program of graduate study in which the emphasis is in preparation for performance in professional education. This program is intended primarily for students pursuing careers in which teaching, administration or school services are predominate rather than those in research. The Ed.D. Degree in curriculum and instruction is offered in the Department of Curriculum and Instruction; the degree in educational administration is offered in the Department of Educational Leadership and Administration.

The requirements for doctoral degrees in the two departments of the College of Education have the following distinguishing elements:

1. The qualifying examination consists of a written and an oral section, both of which are administered prior to admission to the program. Acceptance for doctoral admission is equivalent to the successful completion of the qualifying examination. Residency of at least two consecutive semesters cannot commence until the semester after the qualifying examination is successfully completed.

2. Comprehensive examinations usually are administered three times annually. The written examination tests the major and related areas of concentration and is administered after successful completion of the orals within two weeks' time. A student who fails any part of the comprehensive examination may present him or herself for re-examination of the failed part of the exam before moving on to the next part.
3. The major area of study must be within the College of Education

A minimum of nine credits constitutes the related area. The courses can be taken in any department of the university with the approval of the student's committee. The related area must be specifically planned with the major and minor departments in order for the doctoral fields to be mutually supportive. Any transfer credit or predoctoral course work to be included in the related field must have the approval of both the major and minor department at the outset. Specified course work in both research and statistics is required for this degree. Other requirements are described in the departmental sections of this catalog.

Doctor of Nursing Practice (DNP)

Students holding a Bachelor's degree in Nursing are required to complete and pass all required course work for the DNP program, as well as, complete and pass their comprehensive examination. Since a dissertation is not required, they are expected to complete an internship experience and a project paper as defined by their program. They can embark on the project paper once they have completed and passed their comprehensive examination. They are not required to take 700/7000 level dissertation hours. However, they are expected to complete at least 12 credits at the 600/6000 level including NURS 698 (Advanced Clinical immersion) credits sufficient to complete the DNP Final Project.

Students who hold a Master's of Science in Nursing are required to complete the following:

1. All course work requirements
2. Their comprehensive exam (with passing marks)
3. The DNP Project.

Post- MSN DNP students must complete at least 6 credits at the 600/6000 level, including NURS 698 credits sufficient to finish the DNP Project. Finalized projects must be uploaded to a national DNP Project repository approved by the Graduate Faculty of the School of Nursing in order to achieve the DNP degree.

Doctor of Philosophy (Ph.D.)

The Doctor of Philosophy degree requires distinguished attainment in both scholarship and original research. The doctoral degree requires significant scholarly study beyond the master's that is tailored to the needs and interests of the student. The degree is granted in recognition of the candidate's high attainments and ability in the special field, shown by work on the required examinations covering both the general and the special fields. The individualized program of study is designed to meet the campus residency requirement, includes a minimum of 30 graduate credits, and includes the preparation of a dissertation. A candidate for the Ph.D. degree is expected to maintain a higher level of work than the grade-point average of 3.0, plus at least 18 credits of dissertation work (700/7000-level courses).

Interdisciplinary Doctorate

Students interested in pursuing an Interdisciplinary Doctorate (IDOC) degree program must meet with the Graduate School for advisement. The advisement session will include information on completing the IDOC admission application.

The following requirements for admission to the interdisciplinary doctorate degree program are:

1. Students wishing to study in the interdisciplinary doctoral degree program must apply and be accepted into a doctorate-granting department.
2. A master's degree or equivalent program of study that includes at least 30 credits of graduate course work with a minimum cumulative GPA of 3.0.
3. Twelve credits of graduate course work must be completed at NMSU in order to apply for admission into the interdisciplinary doctorate degree program. Additional course work is required for degree completion.
4. Evidence of outstanding academic achievement in graduate school.
5. A written description of the program concept prepared by the student consisting of:
 - a. Areas in which competency is required
 - b. Purposed readings and course work and how these relate to required competencies
 - c. Objectives and an outline for thesis research
 - d. Justification for not using an existing departmental degree program
6. Student must select an advisor from his/her department to help structure and chair a committee consisting of at least five faculty members from the graduate faculty list who are willing to work on the interdisciplinary degree program. The committee must include at least two members from each of the two doctorate-granting departments. The committee chair will convene a meeting to review and approve the proposed program.
7. The Graduate School will send an Admission Referral document, signed by all the committee members, to the heads of all the departments from which the student proposes to use more than 8 credits of course work, or from the department which the faculty are requested to serve on the proposed committee.
8. Once the Admission Referral document has been approved by all departments, the committee chair will convene a meeting of the committee to review the student's program and make changes as necessary. In addition, the committee will set the format and date for the qualifying exam. An effort should be made to incorporate the interdisciplinary nature of the program into the qualifying exam.

9. Students have satisfied the requirements for admission to the program once the qualifying exam has been passed and the respective department heads approve the Admission Referral memorandum. Formal acceptance into a doctoral program may be required in order to receive financial assistance.
10. The number of courses required for degree completion will vary depending on the student's program of study, please see the department for more specific requirements. However, Interdisciplinary doctorate degree students must meet the requirements for residency, registration, the comprehensive examination, the Final Examination, the dissertation and the declaration of approved minor.
11. The dissertation work shall include at least 18 credits of a 700/7000-level course.

Completing your Doctoral Degree Program

Any student who fails to abide by the regulations in this section will be considered withdrawn from the university. In order to resume their studies, the student must formally apply for readmission to the Graduate School and satisfy any requirements that are in effect at the time of reapplication.

Declaration of Approved Minor

Any doctoral applicant for candidacy may declare up to two approved minors in addition to the major area of study. Demonstration of competency in the minor area will be required at both comprehensive and final examinations.

Qualifying Examination

Doctoral students must pass a qualifying examination that is scheduled by the student's advisor and is administered by the major department. Its purpose is to determine the areas in which the student shows strength or weakness, as well as the ability to assimilate subject matter presented at the graduate level. A student may not register for dissertation credits prior to the successful completion of the qualifying examination.

The following conditions apply to students who wish to take the qualifying examination:

1. For students who enter the Graduate School with little or no previous graduate experience but wish to proceed directly to the doctorate, the qualifying examination should be taken after 12 credits of graduate work
2. For students who enter with a master's degree or equivalent from another university, or another department, the qualifying examination should be taken before the completion of one semester of graduate work.
3. For students who earn their master's degree at New Mexico State University and will continue in the same department, the department may allow the master's final examination to serve as the doctoral qualifying examination or may require a separate examination.

Based on the result of the qualifying examination, the department will take one or more of the following actions:

1. Admit the student to further work toward the doctorate
2. Recommend that the program be limited to the master's degree
3. Recommend a re-evaluation of the student's progress after the lapse of one semester
4. Recommend a discontinuation of graduate work

In all cases, the Graduate School shall be notified by the department of the results of the qualifying examination.

Students will be admitted to the doctoral program once the qualifying examination is passed. The student's advisor and department head will then appoint the doctoral committee to prepare the student's preliminary doctorate program of study. The student must submit the program of study to the Graduate School immediately following admission into the doctoral program and before registering for additional coursework.

Doctoral Graduate Committee

The doctoral committee will be composed of at least four members of the graduate faculty who hold doctoral degrees. The following rules apply to the composition of the committee:

- The committee chair must be from a discipline within the student's major area.
- At least one additional member of the committee must also be from a discipline within the student's major area.
- If an approved minor is declared, at least one (but no more than two) members of the committee must be from the minor area.
- At least three committee members must be members of the graduate faculty and be from a doctorate-granting department
- Only one member may be outside of the student's department.
- One member of the committee must serve as the dean's representative. In programs where more than one department participates, the dean's representative may not be from any of those departments. The dean's representative may be one of the following
 - the member from the related area
 - a member from the minor area
 - An independent member, not from the student's department, that is appointed by the Dean of the Graduate School.

Departments may structure committees that include more than the minimum number of members, as long as the following conditions are satisfied. No changes can be made to the doctoral committee membership without prior approval from the Dean of the Graduate School.

Additional voting and nonvoting members may be any person approved or appointed by the Dean of the Graduate School

All members of the committee will attend the comprehensive oral and final defense for the student's dissertation.

Program of Study

Students should file the Program of Study Form once they have:

- Completed 1 year of enrollment while at NMSU that are beyond the master's degree
- Successfully completed the qualifying examination

The Program of Study Form should be completed and submitted to the Graduate School before registering for any additional courses. The individualized program of study is designed to meet the campus residency requirement and includes a minimum of 30 graduate credits beyond the master's.

If the Doctoral degree requires a dissertation, at least 18 credits of dissertation work must be included. The professional doctoral degree includes a practicum or special project that culminates in a written report which demonstrates a command of the relevant scholarly literature and links it to the specific clinical or practical experience.

Comprehensive Examination

The Graduate School should receive the Program of Study and the Committee for Doctoral Students Form and the Doctoral Qualifying Examination Form.

Students will be admitted to the comprehensive examination only after the following conditions are met

1. Completion of adequate course work, to the satisfaction of the major department and the Graduate School
2. The graduate committee determines the student is adequately prepared for the examination
3. Successful completion of all language requirements (where applicable)

Students must be registered for 3 credits of graduate course work during the semester in which they take the comprehensive examination. A student taking an oral examination during the summer must enroll for at least one credit for that term.

The Doctorate of Philosophy Examination or Professional Doctorate Examination Form must be on file at the Graduate School at least ten working days prior to the proposed date for the examination. The examination must be part written and part oral. The results of the oral examination will be reported to the Graduate School by the Dean's Representative of the committee.

Any student who fails the comprehensive examination may either be terminated from the doctoral program or upon recommendation of the committee and approval of the Dean of the Graduate School, be granted a second examination after a lapse of at least one semester.

NOTE: In general, there should be a time lapse of at least one year between the comprehensive and final oral examination. However, due to the type of research required and the method of administering the written comprehensive in some departments, such a time lapse is not always practical. In all cases there must be one semester between the comprehensive and the final oral examinations.

Time Limit for the Comprehensive Examination

If more than five years have passed since the date of the comprehensive examination, the candidate will be required to take another comprehensive examination before admission to the final examination.

Advancement to Candidacy

Advancement to Candidacy recognizes that the student has demonstrated the ability to sustain a level of scholarly competency commensurate with successful completion of degree requirements. Upon advancement to candidacy, the student is cleared for the final stages of the graduate program which may include a dissertation, project or written examination.

For advancement to candidacy the following criteria must be met

1. Successful completion of the comprehensive examination
2. Recommendation of the graduate committee
3. Approval of the Dean of the Graduate School

Upon receiving advancement to candidacy, students must establish residency and follow the Dissertation Registration Requirements (see Residency Requirements below).

Residency Requirements

The minimum campus residency requirements for the doctoral degree include enrollment in a minimum of 9 credit hours of program course work, including a minimum of 3 credit hours of dissertation, in at least two semesters of classes taught at NMSU. In some cases the minimum credit hour

enrollment for the two semesters required to establish residency may vary based on the instructional delivery of the program, and must have prior approval from the Dean of the Graduate School.

Dissertation Registration during Fall/Spring Sessions

After becoming a candidate, students must continue to register for at least 3 credits of dissertation or graduate course work, each spring/ fall semester until the dissertation is approved by the Graduate School and the dissertation format review has been completed. The total number of dissertation hours must be 18 credits. The doctoral committee can impose additional requirements for courses numbered 700/7000.

A student who fails to abide by these regulations will be considered withdrawn from the university and in order to resume studies, must formally apply for readmission and satisfy the requirements in effect at the time of reapplication.

Dissertation Registration during Summer Sessions

If the final examination is to be held during the summer or the dissertation is to be completed during the summer, students must register for one credit during the summer session in which the final examination will be held or the dissertation will be completed.

Dissertation Leave of Absence

Students may seek a leave of absence from their dissertation. A leave of absence requires that a student must get prior approval from the Dean of the Graduate School, which means the student must receive permission for the leave of absence before discontinuing their formal studies.

Final Examination

NOTE: If more than five years have elapsed since the date of the student's passed comprehensive examination, the candidate will be required to take another comprehensive examination before admission to the final examination.

Every student working toward the doctoral degree will submit a dissertation embodying the results of original research. The dissertation is expected to demonstrate the student's ability in independent investigation and to be a contribution to human knowledge. The dissertation shall display a mastery of the literature of the subject field, present an organized and coherent development of ideas with a clear exposition of results, and provide a critique of the limits and validity of the student's conclusions.

When a complete draft of the dissertation has been prepared, the student's doctoral committee (appointed after the qualifying examination) will conduct the final examination. The final examination is concerned primarily with the research work of the student as embodied in the dissertation, but it may be much broader and extend over the candidate's entire field of study. The intention of the final examination is to verify that the candidate has a satisfactory grasp of the major subject as a whole and has a general acquaintance with the fields of knowledge represented by the course of study. The final examination is oral and is open to the public.

Every student meeting the final examination qualifications must be enrolled in a minimum of 1 credit hour in order to defend. The final examination must be completed in accordance with the schedule provided in the academic calendar. Ten working days before the examination is taken the department must submit the form requesting this examination to the Graduate School. This form may be found on the Web at <http://gradschool.nmsu.edu/graduate-forms/> and is also available from the Graduate School and departmental offices.

Students must ensure that each member of the examining committee receives a copy of the dissertation, no later than seven working days before the date of the final examination.

Any candidate who fails the final oral examination may either be terminated from the doctoral program or upon recommendation of the committee and approval of the Dean of the Graduate School, be granted a second examination after a lapse of at least one semester. Failure in the second examination disqualifies the candidate from obtaining the degree.

Finalizing the Doctoral Dissertation

After successful completion of the final examination, electronic submission of the approved dissertation must be submitted to ProQuest ETD, no later than the deadline posted to the Graduate School website. The format review of dissertation will be performed electronically by the Graduate School. The form and style of the dissertation must comply with the regulations given in Preparing your manuscript for submission located at <https://gradschool.nmsu.edu/doctoral-dissertation-students/>. (<https://gradschool.nmsu.edu/doctoral-dissertation-students/.html>) The dissertation is not complete until the required forms are received at the Graduate School. Required forms may be found at <https://gradschool.nmsu.edu/doctoral-dissertation-students/>.

Registration at NMSU is a process that includes: (1) academic advising, (2) registering for classes, online or with your academic advisor, and (3) paying the tuition and fee bill. For first time freshman and transfer undergraduate students (at the Las Cruces campus), the registration process occurs during Aggie Welcome/Transfer Student Orientations. For currently enrolled Undergraduate students and all Graduate students registration occurs in collaboration with your advisor or online through the myNMSU portal. For detailed instructions and questions about registration which are not addressed on the website, please contact the University Student Records Office (USRO) (<https://records.nmsu.edu>).

Admission Requirement

No person will be allowed to register for courses until formally admitted to NMSU through the Community College, International Programs, Undergraduate or Graduate Admissions processes.

Class Schedule

Each semester and summer session, the University Student Records Office provides an online schedule of classes which can be accessed through myNMSU or the NMSU website. Note that not all courses listed in this catalog are offered every semester.

Registration Schedule by Classification

Several groups of students (e.g. Crimson Scholars, Students with Disabilities, Veterans) receive priority dates for course registration. For other students, registration dates are determined by the student's current classification at the time of registration. A student's classification is determined by the number of credits completed, and does not include courses in progress. A student's classification depends upon the number of credits completed toward graduation. Sophomore classification is achieved with successful completion of 28 credits; Junior classification, 60 credits; Senior classification, 90 credits.

University Credits

The unit of university credit is the semester hour, which is based upon one hour of lecture class or a minimum of two hours of practice/lab per week during one semester, and assumes a minimum of two hours additional, by the student, outside of class. The number of credits associated with each course is indicated in the course schedule.

Course Load for Undergraduate Students

The full-time course load in a regular semester (fall or spring) for a main campus undergraduate students is 12-18 credits. A full-time course load for a summer term is 9 credits with a maximum of 6 credits per session, totaling no more than 12 credit hours. Some scholarships have a 15 credit course load eligibility requirement. Each student is responsible for meeting their own scholarship eligibility requirements.

An overload is classified as more than 18 credits for a regular semester and more than 12 credits for the summer term. A one-credit course in physical education or supplemental instruction will not create an overload. Registration for a course overload requires written permission from an Associate Director of the Center for Academic Advising and Student Support (CAASS) or the Associate Dean for Academics in the student's academic college. An "Undergraduate Change of Schedule (https://records.nmsu.edu/files/2020/05/UG-Change-of-Schedule_Updated-05.27.20.pdf)" form is required and available on the University Student Records Office website (<https://records.nmsu.edu>). Freshmen and students with a grade of D or F, or a cumulative grade-point average of less than 2.5, in either of the last two semesters, are not eligible for overloads. Concurrent enrollment in non-NMSU courses at other post-secondary institutions requires prior approval from the Associate Dean for Academics in the student's college, and these courses are counted as part of a student's class load.

Course Load for Graduate Students

A full-time course load in a regular semester (fall or spring) is 9 credits, with a maximum of 15 graded credits. A full-time course load for a summer term is 6 credits with a maximum of 9 credits.

Course Numbering

The course numbering system at NMSU indicated the levels as follows:

- 100-299/1000-2999 – Lower Division (Las Cruces and Community College Campuses)
- 300-499/3000-4999 – Upper Division (Las Cruces Campus)
- 450-499/4500-4999 – Senior and graduate courses (Las Cruces Campus)
- 500-799/5000-7999 – Graduate courses (Las Cruces Campus)

All undergraduate students must demonstrate Basic Academic Skills in both English and mathematics before enrolling in any upper-division course (numbered 300/3000 or higher). These requirements ensure that each student in the upper-division courses has the ability to succeed without compromising the learning experience of other students.

Class Delivery

Classes at NMSU are delivered in a variety of modalities. Students may see any of the following schedule types when viewing the class schedule through my.NMSU or the NMSU website.

- **CL (Classroom/Lecture):** traditional in-person class meetings that occur on specified days and times in a specified location.
- **LB (Lab):** traditional in-person lab meetings that occur on specified days and times in a specified location.

- **HY (Online with In Person Meetings):** hybrid delivery that is offered both online and with required in-person class meetings that occur on specified days and times in a specified location.
- **ONL (Online with Synchronous Meetings):** online class meetings that require all students to meet virtually on specified days and times
- **WB (Online with no Synchronous Meeting):** online class meetings that do not require students to meet virtually
- **IND (Independent Meeting):** students and instructors schedule meetings on an as needed basis to discuss course content and student progress
- **TD (Thesis/Dissertation):** thesis/dissertation with implied meetings on an as needed basis to discuss course content and student progress
- **PC (Practicum):** practicum/clinical with implied meetings on an as needed basis to discuss course content and student progress

Prerequisites and Corequisites

Some courses require advance or concurrently acquired specific knowledge and skills. Prerequisite(s) and corequisite(s) for each courses are indicated in the course description section of this catalog. Students must have completed (or be presently enrolled in the prerequisite(s)) courses in order to register for a course with prerequisites. Where a student was allowed to register for a course while completing the prerequisite(s), and then subsequently fails to successfully complete a prerequisite course, the student shall be dis-enrolled from the course requiring the prerequisite. In the case of a corequisite, a student must enroll in the courses during the same semester. In some instances, where a course has an enforced "pre/corequisite" the student can elect to either take the requirement before registering for the course, or take the courses at the same time.

Registration Changes

Subject to any registration "holds" and any applicable deadlines, students may change their course registration online. Caution should be exercised as registration changes may negatively impact eligibility for scholarships, financial aid or athletic participation, the student's ability to progress through their degree program in a timely manner, and the student's obligations with respect to tuition and fees.

The University Student Records Office publishes an online schedule of "Important Dates for Students (<https://records.nmsu.edu/important-dates-students/>)" for each semester. The student is responsible for reviewing and adhering to the Important Dates, including the deadlines to add, drop or withdraw from course(s) for the relevant semester.

Adding Courses: There are two different types of deadlines for adding courses:

1. **Last day to add a class without instructor's signature** - during this period courses may be added online through myNMSU, or through your academic advisor (if necessary).
 2. **Last day to add a class with instructor's signature** - during this period courses may only be added with either the "Undergraduate Change of Schedule (https://records.nmsu.edu/files/2020/05/UG-Change-of-Schedule_Updated-05.27.20.pdf)" or the "Graduate Change of Schedule (https://records.nmsu.edu/files/2019/04/GR-Change-of-Schedule_Updated-04.09.19.pdf)" form signed by the instructor (available online on the University Student Records Office website (<https://records.nmsu.edu>)).
- * Students taking classes online and who do not live in the Las Cruces Area must email the instructor, using the NMSU email, in order to get permission to be added to the course. If the instructor approves the addition, the approved response must be sent to either the student's academic advisor or to registrar@nmsu.edu with the student's name, ID number and course CRN number they are wanting to add.

Withdrawing from Courses: There are two different types of deadlines for withdrawing from courses:

1. **Last day to drop without a "W" grade** – during this period, the student can drop the course and not have it appear on their official transcript in any form, and the student will have no financial obligation related to the course (students will receive a 100% refund if tuition has been paid for the course).
2. **Last day to drop with a "W" grade** – during this period, the student can withdraw from the course, but the course will appear on their official transcript with the withdrawal (W) designation as the grade, and the student will be responsible for the full tuition and fees related to that course.

Students are responsible for initiating official withdrawal from any course(s) they do not intend to complete. Students who experience extraordinary circumstances that prevent timely registration changes should consult with their Academic Associate Dean or the Registrar. For more information about the process for adding or withdrawing from a course(s), please speak with your academic advisor or contact the University Student Records Office.

Any student attending under Veteran Educational Assistance must notify the Military and Veteran's Programs office before processing registration changes to determine if changes will affect their enrollment status or benefits.

A student found insufficiently prepared for a course they are enrolled in may be transferred to a more elementary course in the same subject any day before the last day to withdraw from an individual course.

Waitlisting

Waitlisting is available for all courses across the NMSU system, except for labs that are linked to a specific lecture class. Waitlisting is an electronic list of students who are waiting to register for a filled course. Once students are put onto the waitlist, the process to get into that course is as follows:

1. A currently enrolled student must drop the course for a seat to become available.
2. The first student on the waitlist is notified through their NMSU email.

3. The notified student has 24 hours to login to their myNMSU and register themselves for the class.
4. If the first student fails to register within their allotted 24 hours, then the first student is dropped from the waitlist and the next student on the waitlist is notified. This continues until the empty seat is filled.

A student who fails to register for the class during their allotted 24 hours is automatically dropped from the waitlist and can add themselves back onto the bottom of the waitlist for that course.

Students cannot be added to the waitlist after the first day of classes. Instructor overrides can only be made after the second day of class, at which point the instructor's signature is required on either the "Undergraduate Change of Schedule (https://records.nmsu.edu/files/2020/05/UG-Change-of-Schedule_Updated-05.27.20.pdf)" or the "Graduate Change of Schedule (https://records.nmsu.edu/files/2019/04/GR-Change-of-Schedule_Updated-04.09.19.pdf)" to add a course.

Graduate Registration Requirements for Summer

Students who have scheduled their final examination, or who are completing their thesis during a summer session, must be registered for one credit hour during the same summer session. In order to graduate during a summer session, the student must have filed the Application for Degree by the deadline posted on the Academic Calendar.

Repeating Courses for A Change in Grade

See the Grading portion of the Academic Regulations section of this catalog.

Substitutions and Waivers

Students registering for their final semester must have all course substitutions and waivers of required, for their degrees, courses approved before two weeks after the last date of registration for full or summer terms.

Auditing a Course (No Credit)

An audited course is one in which the student registers for the learning experience but does not seek to earn academic credit for the course. A student seeking to audit a course must register and pay tuition and fees for the course and have the consent of the instructor to take the class in audit form. A student who has registered to audit a course may be dis-enrolled from the course at any time before the registration deadline expires if necessary to accommodate a student taking the course for credit. After the last day to register, the student cannot change the course option from audit course to a for credit bearing course.

Audited courses are not used in determining a maximum class load (overload) for undergraduate students in good academic standing, however, the audited course will be counted as part of the maximum allowable course load for graduate students and undergraduate students who are on academic probation.

Attendance and Student Performance

Academic success is closely correlated to student participation and attendance. Accordingly, students are expected to regularly attend all their classes.

Each course instructor will establish the specific attendance and course requirements. Only students who are currently enrolled in a course for either credit or audit are permitted to officially attend the classes. However, individual instructors may allow an occasional visitor and may allow a student who officially withdrew from the course to continue to attend for the remainder of the semester.

Absences from Class and Failure to Complete Assignments

Students who must miss class due to accident or illness, or due to other circumstances beyond their control should consult the course syllabus and the instructor for guidance. Students may be administratively withdrawn from a course due to excessive absences (consecutive absences in excess of the number of class meetings held within a week or any number of absences, including failing to use the online Learning Management System, which are impairing the student's performance), or for persistent failure to complete assignments. In such cases, the Instructor may recommend administrative withdrawal by providing a completed "Student Absence/Lack of Progress Report" form to the Academic Associate Dean. If the Academic Associate Dean agrees with the recommendation of the course instructor, the student will be withdrawn from the course. Any student who has been administratively withdrawn from a class may appeal that decision to the Dean of the College where the course was offered within 10 days after notification of the withdrawal.

Any absences due to the student's participation in a university sponsored event (e.g. ASNMSU president representing NMSU at legislative session, student athletes competing in NMSU scheduled athletic events, or students attending educational field trips and conferences) will be excused and deemed an "Authorized Absence". Authorized absences do not relieve the student of the course assignments or responsibilities and instructors may require students to complete course work before the absence. Prior to the student's absence, the student will provide the instructor(s) with written notice of the dates of expected absence.

Classroom Conduct

Each instructor has the authority to establish and enforce reasonable rules of conduct in their courses. A student who engages in behavior that interferes with the educational environment of the class may be administratively dis-enrolled with the approval of the academic department head and academic associate dean for the course, and with notification to the Provost. Any student who has been administratively dis-enrolled from a class may appeal that decision to the Dean of the College where the course was offered within 10 days after notification of the dis-enrollment.

Student Performance Assessment

Individual student performance and learning outcomes in a course are measured and evaluated by the course instructor and reported to the student in the form of grades. Each instructor has the authority to establish assignments and other assessments (such as exams and quizzes) and to assign grades based on the student's performance on those assessments. Final grades for the course are determined by the instructor and reported to the University Registrar as described in grading section of this catalog. Any student who believes that their academic performance has been evaluated unfairly may appeal the grade through the University's Academic Appeals process as provided in this Catalog.

Academic Program Assessment

New Mexico State University is committed to providing its students with a quality education and a supportive learning environment. Academic Program Assessment is a continuous improvement process achieved by identifying a program's desired learning outcomes, evaluating the extent to which those outcomes are collectively achieved by students in the program, and then implementing changes to enhance and improve the collective program outcomes. For assessment to be effective, students must be actively aware of and engaged in assessment activities.

Academic Program Assessment requires participation of students who are expected to provide feedback on personal, professional and academic development and to participate in a variety of assessment exercises. Assessment activities may be a part of regular graded course assignments, or may require students to engage in other activities. Assessments may include course projects, exams, exit interviews, standardized tests, surveys, focus groups, etc. Data gathered through these assessments is published only in aggregate form. Learn more about NMSU's Academic Program Assessment at <https://assessment.nmsu.edu/>

Exam Week and Final Examinations

NMSU designates the last week of each semester as "Exam Week" during which each course has only a single 2 hour meeting time for a mandatory culminating activity which may be a final examination or some other course related activity. The University Student Records Office (USRO) establishes the Final Examination Schedule (<https://records.nmsu.edu/final-examination-schedule/>) for each semester. Examinations are typically held in the course's usual lecture/lab room. Some departments hold Departmental Exams where all students for all sections of a particular course are required to take the final examination simultaneously. The date, time and location of the Departmental Exams are indicated on the Final Examination Schedule. For courses that were not scheduled to meet at the specific times listed under "Regular Class Time" on the USRO's Final Examination Schedule, the instructor and course department coordinate examination dates, times and locations with NMSU's Academic Scheduling office (575) 646-4790. Final exams for weekend courses are held at the regular class period on the last day of class.

The final exam or culminating activity must not be rescheduled for a different date, time or location, except with permission of the department head and the unanimous consent of the enrolled students. During the week before Exam Week, instructors are not allowed to hold examinations lasting more than one class period.

Any student having more than three examinations scheduled in any one day may, no later than the week prior to exam week, notify the instructor of the examination scheduled latest in the day to obtain an alternative date for that examination. (If the fourth exam is a departmental exam, the instructor of the third exam will make alternate arrangements for that exam upon request.)

Students who believe that their instructor(s) have not honored Exam Week requirements may appeal to the instructor's department head.

Developmental Evaluation

The academic skill level of all entering first-time students at the time of registration is evaluated based upon ACT scores, SAT test scores, and/or alternative placement assessments. The student's eligibility to enroll in university level English and Mathematics courses is dependent upon this evaluation. Students who have not demonstrated adequate preparation for university level courses are required to take developmental courses. Developmental courses are included on the transcript and will be included in the calculation of the GPA, but the developmental course credits do not count towards a degree.

Basic Academic Skills

All undergraduate students must demonstrate Basic Academic Skills in both English and mathematics before enrolling in any upper-division course (numbered 300 or higher). These requirements ensure that each student in the upper-division courses has the ability to succeed without compromising the learning experience of other students. The completion of the Basic Academic Skills requirements **does not necessarily result in the award of academic credit nor satisfaction of university general education requirements** in English and mathematics. (Students should consult the General Education Courses and Requirements section in this chapter for these requirements.)

Transfer students with 45 or more credits are allowed to enroll in upper-division courses for only one semester before satisfying the Basic Academic Skills requirements. The Basic Academic Skills requirements may be satisfied in a variety of different ways as listed below:

English Basic Skill Demonstration Options (achieve one of the following):

- ACT English Score of 30
- Coursework - **ENGL 1110G**, or equivalent, completed with a grade of C- or higher.

Equivalents: the following are deemed equivalents to ENGL 111G for the purpose of satisfying Basic Academic Skills in English:

- **ENGL 1110H** – completed with a grade of C- or higher
- ENGL 1110M - required for International students who took the TOEFL examination
- CLEP Exam score of 57 or higher in freshman college composition
- English Advanced Placement (AP) Exam score of 3, 4, or 5
- English Composition Transfer Credits - 3 or more credits with a grade of C- or above, transferred from accredited post-secondary institutions (International students may be required to take ENGL 1110M Composition I Multilingual as noted above.)

Credits from Non-accredited Institutions - As a general rule, NMSU does not accept credits from non-accredited institutions. Students with 3 or more credits of college-level English composition with a grade of C- or higher from a non-accredited institution may, however, challenge the Basic Academic Skills requirement in English and ENGL 1110G Composition I course requirement by submitting a theme paper written under the supervision of, and demonstrating achievement of ENGL 1110G Composition I learning outcomes as determined by, the Department of English.

Mathematics Basic Skill Demonstration Options (achieve one of the following):

- ACT Mathematics Score of 23
- Coursework – any one of the following courses or course combinations completed with a grade of C- or higher in each course:
 - MATH 1130G Survey of Mathematics
 - MATH 1215 Intermediate Algebra
 - MATH 1220G College Algebra
 - Any mathematics course numbered 1250G or above (prefix MATH) excluding MATH 1996 Topics in Mathematics and MATH 2992 Directed Study
- Basic Skills Exam Passing Score - offered twice a semester by the Department of Mathematical Sciences
- Calculus AB, Calculus BC or Statistics Advanced Placement (AP) Exam score of 3, 4, or 5

IMPORTANT NOTE: Basic Academic Skills Demonstration fulfillment options may not appear on the transcript, result in the award of academic credit, or satisfy general education requirements. The Basic Academic Skills requirements are used solely for the purpose of determining eligibility for enrollment in upper-division courses. All students should seek to complete the Basic Academic Skills requirements as early in their academic program as possible. Students who postpone completion of Basic Academic Skills may be unable to progress toward degree completion in a timely manner.

Independent Study and Directed Reading Courses

Independent study courses and directed reading (other than those designated in the catalog with a subtitle), are for students capable of and sufficiently motivated to undertake self-directed study with limited oversight of a faculty member. Only students who have completed at least 28 credits at NMSU under traditional grading, with a cumulative GPA of 2.5 or better, are eligible to enroll in independent study courses. No student is entitled to enroll in independent study and enrollment requires the consent of an instructor who agrees to supervise and evaluate the student's learning activities in the course. Students seeking enrollment in an independent study course should prepare an independent study proposal to present to individual faculty member(s) in the relevant discipline for consideration. At a minimum, the proposal should include the topic of study, a brief survey of the literature or other resources on the topic, and a description of the proposed written product or other tangible outcome of the independent study. The relevant academic department for the discipline may have additional requirements. Each college determines the maximum number of credits that may be earned in independent study courses.

Adjusted Credit Option

The adjusted credit option provides eligible undergraduate students who earned a low grade-point average (less than 2.0 cumulative) during their first few semesters to reset their GPA calculation. This option may be used only once and is not reversible. These are the consequences of exercising the Adjusted Credit Option:

1. All of the student's academic history pre-dating the request, including all NMSU course credits previously attempted or completed, transfer coursework, CLEP, ACT, advanced placement, special examination, and/or military service are included in the adjustment and designated as "ADJUSTED CREDITS" on the transcript. These credits are no longer be included in the calculation of the cumulative grade point average.
2. Courses carrying an academic grade of S, CR, C- or better, earned prior to the grading period in which the student requested this option, are treated as earned academic credit and need not be repeated, except where a higher grade is required in the student's academic program.

3. Courses carrying an academic grade of U, CD, D or F, earned prior to the grading period in which the student requested this option, remain on the student's transcript, but no academic credit is provided for these courses. The student must repeat these courses to obtain academic credit.
4. The student's academic transcripts will continue to reflect all coursework, including courses falling under the adjusted credit option. In no circumstances will a transcript be issued that does not include all courses attempted at this university.
5. The student's current academic status, eligibility for employment, and financial aid may be impacted. Probationary status and eligibility for on-campus employment are not affected by the exercise of the adjusted credit option.
6. The repeat rule for courses starts anew.
7. The student will not be eligible for award of an associate degree until earning thirty (30) or more additional credits after exercise of the Option.
8. The student is eligible for University honors at graduation upon completing a minimum of 60 academic credits at NMSU, after the adjusted credit option is exercised, with a resulting grade point average which satisfies University regulations for honors.

After carefully considering the consequences indicated above, eligible students may exercise the Adjusted Credit Option by paying a fee of \$10 and submitting an adjusted credit option application to the University Student Records Office. Application forms are available on the University Student Records Office website and can be approved by the Director of the Center for Academic Advising and Student Support or the Associate Dean for Academics in the student's college or the Academic Vice President at the Community Colleges. Only students meeting the following criteria are eligible to exercise the Option:

1. No awarded baccalaureate degree
2. Enrolled as a degree-seeking or non-degree undergraduate student
3. Cumulative grade-point average of less than 2.0 at NMSU
4. Fewer than 60 credits accumulated (including both transfer and NMSU credits)

Credit by College Level Examination Program (CLEP)

Prior to or during a student's enrollment at NMSU, credits may be earned through the College Level Examination Program (CLEP) of the College Entrance Examination Board. CLEP is a national program of credit by examination that offers the opportunity to earn credits for college level achievement wherever or however the student learned. Earned CLEP credit will be treated as transfer credit without a grade, will count toward graduation, and may be used in fulfilling specific curriculum requirements. A current NMSU CLEP policy as well as test schedule information is available through Testing Services DACC East Mesa, RM 210. Testing Services may be reached at: (575) 528-7294.

Credit by Examination

Any enrolled student with a cumulative GPA of at least 2.0 currently attending classes may, with permission of the appropriate department, challenge by examination any undergraduate course in which credit has not been previously earned except an independent study, research or reading course, or any foreign language course that precedes the final course in the lower-division sequence. The manner of administering the examination and granting permission shall be determined by the department in which the course is being challenged. Students may not enroll in a single course, challenge it by examination, and drop it during the drop/add period, unless they enroll in an additional course. In exceptional cases in which a student demonstrates outstanding ability in a course in which they are already registered, they may be permitted to challenge the course. A student desiring to apply for special examination may obtain the necessary forms from the University Student Records Office. The fee for challenging a course is the same as the approved tuition rate. Courses may not be challenged under the S/U option. The special examination privilege is based on the principle that the student, exclusively, has the responsibility for preparing for a special examination.

Credit for Military Service

New Mexico State University will award academic credit to United States military personnel for courses and Military Occupational Specialties (MOS), based on the American Council of Education Guide (ACE) as well as through national standardized tests, such as CLEP, AP, PEP and DANTES. Credit for military-training is in accordance with NMSU Faculty Senate Legislation Proposition 24-07/08, which was passed in May 2008. Military Training and Military Occupational Specialties (MOS) must have a recommendation evaluation by ACE (in the ACE Guide) for credit to be awarded. Courses accepted for transfer credit become part of the student's official NMSU transcript and academic record. If a student wishes to appeal a decision regarding the acceptance of military training/education and/or MOS for academic credit, the student must submit a written statement of appeal to the Dean of the College to which the student has applied. The Dean will review the merits of the appeal and render a decision. The decision of the Dean is final.

Only Primary MOS (s) are eligible for academic credit in the initial review and evaluation. Credit for Duty and/or Secondary MOS may be eligible for academic credit if the student petitions the college's Associate Dean. Primary MOS is the primary specialty of a soldier and reflects the broadest and most in-depth scope of military experience. Veterans, active-duty personnel, National Guard and Reservists who are current students or students applying for admission to New Mexico State University may be granted academic credit on a case-by-case basis upon evaluation of military transcripts - the Joint Service Transcript (jst.doded.mil) and the Community College of the Air Force transcripts. Course equivalencies and credit hours awarded for a particular NMSU degree are determined by colleges and/or academic departments. Credit hours may be awarded for specific courses toward degree requirement, or as elective credit. The number of credit hours awarded will be determined by the college and/or academic department.

NOTE: Students submitting military transcripts for credit evaluation must keep in mind the Maximum Time Frame policy. See Financial Aid (<http://catalogs.nmsu.edu/nmsu/financial-aid-scholarship-services/>) Section.

Graduate Course Deficiencies

Students who have been admitted with departmental deficiencies may be required to take diagnostics tests and additional qualifying examinations. They must complete satisfactorily, in a manner specified by the major department, all undergraduate course deficiencies as prescribed by the department responsible for the graduate program. Courses taken to satisfy deficiencies will be listed on the undergraduate transcript; however, these course grades will not be calculated in the student's graduate GPA or graduate hours. With the permission of the student's advisor and the head of department, courses to meet undergraduate deficiencies may be taken under an S/U option (with S being a grade satisfactory to the professor), and such courses will not affect the maximum number of S/U graduate credits permitted.

Short Courses for Graduate Students

Short course(s) that are numbered 450/4500 and above have been approved to carry graduate credit. Graduate students must be registered for the short course(s) to receive graduate credit. Concurrent enrollment of graduate students in regular and short courses for the fall/spring semesters is allowed, provided the combined total credits does not exceed 15. All short courses carrying one semester credit will be graded on an S/U basis and these credits will be counted toward the student's limit of S/U credits.

Challenging Graduate Courses

A graduate student may challenge a graduate course by examination, please see the Graduate School for more information.

University Grading System

Each course department or instructor establishes the system for assessing student performance in achieving course learning objectives. Students should consult the course syllabus for a description of the grading system used in each course. At the conclusion of each course, instructors are required to report a final grade reflecting the instructor's assessment of each student's performance. Shortly after the end of the term, students can access their grades through the MyNMSU portal. No other grade notification will be issued. The final grade is reported on the student transcript. Instructors may elect whether to use fractional grading (the use of the plus and minus) in assigning final letter grades.

The NMSU system for final grades is expressed in letters, which carry grade points that are used in calculating the cumulative grade-point average, as shown in this table:

| Letter Grade | Grade Points per Unit of Credit |
|---|---------------------------------|
| A+ | 4.0 |
| A | 4.0 |
| A- | 3.7 |
| B+ | 3.3 |
| B | 3.0 |
| B- | 2.7 |
| C+ | 2.3 |
| C | 2.0 |
| C- | 2.0 |
| D+, D, D- | 1.0 |
| F | 0 |
| W- Withdrawal | 0 |
| N- Grade not submitted | 0 |
| CR- Credit authorized, but not letter grade | 0 |
| IP- In progress | 0 |
| RR- Progress in undergraduate course | 0 |
| PR- Progress in graduate thesis | 0 |
| S- Satisfactory work ¹ | 0 |
| U- Unsatisfactory work | 0 |
| I- Incomplete work | 0 |
| AU- Audit | 0 |

¹ S grades are grades that are satisfactory to the professor and are normally equivalent to the letter grade of C- or higher.

Any courses for which only CR, S or PR is awarded, but no traditional letter grade is given, will be included in the total number of earned hours but is not computed in the grade-point average. Traditional letter grades are those which are used in the grade point average determination: A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D- and F. In computing the overall grade-point-average, the total credits in which grades of A+ through F have been assigned is divided into the total number of grade points earned.

Midterm and Six-Week Early Performance Grades

A Six-Week Early Performance Grade (sometimes referred to as Midterm Grade) for courses numbered 100-299 will be posted and available to students through the MyNMSU portal. The purpose of the early grade posting is to ensure that students have an opportunity to address any performance issues. Students should be mindful that the Six-Week Early Performance Grade reflects a students' performance on only that portion of the total coursework that has been graded at that time. Any student who is doing poorly, or not as well as they would like, should meet with the instructor to discuss how they can improve. Students who have concerns about their progress in multiple courses or who are considering withdrawal from course(s) must meet with their academic advisor.

In courses numbered 300 or higher, the posting of Early Performance Grades is optional and may occur through the online course management system rather than the MyNMSU portal. However, prior to the last day to withdraw from a course, upon request, instructors will provide information to students about their progress in the course.

Retention of Grading Records

Individual assignments and exams that are not returned to students should be retained by the instructor or department through the end of the subsequent regular semester. The records used to compute individual final grades should be retained for two years after the completion of a course. If a final grade is appealed, these records are kept for at least two years after the completion of the appeal. Departments, colleges or the library may require that records be kept for longer periods.

Minimum Grade Requirement for Undergraduate Students

Undergraduate degrees require a cumulative GPA of 2.0 or higher for degree completion. Although D+, D, or D- can be considered passing, some departments have higher grade requirements for the courses within their program and/or their program as a whole. Students should check with their departments regarding specific course grading requirements for their particular degree program.

Minimum Grade Requirement for Graduate Students

Graduate degrees require a cumulative graduate G.P.A. of 3.0 or higher. Although B- and C grades (including C+ and C-) earned at NMSU may be counted toward the requirements for a graduate degree in some programs, this grade does not reflect acceptable graduate-level performance and may cause the cumulative G.P.A. to fall below the 3.0 required for graduate students. Some departments have higher grading requirements for courses in their programs. Students should check with their departments regarding specific course grading requirements for their particular degree program.

Courses in which a student earns a D or F grade do not ever satisfy graduate degree requirements; however these grades will be calculated in determining the students' cumulative grade-point average. To obtain academic credit, students must retake courses in which a grade of D or F was earned.

S/U Grading

S/U grading allows the student to attempt to earn course credit without having a course grade included in their grade point average calculations. Under S/U grading, the instructor assigns an S grade for satisfactory achievement of the course learning objectives (normally equivalent to the letter grade of C- or higher) and a U grade for unsatisfactory performance in the class.

Designated S/U Courses

Each academic college may designate courses in which the grading will be on a basis of S or U for all students enrolled in the courses. Credits in designated S/U courses are not included in the limitations on the number of S/U credits a student may take, and are not subject to the student eligibility requirements described below.

Election of the S/U Grading Option - Undergraduate Students

In courses other than those designated as S/U for all students, eligible individual students may elect the S/U Grading Option, subject to the regulations stated below. To be eligible for the S/U (satisfactory/unsatisfactory) Grading Option, undergraduate students must meet the eligibility requirements and obtain approval of an academic advisor. Eligibility requires completion of 28 credits at NMSU under traditional grading, with an overall average of 2.5 or better. (Upon approval of the adjusted credit option, students must re-establish eligibility.) Non-degree seeking students may take courses under the S/U option without regard to eligibility requirements. However, these courses may not be subsequently applied toward an undergraduate degree at NMSU.

The S/U option must be elected as part of the course registration and may not be added once the course registration period closes. Other than honors courses and courses officially designed as S/U, the following limitations apply to courses in which the S/U option is elected:

1. No more than 7 credits per semester or 4 credits per summer session.
2. Not to exceed a total of 21 credits towards a degree.
3. Not a required course for the student's major.

Students electing the S/U option should be mindful that upon a change of majors, the new major department may require a traditional grade for a course within that major that was previously completed with an S grade. In such cases, the student may request that the original instructor process a change of grade form to apply a traditional grade, however, if more than 2 years have elapsed or if the instructor is no longer at NMSU, such a change will not be possible and the student may be required to retake the course or obtain a traditional grade through a course challenge.

Election of the S/U Grading Option Election - Graduate Students

With an approval from their advisor and department head, graduate students in good academic standing may elect the S/U option, at the time of registration, for courses taken outside the major department, subject to the regulations stated below:

1. No more than a total of 6 credits of elected S/U courses are permitted in the master's degree.
2. Doctoral candidates may take an additional 6 credits under the S/U option after application to candidacy.

I Grade Designation

The letter grade of I (incomplete) is given for passable work that could not be completed due to circumstances beyond the student's control that develop after the last day to withdraw from the course. In no case is an I grade to be used to avoid the assigning of D, F, U or RR grades for marginal or failing work. Examples of appropriate circumstances include documented illness, documented death or crisis in the student's immediate family, unexpected military deployment and similar circumstances. Other job related circumstances are generally not appropriate grounds for assigning an I grade. Students requesting an I grade are responsible for providing satisfactory evidence of such circumstances. (In the case of medical records, instructors should review the information provided, note that adequate medical documentation was provided for review, and return the documentation to the student. Under no circumstances should the instructor retain any medical records or indicate the specifics of any medical condition in the academic records.) The refusal to grant an I grade may be appealed in the same manner as any other final grade.

To assign an I grade, the instructor must complete the "I grade Information Form (https://records.nmsu.edu/files/2021/02/Incomplete-Grade-Form_Revised_02042021_DH-Signature-added_verbiage-added-to-number-1.pdf)" by the deadline for final grade submission in the semester the student was enrolled in the course, and have the form delivered to the associate dean of the course college. The instructor must indicate on the form whether the student will be given the option to complete the remaining coursework and have the I grade changed to the earned letter grade. If so, the instructor should indicate the steps necessary to complete the remaining coursework. The I grade form should either be signed by the student in person, or the associate dean must send a copy of the document to the student's official permanent address, as recorded in the University Student Records Office, with a notation on the form that the student was not available for signature.

The I grade will be permanent in instances where (1) the instructor did not provide an option to complete the coursework, (2) the instructor left NMSU prior to completion of the coursework and grade change, or (3) the student failed to complete the coursework by the relevant deadline, and the instructor did not indicate that the I grade would be changed to the earned grade upon failure to complete. In such instances, the student will be required to re-enroll in the course to receive credit (in which case the permanent I grade and the subsequent earned letter grade will both appear on the transcript).

The student is entitled to have the I grade removed from the transcript only if, within 12 months or any earlier deadline established by the instructor on the "I Grade Information Form" and prior to graduation, the student completes the remaining coursework, as specified on the Form, in a manner satisfactory to the instructor. If the student fails to complete the coursework, the instructor may change the I grade to any appropriate grade (including D, F or U) only if the instructor stated that this would occur on the "I Grade Information Form." The instructor should assign whatever grade was earned for the entire course.

To change the I grade, the instructor must complete a "Change of Grade Form," obtain the signature of the associate dean for the course, and submit the form to the University Student Records Office.

RR Grade

The RR grade may be assigned only in undergraduate developmental courses (CCDE, CCDL, CCDM & CC DR) and indicates that the student has made substantial progress toward completing the requirements of the course. It carries neither penalty nor credit, so a student must re-enroll and successfully complete the course in order to earn credit. The grade of RR may be received only once in any given course, and is a permanent notation on the student's transcript.

W Grade Designation

The W grade is assigned only in courses when the student withdraws or is administratively dis-enrolled from the course after the last day to drop the course. The W grade is permanent.

Effect of Change of Grade

The effect of a change of grade on a student's academic standing (academic warning, probation or suspension) depends on the date the transaction is officially recorded on the student's academic record. If the transaction is recorded before the student begins another semester, the grade change (such as replacing the I grade with an earned grade) is included in the grade-point average calculation in order to establish the student's academic standing. If the transaction is recorded after the student begins another semester, for the purpose of calculating academic standing, the new grade is included with any other grades earned for the semester in which the grade change is processed.

Repeating Courses for a Change in Grade

Undergraduate students: may repeat courses, for a change in grade, when the original grade earned was a D or F. Las Cruces Main Campus students are not allowed to count repeated courses towards the minimum 15 credits required to retain merit-based institutional scholarship. Once a grade of C- or better is earned, the course will then be substituted in the calculation of the grade-point-average and students will no longer be able to repeat that course for change of grade purposes. Student transcripts will continue to show the grade awarded for each course attempt. If the student's original grade was a D and he/she repeats the course, but receives a F, the second grade will not be substituted for the original.

Graduate students: may repeat courses to achieve a higher grade, but the grade assigned for each attempt will remain on the transcript and will be counted in the grade point average calculation.

Grade Point Average

Grade point average (GPA) calculations are based solely on courses taken at NMSU or under an approved National Student Exchange.

Grading in Graduate Research

In grading both master's and doctoral research, thesis and dissertation work in progress, the instructor reports for each enrollment period the grade PR (progress) or U (unsatisfactory) rather than a traditional letter grade. These assigned grades are permanent notations on the student's transcript. Only those credits graded PR (Progress) accumulate toward the minimum number of research credits required.

PR indicates that the student has devoted an adequate amount of time to the work scheduled but does not indicate the quality. U indicates that the student has stopped work or is doing work of unacceptable quality.

At the conclusion of the final oral examination, or when the thesis/dissertation is submitted for the final signature of the graduate dean, the instructor will report the final S or U grade for that semester. If the thesis/dissertation and the performance in the final oral examination are found to be acceptable, the instructor will report an S (satisfactory) grade. If the thesis/dissertation or the performance in the final oral examination is found to be unacceptable, the instructor will report an U (unsatisfactory) grade.

If a student accumulates a total of two U (unsatisfactory) grades in courses numbered either 599/5999, 600/6991, 700/7000, or any other graduate level project/research type courses with S/U grading, the student will be placed on provisional status. If three U (unsatisfactory) grades are reported for these courses, the student will be dismissed from the Graduate School.

For more information regarding how withdrawals impact tuition refunds, please see the Tuition, Fees & Other Expenses (<http://catalogs.nmsu.edu/nmsu/tuition-fees-expenses/#newitemtext>) section of the catalog.

Withdrawal from a Single Course

Any student wishing to formally withdraw from a single course, after the last day to drop has passed, can do so through their Academic Advisor or the University Student Records Office. All such withdrawals will be registered on the student's transcript with the "W" grade indication.

For students wishing to withdrawal from all courses, please see the section on Withdrawal from NMSU.

Leave of Absence from the Graduate School

Students who are working on advanced degrees and plan to have an interruption in studies, for a calendar year, should request for a leave of absence through their department head. The student must submit a formal letter through their department head to the Dean of the Graduate School, an email will not be accepted. The request should include the beginning date and the anticipated ending date for the period of absence.

A graduate student on leave of absence will be expected not to use university facilities and place no demands upon the university faculty and staff, and, therefore will pay no fees. Time spent in the "leave-of-absences" status will not be counted toward the advanced degree time limits.

A graduate student who fails to register for one calendar year without obtaining a leave of absence from the Graduate School will be considered withdrawn from the university, by the Graduate School. In order to resume their studies after such absences, the student must go through the formal readmission process.

Administrative Withdrawals

In the event that a student has stopped attending class without formally withdrawing, stopped using the online Learning Management System, or has a history of persistent unexcused absences or failures to complete assignments, the University reserves the right to remove the student from the class by means of an administrative withdrawal. An administrative withdrawal may be requested under the following circumstances:

1. At the beginning of the semester, if a student misses the first two (2) class meetings or online activities.
2. At any point in the semester, if a student misses four (4) consecutive class meetings or online activities.
3. If over the course of the semester, the student persistently fails to attend class or fails to complete assignments.

In NO case is an administrative withdrawal used to avoid the assigning of D, F, U or RR grades for marginal or failing work. Administrative withdrawals are subject to the same refund rules as student initiated withdrawals (100% refund prior to census and no refund after census)/

To request consideration for an administrative withdrawal, the instructor must complete the Student Absence/Lack of Progress Report (https://records.nmsu.edu/files/2020/03/Student-Absence_Lack-of-Progress-Report_03092020.pdf), found on the forms page of the University Student Records Office webpage, and route for approvals. The University Student Records Office is ultimately responsible for processing the administrative withdrawal.

Upon receipt of a fully approved Student Absence/Lack of Progress Report, from the Dean's Office, the Student Records staff will withdraw the student from the class and notify the student. This notification will be sent to the student's official NMSU email address. Students wishing to appeal the administrative withdrawal, should reply to the Student Records' notification email, with a valid reason for non-attendance / non-completion of coursework, within 48 hours of the email delivery time stamp.

The Student Records Office, in consultation with the class instructor, will determine if the appeal circumstances are reasonable and the student has not missed too much content to successfully complete the course. If so, the Student Records staff will add the student back into the class and the student will be expected to actively participate in all future meetings and coursework. The student Records Office will notify the student, instructor, Department Head and Associate Dean of the determination, via official NMSU email.

When an administrative withdrawal is initiated for a student who is representing the university at an official out-of-town event any administrative withdrawals will become effective upon the student's return from the event or five days after the drop slip fully approved form is submitted to the Student Records Office.

Military Withdrawal

New Mexico State University understands that our military students may be called to active duty, specialized training, or disaster relief efforts with little notice. U.S. active duty military students wishing to withdraw from all their classes must present their orders and their request for full withdrawal, as indicated below. However, the below policy does not pertain to a student's basic and/or annual training. A student who has an order for training is encouraged to formally request, through the proper military chain of command, a postponement of their orders until the summer or the end of the semester they are currently enrolled in. If a student's request for postponement is denied, the student may then follow the below steps but must provide documentation that their postponement request was formally denied.

All NMSU students that have been called up for active duty must take the following steps in order to withdraw from all their classes:

1. **Military and Veterans Programs (MVP):** TA/VA students ordered to Active Duty must provide a copy of orders to the MVP office, in Corbett Center Student Union, Room 244, or by email mvp@nmsu.edu. To assist in reporting accurate information to their military service or the VA Regional Office, student should also provide, in writing, last day of class attendance.
2. **NMSU University Student Records:** All students presenting their orders to the University Student Records Office, (575) 646-3411, or records@nmsu.edu, will receive a military withdrawal from classes and a full tuition and fees refund for that semester.
3. **Bookstore:** Students who still have their receipts for textbooks purchased the semester in which they are called to active duty will be given a full refund for these textbook purchases when they present their orders. Please contact the bookstore for assistance at (575) 646-4431 or nmsu@bkstr.com.

Student Medical Withdrawal

A student medical withdrawal applies to a student who becomes seriously ill, injured or hospitalized and is therefore unable to complete an academic term for which they are enrolled. This action applies to all courses a student is registered for in the affected semester(s). The student cannot select which courses they want to withdraw from and which they want to remain registered for when exercising this option. The students' attending physician must provide a letter, on official letterhead with an original signature, stating the date(s) within the semester that the student was under medical care and must withdraw because of that medical condition. This letter must be submitted within the semester or no later than one academic year after the end of the term for which the withdrawal is being requested.

Once the information is reviewed a final determination will be made if the student is eligible for the consideration of tuition or other refunds (students receiving funds awarded by the University Financial Aid and Scholarship Services should be aware of policies regarding withdrawal from the University). At the Las Cruces campus, medical withdrawal begins and ends at the University Student Records Office. At all other campuses, medical withdrawal begins at the Student Services Office but is ultimately finalized with the University Student Records Office on the Las Cruces campus.

Medical Conditions of a Family Member Withdrawal

A student who is withdrawing because of a medical condition of an immediate family member must submit a letter from the family member's attending physician. This action applies to all courses a student is registered for in the affected semester(s). The student cannot select which courses they want to withdraw from and which they want to remain registered for when exercising this option. It must be on official letterhead with an original signature, stating the date(s) within the semester that the student's immediate family member was under medical care and that the student must withdraw to attend to the immediate family member's medical condition. This letter must be submitted within the semester or no later than one academic year at the end of the term for which the withdrawal is being requested.

Immediate family member, in this instance, includes a spouse; a domestic partner, as defined in the NMSU Policy Manual 7.04; a child, parent or legal guardian; a sister or brother and a grandparents or a grandchild. Familial relationships that are created by law are also included (i.e. mother/father in law; half or step siblings); any other relationships can be considered on a case-by-case basis.

Once the information is reviewed a final determination will be made if the student is eligible for consideration of tuition or other refunds (Students receiving funds awarded by the University Financial Aid and Scholarship Services should be aware of policies regarding withdrawal from the University.) At the Las Cruces campus, medical withdrawal begins at the University Student Records Office. At all other campuses, medical withdrawal begins at the Student Services Office.

Withdrawal from NMSU

Withdrawal from any NMSU campus is an official procedure that must be:

1. Initiated by the student (using the Withdrawal form)
2. Have all necessary signatures (as indicated on the form)
3. Be approved and processed through the University Student Records Office, located on the Las Cruces Campus

Students who withdraw from all courses for the semester should do so in person through the University Student Records Office. However, students who are unable to come in person may submit an e-mail using their NMSU e-mail account to records@nmsu.edu (). Students who leave without following the official procedure are graded appropriately by the instructor.

Applicable dates for the last day to withdrawal are published on the approved university academic calendar or under important dates at: <http://registration.nmsu.edu> (<http://registrar.nmsu.edu>).

A student who withdraws from all classes for the semester will retain access to their NMSU account per current policy but will lose access to other services and privileges available to enrolled students.

Financial information concerning drops and withdrawals can be found at <http://uar.nmsu.edu/withdrawals/>. Financial Aid Recipients should contact University Financial Aid and Scholarship Services before withdrawing. Students receiving funds awarded by the University Financial Aid and Scholarship Services should be aware of policies regarding withdrawal from the University.

The Federal Higher Education Act requires the University to calculate a Return of Federal Student Aid Funds for students who withdraw (officially or unofficially) from all classes on or before the 60 percent attendance point in the semester. Using a pro-rata schedule, the percentage of the semester attended is used to calculate the amount of the student's earned versus unearned Federal student aid funds. The unearned portion of Federal student aid funds will be returned to the appropriate aid program(s). Students withdrawing from classes are responsible for payment of any balance due after the required return of Federal student aid funds.

Graduation Requirements

For specific graduation requirements for any degree offered at NMSU please see the Degrees, Majors, Minors and Other Academic Programs of Study (<http://catalogs.nmsu.edu/nmsu/regulations-policies/#academicprogramsofstudytex>) section, as well as the departmental sections for those requirements. These requirements will include the minimum GPA, total credits and specific course requirements for graduation.

Applying for a Degree

Any students that are in their final semester of classes are considered degree candidates and are required to submit an "Application for Degree" as well as pay graduation fees for each degree being sought. The application for Degree form is available online through the MyNMSU website. It must be completed and submitted by the designated deadline for that semester. The fees for the Las Cruces campus are all listed in the Tuition, Fees and other Expenses (<http://catalogs.nmsu.edu/nmsu/tuition-fees-expenses/>) section of the catalog, once a student submits the application the fee will be included in the total cost for the semester or session in which the candidate anticipates completing their degree requirements.

If degree requirements are not completed during the semester/ session the student originally applied for, the student must then reapply and pay the appropriate fees. A \$50 late fee applies to applications received after the application deadline, and no applications will be accepted after the posted deadline date.

A student must specify which catalog they are using for their degree requirements in order for the university to determine if the requirements are met and if a degree can be certified. The latest date for substitution or waiver of required courses for degree candidates is two weeks after the last date of registration for full or summer terms.

Attendance at the Commencement Ceremony

Commencement is a symbolic ceremony, that students can elect to participate in after they have applied for their degree (<https://commencement.nmsu.edu/apply-to-graduate/>). Participation in commencement does not, in itself, mean that a student is considered an NMSU graduate. In order to be awarded a degree, a student must fulfill university requirements as determined by academic colleges. The degree will reflect the graduation date from the application for degree in which all degree requirements were determined by the academic colleges.

The academic colleges will confirm students' eligibility to participate in the commencement ceremony that is held at the end of the fall and spring semesters. Eligible candidates who are in the process of completing their final degree requirements and degree recipients from the previous summer session will participate in the fall ceremony. Students who are in the process of completing their final degree requirements in the spring can participate in the spring ceremony. However, Bachelor degree candidates that wish to participate in a spring commencement, prior to completing degree requirements in summer school may do so if they meet the following conditions:

1. Receive permission from the Dean of their college
2. Show a minimum cumulative grade-point average of 2.0
3. Only need 12 or fewer credit hours to complete their degree requirements
4. These remaining credit hours must be offered in the upcoming summer schedule of classes
5. Submit a degree application and approved petition form (available in the Dean's office) by the last day to apply for a degree in the spring semester.

Academic Regalia

Each college may approve distinctive symbols to be worn by the top 10 percent of its graduates at commencement. Only one symbol may be worn by each graduate. In addition, the student with the highest honors in each college may wear a crimson-colored gown. No other symbolic additions to academic regalia are allowed without the approval of the Academic Deans Council.

Diploma

All fees and bills owed the university must be paid in full before a student may receive a diploma or official transcripts. The degree title and major(s) will be printed on the diplomas, in accordance to the degree application award, determined by the academic colleges. Academic honors will also be printed on the diplomas below the degree and major(s). The name on the diploma will reflect the student's current official NMSU records. Name changes are only processed for currently admitted students.

Diplomas will be mailed to graduates approximately eight weeks after the individual colleges certify the degree requirements and the final grades have been processed by the University Student Records Office. The diploma will be mailed to the address specified on the degree application, unless an address change was requested before the last day of the semester.

Undergraduate Academic Standing

When a student does not maintain adequate academic standing, he/she is placed in Academic Warning. If the student's academic standing does not improve, the placement progresses to Academic Probation I. Continued unimproved academic standing moves a student into Academic Probation II, then finally, Academic Suspension. Each stage imposes more structure and limitations on the student in order to help them return to normal academic standing. The intent is not to punish, but to help the student return to normal academic standing and success. Since some of these limitations involve limitations on the number of credit hours, students on Probation or Suspension may be subject to loss of financial aid. It is the responsibility of the student to determine the impact of their changed academic standing on their financial aid. Notification to students of academic warning, probation, or suspension appears on the student's grade report at the end of each grading period.

Undergraduate Academic Warning

Issued only once, the first time a student's cumulative GPA falls below a 2.0 while in good academic standing. The University Student Records Office will send the student a notification detailing the consequences should the cumulative grade point remain below a 2.0 at the conclusion of the semester. A student on Academic Warning remains eligible for all extracurricular activities as governed by the rules of the specific activity.

While under Academic Warning the following restrictions apply:

1. The student cannot enroll in more than 15 hours of coursework during the semester.
2. The student may be required to enroll in a 3-credit hour special study skills/time management course specifically designed for students on Academic Warning, or an equivalent course approved by the appropriate associate dean or CAO of their campus.
3. Students may be required to enter into a contract with their advisor, approved by their department head that places further stipulations on Academic Warning. The contract may include, but is not limited to the following:
4. The student may be required to take at least one repeat course to try to improve their GPA.

5. Except for the special study skills/time management course, the student's coursework may be restricted to their major.
6. The student may be required to get tutoring help.
7. The student may be required to see an academic counselor on a specified time schedule.
8. The number of credit hours a student may register for may be restricted (due to extenuating circumstances such as the student's workload commitments).

The associate dean or CAO may place the student on Academic Probation I should the student not adhere to the stipulations of the contract.

If the student's semester GPA is less than a 2.0, and the cumulative GPA remains below a 2.0 at the end of the semester on Academic Warning, the student is placed on Academic Probation I. If the semester GPA is greater than 2.0 but the cumulative GPA is still less than 2.0, the student will remain on Academic Warning. If the cumulative GPA is greater than a 2.0 at the end of the semester then the student is returned to good academic standing.

Undergraduate Academic Probation I

This occurs when a student under Academic Warning has a semester GPA less than 2.0, and the cumulative GPA remains below 2.0 at the conclusion of the semester or if the student maintains a semester GPA greater than 2.0 while on Academic Probation I but the cumulative GPA is still less than 2.0. Academic Probation I will also occur if a student falls below a 2.0 cumulative GPA from Good Academic Standing if Academic Warning already occurred in a previous term.

Under Academic Probation I the following conditions apply:

1. The student cannot enroll in more than 13 hours of coursework during the semester. *Note: Students falling below 12 credits in any one semester will jeopardize their financial aid.* Should this occur, students should see the associate dean in their college as soon as possible to try to implement corrective measures.
2. The student may enter into a contract or individualized education plan with their advisor and approved by the associate dean or CAO that place further stipulations on Academic Probation I. The associate dean or CAO may place the student on Academic Probation II or Academic Suspension should the student not adhere to the stipulations of the contract.
3. Students on Academic Probation receiving educational benefits from the Veterans' Administration must obtain counseling from the Military & Veterans Programs Office.
4. Students admitted under special provisions whose transcripts indicate less than a 2.0 GPA are admitted on Academic Probation I.

The student must maintain a semester GPA equal to or greater than 2.0 until such time that the cumulative GPA is greater than 2.0 at which time the student goes back to good academic standing. Until the transition happens the student remains on Academic Probation I. The student will be placed on Academic Probation II if he/she is unable to maintain a 2.0 semester GPA, and the cumulative remains below a 2.0 GPA, while under Academic Probation I. A student on Academic Probation I remains eligible for all extracurricular activities as governed by the rules of the specific activity.

Undergraduate Academic Probation II

Academic Probation II is issued in two ways.

- The first is when a student falls below a semester 2.0 GPA and the cumulative GPA remains below a 2.0 while on Academic Probation I.
- The second is when a student maintains a semester GPA greater than 2.0 while on Academic Probation II but the cumulative GPA is still less than 2.0.

The following restrictions are in place for student's in Academic Probation II:

1. The student cannot enroll in more than 7 credit hours of coursework during the semester.
2. As with rule 2 under Academic Warning and Academic Probation I and at the discretion of the associate dean or CAO, the student will be required to enter into a contract with their advisor, approved by the associate dean or CAO, to place further stipulations on Academic Probation II.

The associate dean or CAO may place the student on Academic Suspension should the student not adhere to the stipulations of the contract.

The student must maintain a semester 2.0 GPA or higher until the cumulative GPA reaches a 2.0 or higher at which time they are placed on good academic standing. A student unable to maintain a semester GPA of 2.0 or higher, and the cumulative remains below 2.0 GPA, while under Probation II will be placed on Academic Suspension. A student on Academic Probation II remains eligible for all extracurricular activities as governed by the rules of the specific activity.

Continuing in Probationary Status

Students may continue to enroll while on Academic Probation I or II provided they maintain a semester GPA of 2.0 or higher. If they withdraw from the university while on Academic Probation, they continue on that same level of Academic Probation.

Removal of Academic Probation

Such academic standing is removed when the cumulative GPA is raised to 2.0 or higher, with the following exceptions:

1. a transfer student may not remove probation by summer work alone;
2. if an I grade is removed after the student has enrolled, the new grade's effect on academic standing is based on its inclusion with grades for the term for which the student is enrolled;
3. exercise of the Adjusted Credit Option does not change academic status until subsequent grades are earned.

Academic Suspension

When a student does not achieve a semester 2.0 GPA or higher, and the cumulative remains below a 2.0 while under Academic Probation II, they are placed on Academic Suspension. Students under Academic Suspension are not allowed to take NMSU courses while under suspension. Students on Academic Suspension must sit out a minimum of 1 semester and apply for re-admission.

Under certain conditions, a student may be re-admitted at NMSU under regular status while under Academic Suspension when satisfactory progress has been demonstrated at another college or university (see Readmission- Degree Seeking). Credits earned at another university or college while under Academic Suspension from NMSU or another university or college will be accepted at NMSU only after the student demonstrates satisfactory progress over a period of two semesters after being re-admitted or admitted to NMSU. Acceptance of transfer credits that count toward degree requirements is still governed by the rules established by the student's respective college or campus.

Summer Attendance Impact on Academic Standing

A student may use summer classes to try to get warning or probationary status removed. Students suspended at the close of the spring semester may have their Academic Suspension rescinded if they attend summer session at NMSU or one of its Community College campuses. Such attendance must raise the combined spring semester and summer GPA to 2.0 or better. Under no circumstances may a student on Academic Warning or Academic Probation be allowed to register for an overload. The current academic status is continued if the student withdraws from the university and the probation or suspension status applies to all subsequent enrollments until the cumulative GPA is 2.0 or higher.

Graduate Academic Probation and Suspension

Graduate Academic Standing is based on both the student's semester GPA and cumulative GPA. The student must maintain a cumulative GPA of 3.0 or higher to remain on Graduate Academic Good Standing.

Graduate Academic Probation I: A graduate student is placed on Graduate Academic Probation I when a graduate student's semester GPA is above a 3.0 and the cumulative GPA drops below 3.0; or when the semester and cumulative GPA's drop below 3.0 and the previous academic standing is Graduate Academic Good Standing.

Graduate Academic Probation II: Is issued when a graduate student semester GPA and the cumulative GPA drops below as 3.0 and the previous academic standing is one of Graduate Academic Probation I or Graduate Re-admit on Probation I.

Graduate Academic Suspension:

If the graduate student is unable to maintain a semester GPA of 3.0 or higher and the cumulative remains below 3.0 GPA while under Graduate Academic Probation II, the student will then be placed on Graduate Academic Suspension.

Students on Graduate Academic Suspension are barred from enrolling in graduate level courses at NMSU while on Suspension. Graduate students on Graduate Academic Suspension must sit out a minimum of one semester. Graduate students on suspension who wish to continue Graduate School after suspension must re-apply to the department and Graduate School. The student must also petition College Academic Dean or the Graduate School Dean, based on the major and degree the student is pursuing to be removed from Graduate Academic Suspension. At this time the graduate academic suspension status will be evaluated for possible readmission to the department. Should the suspension be lifted, the graduate student is placed on Graduate Academic Probation II or Graduate Re-admit on Probation II until such time that the graduate cumulative GPA equals or exceeds 3.0.

If you have questions about your academic standing, please contact your department academic advisor or Graduate Dean's office.

Student Academic Code of Conduct

The Student Academic Code of Conduct (SACC), applicable to both undergraduate and graduate students, provides procedures for the review and resolution of alleged or suspected academic misconduct within a reasonably prompt time frame. The full SACC is found in the university's published Administrative Rules and Procedures (ARP), specifically ARP 5.10 and ARP 5.11.

While it is important to refer to the detailed governing rules in the ARP, the process is summarized as follows: An institution-wide Academic Conduct Officer is responsible for processing each case of alleged academic misconduct. The accused student is provided notice of the allegation and has the right to participate during the fact finding process. The student may contest the investigative findings or sanction before a neutral third party hearing panel member. Either party to the matter has the right to a final appeal of the findings or a Level II sanction to the Office of the Provost.

The SACC distinguishes between Level I Sanctions and Level II sanctions, depending upon the severity of the offense and other factors. The Level 1 sanction includes a formal warning. Offenses by graduate students and repeat offenses, even if less serious are subject to a Level II Sanction. Level II sanctions may include a notation of academic misconduct on the student's academic transcript.

The full policy, examples of academic misconduct, report form and a flowchart of the procedures for resolving alleged student academic misconduct is available at:

Policies

- ARP 5-10 (<https://arp.nmsu.edu/5-10/>)
- ARP 5-11 (<https://arp.nmsu.edu/5-11/>)

Examples of Academic Misconduct and Report Form

- ARP Appendix 5.10-A (Examples) (<https://arp.nmsu.edu/wp-content/uploads/sites/26/2018/01/Appendix-5-10-A.pdf>)
- ARP Appendix 5.11-B (Form) (<https://arp.nmsu.edu/wp-content/uploads/sites/26/2018/01/Appendix-5-11-B.pdf>)

Flowchart of Procedures

- ARP Appendix 5.11-A (<https://arp.nmsu.edu/wp-content/uploads/sites/26/2018/01/Appendix-5-11-A.pdf>)

Privacy Rights

The following information has been designated as directory information and is subject to release to the public under the Buckley Amendment (PL 98-380), "The Family Educational Rights and Privacy Act of 1974:" student's name, class level, college and major, dates of attendance, degree(s) earned, honors and awards, address, telephone number, NMSU email address, Aggie ID number, most recent previous educational institution attended, place of birth, and some information about students involved in recognized activities and sports.

Other information regarding disclosure of student data is posted on the University Student Records Office website (<https://records.nmsu.edu>) and in the University Student Records Office (USRO), in compliance with the Act.

Requests for withholding directory information must be filed in writing with the USRO. A student may choose to hide his/her address and phone number from the campus phonebook through the myNMSU portal. This will only hide the information from the public but the records will still be officially kept within the USRO.

Social Security Numbers in Student Records

As required by law, social security numbers are collected from prospective and current students who are either applying for admission to the university or plan to seek employment on campus. The social security number is a confidential record and is maintained as such by the university in accordance with the Family Educational Rights and Privacy Act.

In addition, the university is mandated by federal tax regulations to provide tuition and fee payment information to the student and the Internal Revenue Service so that applicable educational tax credits may be computed. The social security number is required for tax reporting purposes.

Change in Demographic Information

Students wishing to make a legal name change, citizenship change, social security number update or a gender update can do so through the University Student Records Office (USRO). All students will need to fill out the "Demographic Change form" located at <https://records.nmsu.edu/forms/> and provide one of the following documents to the USRO. Legal name changes will only be processed for students currently enrolled at NMSU or any of its Community Colleges.

1. **Legal name change:** students will need one legal documentation with the new name on it. This can be a Government Issued ID (drivers license, state card or valid passport), a Birth Certificate, a Court Order, a Marriage Certificate/Divorce Decree or a Certificate of Naturalization/I551 Card.
Note: Documentation is not required to add/delete hyphen, space, apostrophe, or to abbreviate a middle name to initial.
2. **Citizenship change:** Certificate of Naturalization or I551 card.
3. **Social Security Number Update:** students will need to provide an original signed Social Security Card. Unsigned cards will not be accepted.
4. **Gender Update:** students will need to bring a Government Issued ID (drivers license, state ID card or valid passport) and a Revised Birth Certificate

Students may update their "preferred name", which is the name used in lieu of a student's legal name, on certain documents, such as, the email display name, learning management system, the phonebook, class rosters and advisee lists. This can be done by the student through the myNMSU portal and does not need to be done at the USRO.

For more information about the specific documents that are needed please contact the University Student Records Office at (575) 646-3411.

Changes in Residency Status for Tuition Purposes

The University Student Records Office (USRO) does not determine the laws and rulings for determining Residency, these are state laws that the USRO simply administers. An individual must establish legal residency in New Mexico before he or she is entitled to pay in-state tuition rates.

The student's initial residency status is determined at the time of admission, any changes to this status must be initiated by the student through the USRO. A continuing student, classified as a non-resident, who has satisfied the requirements to establish residency may submit a Petition for In-State Residency Tuition Classification along with the required supporting documentation to the USRO Office. Petitions must be filed on or before the third Friday of the semester for which the student is requesting resident tuition.

For specific information about the process of petitioning for In-State Residency or for information about who is eligible for residency for tuition purposes please visit the <https://records.nmsu.edu/residency/> website or the University Student Records Office on the Las Cruces campus.

Official Transcripts

An official transcript is the University's certified statement of your complete NMSU academic record in chronological order by semester and year. It includes the student's coursework, grades and any degrees that were awarded. Any credit hours earned through transfer work are listed as the equivalent course at NMSU. Grades are not transferred, nor are they used to calculate the NMSU grade point averages. Official transcripts will not be released if the student is in debt to the university.

Transcripts can either be ordered in person at the University Student Records Office or online at <https://records.nmsu.edu/transcripts/>, there will be a fee for these that may vary depending on the total number of transcripts ordered and the type of delivery method that is selected. A student can request two types of transcripts an electronic one, which is sent as a secured PDF or a printed hard copy that can be delivered in a sealed envelope.

The name that will appear on the student's transcript will match the name on the student's official NMSU record. Name changes will only be processed for students currently enrolled at NMSU or any of its Community Colleges.

Purging of Student Files

All academic files for students who attend NMSU are kept for five (5) years following the student's final term enrolled. Only archival documentation will be retained. The files of students who do not enroll within one year after being admitted are destroyed.

Academic Support Services, Costs, Campus Resources, Student Activities

Adult Education and GED (p. 67)[®]/HiSET Preparation (p. 67)

Advising (p. 72)

Apprenticeship Program (p. 68)

Career and Job Placement Services (p. 68)

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Small Business Development Center (p. 71)

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Video Conferencing and ITV (p. 72)

Adult Education

The Adult Education (A E) Division offers adults the opportunity to begin and/or complete a basic education through the twelfth grade. A E also provides a variety of educational programs and students support services that can help individuals achieve their goals and transition to college. A complete education improves one's opportunity for obtaining or retaining employment and/or going to college and can provide a person with a sense of accomplishment. A E instructional programs and classes include basic literacy, English as a second language (at various levels), EL/Civics, GED®/HiSET (high school equivalency diploma), college preparation, U.S. citizenship, computer literacy and work readiness. Practical living skills, employment and training and student success principles are also emphasized throughout the A E curriculum. Student support services include basic skills assessments, student orientations, self-paced studies, advising and referral services, student success skills, tutoring on an individual and small-group basis and assistance with college transition. For more information about the A E programs, visit us at the A E Office at New Mexico State University Carlsbad; room 207; call (575) 234-9250 or email us at bradshaw@nmsu.edu; becca130@nmsu.edu; or marinaso@nmsu.edu.

Advising

Academic Advising

Academic advisors help students establish academic and career goals, transition to college, interpret placement test scores, select and schedule classes, explore majors, develop a graduation plan and evaluate progress towards completion. Students are encouraged to meet with their advisor each semester.

Student Accessibility Services

Students Accessibility Services (SAS) coordinates university efforts to provide access and opportunity to students with disabilities, including students who have disabilities that are apparent and non-apparent. Students wanting to learn more about the services or accommodations available to those with a documented disability should contact the SAS Coordinator in Student Services, Room 111. Advanced notice in planning services is strongly encouraged. NMSU is committed to providing an accessible institution to all individuals.

Accommodations can be requested by completing these steps:

1. Make an appointment with the SAS Coordinator to self-identify as a student with a disability.
2. Submit a Petition for Accommodation and proper documentation to the SAS Coordinator.
3. Finalize accommodations for the semester with the SAS Coordinator.
4. Take faculty notification letters listing approved accommodations to each instructor and return to the SAS Coordinator within five working days.
5. Submit a Petition for Continuation of Services each semester.

Grievance Procedure for Students with Disabilities

NMSU Carlsbad has adopted an internal grievance procedure providing for the prompt and equitable resolution of complaints alleging any action prohibited by Section 504 of the Rehabilitation Act of 1973 of the Americans with Disabilities Act of 1990 (ADA), which prohibit discrimination on the basis of disability.

Students are encouraged to attempt to resolve any problems or complaints they might have at the local college level first, when possible. Students should initially contact the NMSU Carlsbad Student Accessibility Services Coordinator at (575) 234-9321 in an effort to resolve problems related to the need for or provision of accommodations as well as those that are related to access needs or the equalization of learning opportunity. While students are encouraged to resolve concerns at the college level, any student may contact the EEO/ADA and Employee Relations Director at (575) 646-3333 or (575) 646-7802 (TDD) at New Mexico State University's main campus at any time.

Informal Complaint Procedure

The student may choose to resolve the complaint on an informal basis (such may include mediation, a letter to the professor, a telephone call or some other resolution amenable to the student). A written confidential record of the final outcome or resolution will be retained with the Student Accessibility Services Coordinator.

Formal Grievance Procedures

If the student wishes to formalize a grievance, completion of the New Mexico State University, EEO Grievance Form is required by the EEO/ADA and Employee Relations Office (575) 646-3333 within ten (10) working days of the occurrence. (Note: The 10-day filing period may be extended by written request to the EEO/ADA and Employee Relations Office with consent of the student). In order to expedite the filing process, formal New Mexico State University, EEO Grievance Forms are available in the Student Accessibility Services, Room 111.

The foregoing procedures are implemented to:

- Protect the substantive due process rights of students with disabilities, and
- Assure that NMSU Carlsbad complies with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973, as amended.

For further information, contact the Student Accessibility Services Coordinator, the Vice President for Student Services or NMSU's EEO/ADA and Employee Relations Director at NMSU Las Cruces.

Apprenticeship Program

The Manufacturing Sector Development Program (MSDP) in conjunction with local employers offers apprenticeships to current students. The objective of the Apprentice Program is to train individuals in the field of Industrial Maintenance Electrical in all phases of the industry through a well-developed, on-the-job and instructional program.

Recognizing the need for skilled construction craftsmen in Eddy, Chaves, and Lea Counties, the Carlsbad Community Development Corporation established the Multi-trade Apprenticeship Standards to be used by all of its members, including contractors, manufacturers and businesses that utilize people in occupations that can be learned through apprenticeship and wish to employ apprentices. For additional information contact the MSDP Department at New Mexico State University Carlsbad, room 227B or call (575) 234-9271.

Career and Job Placement Services

Student Services offers various resources to help students evaluate and choose potential career options including Choices, a web-based career guidance software program and various workshops. We provide assistance with general job search strategies and guidance regarding how to write effective cover letters and resumes. Student Services coordinates work-study positions for eligible students as well as cooperative and internship opportunities.

Citizen's Professional Advisory Councils

The Citizen's Professional Advisory Councils "CPAC" represents individual community stakeholder groups primarily aligned with workforce and academic instructional areas of the college. CPAC gives community stakeholders a chance to influence the college's role in the community and communicate the needs of individual organizations and business as they relate to the college. Advisory Councils are comprised of local employers and organizational representatives and involve valued constituencies in NMSU Carlsbad's planning for the educational needs of its students. Again, CPAC events allow the college and its community stakeholders to gather together to communicate external stakeholder wants and needs. CPAC members come from the business community, public education, law enforcement, research laboratories, government agencies, private industry, media, etc. CPAC events occur twice a year and includes dinner, breakout sessions, focus groups, etc.

Community Education

NMSU Carlsbad Community Education offers lifelong learning to individuals of all ages seeking educational options for the purpose of personal enrichment and self-improvement. Personal enrichment courses offered are in topics such as art, music, cooking, pottery, computer skills, yoga and welding. Course instructors include retired professionals, NMSU faculty, and business owners. The courses are affordable and can be taken in several hours to several weeks on our campus. Additionally, taking classes with NMSU Community Education allows the student to meet other people with the interest or hobby they would like to pass on. If someone is interested in teaching a class with Community Education, that person should call (575) 234-9247 or (575) 234-9211 or visit the Community Education Office on campus in Office 1A.

Developmental Programs and Services

The mission of the Developmental Education Program at NMSU Carlsbad is to help students cultivate the knowledge, skills and attitudes necessary for success in college level curriculum by providing quality instruction and academic support that encourages students to be active participants in the learning process.

New students are placed into developmental education courses based on their ACT and/or Accuplacer placement testing scores. The course placement level is determined based on system wide standardized "cut-off" scores. The university strongly recommends that all required developmental education coursework be started during the first year of enrollment.

Students must pass all developmental coursework with a grade of "C" or higher, in order to move on to the next course in the sequence. Students who earn less than a "C" in a course will be required to repeat that course and must obtain the required minimum grade before moving to the next course in the sequence. Please note that credit earned in developmental coursework is not applied toward any degree or certificate at NMSU Carlsbad, but completion of developmental coursework may be a requirement for any degree or certificate. Credit for developmental coursework is included in the credit calculations for financial aid. Most developmental courses are offered for 4 credits, which includes 3 credits of instruction and 1 credit of laboratory time to practice skills taught during instruction. A variety of course instructional formats may be offered. Please refer to the semester course schedule or visit the L.A.C. for more information regarding specifics for each course section.

| Prefix | Title | Credits |
|---------------------------------------|--|---------|
| Developmental Reading | | |
| CCDR 105 N | Fundamentals of Academic Reading. | 3 |
| CCDS 109 N | Study Skills for Reading | 1 |
| Developmental English Sequence | | |
| CCDE 105 N | Effective Communication Skills | 4 |
| CCDE 110 N | General Composition | 4 |
| Developmental Math Sequence | | |
| CCDM 105 N | Mathematics Preparation and Pre-Algebra ¹ | 5 |
| CCDM 114 N | Algebra Skills | 4 |
| CCDR 110 N | Effective College Reading | 3 |
| Tutorial/Skills Courses | | |
| FYEX 1131 | Personal Learning Skills I ³ | 1 |
| FYEX 1996 | Special Topics ² | 2 |
| College Level English Courses | | |
| Approved FYEX Elective | | 1 |
| ENGL 1110G | Composition I ⁴ | 4 |
| Course Level Math Courses | | |
| MATH 1134 | Fundamentals of Elementary Mathematics I | 3 |
| MATH 1130G | Survey of Mathematics | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| MATH 1220G | College Algebra | 3 |
| MATH 1250G | Trigonometry & Pre-Calculus | 4 |
| MATH 1350G | Introduction to Statistics | 3 |
| MATH 1430G | Applications of Calculus I | 3 |
| MATH 1511G | Calculus and Analytic Geometry I | 4 |
| MATH 1521G | Calculus and Analytic Geometry II | 4 |
| MATH 2134G | Fundamentals of Elementary Math II | 3 |
| MATH 2415 | Introduction to Linear Algebra | 3 |
| MATH 2530G | Calculus III | 3 |
| Approved MATH Elective | | 3 |

¹ An accelerated mathematics preparation and pre-algebra review sequence, which can be taken by those students who have recently had math.

² May be taken concurrently with MATH 1215 Intermediate Algebra and MATH 1220G College Algebra and any college level English. Graded on an S/U scale, based on the number of tutoring hours required. Students must contact the Tutor Coordinator in the L.A.C. prior to the start of the semester to receive additional information and sign a contract agreement that stipulates the number of required tutoring hours. Students may only enroll for a total of 2 credits of FYEX 1996 Special Topics per semester and the course may be repeated in subsequent semesters for a maximum of 8 credits.

³ Requires the student to design a curriculum of study to meet individualized learning goals. Graded on an S/U scale, based on the number of hours completed and amount of progress made during the semester. Students must contact the Tutor Coordinator in the L.A.C. prior to the start of the semester to receive additional information and sign a contract agreement that stipulates the number of required hours and dictates the curriculum to be followed. This course may be repeated in subsequent semesters for a maximum of 3 credits.

⁴ This course is required for all degree programs. Also, this course should be taken only by those who either initially "placed" into the course (by placement testing) or by those who have first successfully completed CCDE 110 N General Composition prior to enrollment in the course.

Developmental Courses and Course Sequence

Before students enroll for any college level course listed above, they should have satisfied the following requirements:

1. have taken and passed any stated prerequisite course with a grade of "C" or better, or
2. have taken the placement examination earlier, the result of which must affirm a student's placement at a college course level.

Courses beyond the developmental level may or may not be degree required (check the degree plan first).

Learning Assistance Center

The Learning Assistance Center (L.A.C.) provides instructional support for students at NMSU Carlsbad. The goals of the L.A.C. include tutoring students for a wide variety of developmental and college level courses, helping students improve their study and learning skills, and connecting students to the network of support available at the university and within the community.

The L.A.C. oversees the following:

Services:

- Individual and Group Tutoring: Scheduled academic course assistance by qualified tutors for a wide variety of courses. Visit the L.A.C. for more information. Math tutoring for all CCDM and MATH courses through MATH 1220G College Algebra .
 - Learning and Study Skills: Assistance with a variety of needs from learning style assessment to time management. Visit the L.A.C. for more information.
 - Test Prep: Tutoring, books and online preparation for Accuplacer, ACT and HESI.

All services are offered free of charge to qualified NMSU Carlsbad students. Courses are offered for credit and adhere to the university tuition schedule. Students must be admitted to NMSU Carlsbad to access all services and courses.

For more information about these services or its offerings, call (575) 234-9315, visit the L.A.C. in Room 253 or visit our website at carlsbad.nmsu.edu (<http://carlsbad.nmsu.edu>). The L.A.C. hours are 8 a.m. to 6 p.m. Monday through Thursday and the hours on Friday is 8 a.m. to 12 noon; during the Fall and Spring semesters. Summer hours are determined at the end of the spring semester.

Learning Technology Center

The Learning Technology Center (LTC) located in Room 211 of the Main Building, is open Monday through Thursday, 8am to 6pm and Friday 8am to 5pm. The office phone number is (575) 234-9263. The LTC provides technology support for faculty, staff and students at New Mexico State University Carlsbad. The goals of the LTC include teaching faculty and students on the learning management system (LMS) and other web technologies, providing professional development for faculty and staff, helping faculty improve course design and development of online learning and assisting students with technology issues.

For students, the LTC provides training and technology support in the following topics:

- Cloud based storage (Google Drive, Microsoft 365 OneDrive)
- Learning Management System - Canvas interface/online classroom
- Mobile learning devices basics
- NMSU account set up
- NMSU E-mail
- Other Web technologies

Computer Center

The Computer Center at NMSU Carlsbad operates four instructional computer classrooms and general use computer labs in the Library, Learning Technology Center and the Learning Assistance Center. All computers are networked and provide access to the Internet. The Center maintains a staff of full time and student employees to provide users with technical support. The ICT general Help Desk phone number is (575) 234-9448.

Student Computer Accounts

All students enrolled for credit courses are given a computer account that allows them access to the Internet during the semester(s) in which they are enrolled. This account also allows a student access to server based storage for homework. If you are experiencing trouble with Canvas or Banner access, please call the LTC at (575) 234-9263 or (575) 234-9259.

Library and Media Center

A center of academic activity, the Library and Media Center is the first choice for information for students at NMSU Carlsbad. The campus library supports learning and instruction with online and traditional learning resources. The library ensures equal access to learners across the spectrum of educational level, physical ability and location. General and discipline based instruction is available for classes, individual students and faculty by appointment.

Through active collaboration with faculty, the library offers academic and vocational resources relevant to student achievement and success. Information literacy training is embedded into the physical and on-line learning environments to ensure technological readiness vital to personal and professional achievement in today's global economy.

The library is an open, vibrant and student centered environment that encourages discovery and academic advancement through active learning. A welcoming space for individual and collaborative interaction, the library is open six days a week, 10 hours each weekday and 4 hours on Saturday during the fall and spring semesters. Remote access to selected online resources is available to current students, faculty and staff.

The library also serves as a public gateway for the Carlsbad and Eddy county communities by providing access to both print and specific online resources delivered through the State Library of New Mexico.

Library Hours

Monday – Thursday 8:00 am to 8:00 pm

Friday – 8:00 am to 5:00 pm

Saturday – 10:00 am to 2:00 pm

The library follows the NMSU Carlsbad calendar and is closed whenever the campus is closed.

NMSU Carlsbad Bookstore

The NMSU CARLSBAD BOOKSTORE, located in the main building of the Carlsbad campus, is open not only the campus, but to the surrounding communities of Carlsbad, Loving and Artesia. The bookstore offers a wide variety of fresh, quick snacks and lunch items. For students who need supplies, including flash drives, calculators and planners, the bookstore is well stocked. Campus bookstores always have the best spirit clothing, drinkware and gifts, and NMSU CARLSBAD BOOKSTORE is the only store that features NMSU Carlsbad logo items. NMSU Carlsbad Customers who prefer to place orders over the phone, may also take advantage of curb pick up.

For the first time on this campus, the NMSU CARLSBAD BOOKSTORE is pleased to welcome the community to our General Reading department. The Bookstore offers, not only Best Sellers, but New Releases which are updated weekly. The Children's section features Caldecott and Newberry award winners and grade specific workbooks. For students needing test preps and Study Aid, the NMSU CARLSBAD BOOKSTORE is the place to shop. If bookstore customers need to place a special order, please take advantage of our free special order services.

All textbooks that have been adopted for classes are available online through the main campus Follet NMSU Bookstore. Textbooks ordered online, requesting store pick up, will be available at the NMSU CARLSBAD BOOKSTORE for student convenience.

Service Learning Opportunities

A variety of NMSU Carlsbad courses may include Service Learning options. Service learning programs involve students in activities that address local needs while developing their academic skills and commitment to their community. Service Learning is a teaching and learning strategy that connects meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility and strengthen communities. Participants in Service Learning master important curriculum content by making connections between what they are studying in the NMSU classroom and its many applications. The four pillars of Service Learning are

- the academic focus in the NMSU classroom,
- the service that meets a community need,
- reflecting on the experience, and
- strengthened civic responsibility.

For more information on Service Learning Opportunities at NMSU Carlsbad call (575) 234-9247 or visit the Community Education Office on campus in office 1A.

Small Business Development Center

NMSU Carlsbad's Small Business Development Center (SBDC) is located in downtown Carlsbad at 221 S. Canyon Street in the heart of the local business district. The SBDC offers free, quality counseling and guidance for business owners and prospective owners.

The SBDC is designed with you in mind. Whether you have been in business for some time or just starting out, we can help you address the multitude of issues and problems you encounter each day.

Our experienced staff can help you:

- Explore business ownership opportunities in Eddy County
- Start a new business or make an established one more efficient and profitable
- Create alternatives for problem solving
- Measure your success potential
- Improve your management skills
- Access a wealth of business resources

Business Education

If needed, special arrangements can be made for SBDC staff to come to your business site to discuss strategies. Seminars and workshops are available to improve your business and management skills. Classes are scheduled through the SBDC by contacting (575) 885-9531.

Center for Resource Information

The SBDC has a resource library that can benefit you in retrieving business information. Why work alone? SBDC will help you find a competitive advantage through professional business publications. Internet access is available at the center for clients. Let the Small Business Development Center help you and your business reach full potential. Call us today to discuss your needs at (575) 885-9531.

Student Organizations

Phi Theta Kappa

Phi Theta Kappa is the international honor society for two year colleges. To be eligible, students must have a 3.5 GPA, have completed 12 credit hours of non-developmental course work, be of good character and be recommended by faculty. Members are invited to membership once per semester. Members are eligible for special conferences, workshops and scholarships.

Associated Students (Student Government)

The Associated Students of NMSU Carlsbad are elected by and represent the student body. During the spring semester, NMSU Carlsbad holds an election and the newly elected members serve during the next academic year (summer sessions excluded). The Associated Students coordinate campus activities and host events on student development issues such as drug and alcohol abuse prevention, suicide prevention, mental and physical wellness, leadership and cultural diversity.

Associated Students is open to any student meeting the following qualifications: Enrolled in a minimum of 6 semester credits, possessing a 2.0 grade point average or higher, and in good standing with NMSU Carlsbad. Responsibilities of the Associated Students include but are not limited to identifying qualifications for the recognition of student organizations and related funding, student social activities, student activity budgets, student publications, student elections, students' academic freedoms, and the use of facilities dedicated for student's social, cultural, recreational and service activities. Students are encouraged to join and actively participate in the student government. For more information, call (575) 234-9335.

Beta Alpha Delta

NMSU Carlsbad supports the Beta Alpha Delta Chapter of the American Criminal Justice Association/Lambda Alpha Epsilon. The Association is a National Criminal Justice professional type fraternity. The college has a very active chapter that raises funds to attend regional and national conferences/competitions, perform community service projects, campus service projects and have fun.

Membership in the association gives the student an opportunity to improve their C J skills and knowledge, network with people from all over the United States and further criminal justice professionalism. Membership is open to anyone who has an interest in Criminal Justice. There are three levels of participation for competition purposes: lower division academic, upper division academic and professional. For further information, please call (575) 234-9354.

Skills USA

A national non-profit student organization, Skills USA is a partnership of students, teachers and industry working together to ensure America has a skilled work force. Activities include; participating in state conventions each year, Membership is open to any interested student. A \$20 membership fee applies each year.

Student Nurses Association

The NMSU Carlsbad Student Nurses Association is an organization for nursing students designed to contribute to nursing education, to provide programs representative of the fundamental interests and concerns of nursing students and to aid nursing students in the development of the whole person, and to promote and encourage collaborative relationships with nursing and health related organizations. Membership is open to pre and current nursing students. For more information, call (575) 234- 9300.

Note: This list of Student Organizations could change as students are always welcome to create additional organizations and clubs.

Video Conferencing and ITV

Video conferencing services, including two way interactive televisions, are also provided for staff and community organizations through the Help Desk in the Business Office. To schedule a computer classroom or a video conferencing room contact the Help Desk at (575) 234-9406.

Fields of Study

NMSU Carlsbad offers 100-200 level courses which, when taken in specified sequences with additional academic requirements, normally lead to a certificate or an associate degree.

A certificate represents a sequence of specified courses which offer instruction in specific knowledge, competencies and skills to meet certain predetermined qualifications specified and/or required by a given vocation or profession. The certificate normally represents approximately one year of full time college study or its equivalence in the depth and quality of related learning experiences, and is intended to train and otherwise prepare graduates for entry into the workforce immediately upon completion of their studies. Consequently, the emphasis of a certain curriculum is to provide graduates with the knowledge, competencies and skills to succeed in a specific vocation or profession; without immediate need for additional academic preparation.

An associate degree is a 100-200 level undergraduate degree and is awarded to graduates of prescribed lower division curricula normally representing approximately two years of full time college study (60 or more semester credits) or its equivalent in the depth and quality of related learning experiences. The Associate of Arts degree normally implies a liberal education orientation and the Associate of Applied Science degree normally implies a more applied orientation in a given discipline; which may align with a specific vocational or professional field. NMSU Carlsbad also awards an Associate Degree in General Studies. Although graduates awarded the Associate of Applied Science degree intend to enter the workplace immediately, most graduates of the Associate of Arts degree intend to continue their academic preparation towards the completion of a baccalaureate degree and should be mindful of what courses may transfer easily toward their major area of study at the receiving institution.

All entering students are required to take specific placement tests in the areas of English, math and reading to determine their eligibility for entrance to college level courses.

Prerequisites to Certificates

Graduates in certificate programs must demonstrate proficiency in reading, math and English as evidenced by sufficient scores on the Workkeys® assessment. Additional remediation may be required to attain these scores.

Requirements Specific to Associate Degrees

The following requirements apply to students seeking to graduate with an associate degree from NMSU Carlsbad:

1. Students must maintain a cumulative grade point average of 2.0 or higher.
2. Students must take their last 15 semester credits through NMSU Carlsbad or any NMSU campus (cannot include CLEP, challenge exams, or transfer credits).
3. Students must complete a minimum of 60 approved semester credits.
4. Student must complete ENGL 1110G Composition I with a grade a C or better.
5. Students must demonstrate proficiency in reading, math, and English as evidenced by sufficient scores on the college placement test, ACT, or SAT.

Preparation for Transfer to Baccalaureate Study

Students planning to attend a baccalaureate granting institution, at either NMSU Las Cruces or elsewhere are encouraged to contact the institution they intend to attend and secure all application materials and information pertaining to their intended programs of study.

Requirements for baccalaureate degrees awarded through the NMSU-Las Cruces includes specific general education courses and requirements that are listed in the undergraduate catalog published annually by NMSU Las Cruces. Students planning to complete the course requirements for an Associate of Arts degree, with the intention of later attending NMSU Las Cruces to complete an undergraduate degree are encouraged to consult with their advisor(s) at NMSU Carlsbad or with the appropriate dean at NMSU Las Cruces, to identify specific program requirements.

NMSU Carlsbad offers courses up the first two years of study to prepare students for a variety of Bachelor degree programs. NMSU Carlsbad offers associate degrees and certificates in a variety of fields.

Common Course Numbering Crosswalk

The Post-secondary Education Articulation Act (https://hed.state.nm.us/resources-for-schools/public_schools/nm-course-numbering-system/) charges the New Mexico Higher Education Department with establishing and maintaining a common course numbering system, in consultation with faculty. To this end, the common course numbering system includes both equivalent (Common) and unique courses.

- **Common Course:** is any course that is offered at multiple institutions throughout the state, has the same prefix/number combination, the same title, the same description, and at least 80% of the learning outcomes for the course are the same.
- **Unique Course:** is any course that is unique to the institution (the NMSU system), has a prefix/number combination, title, description and learning outcomes that are unique to the institution (the NMSU System).

The table below shows the previous NMSU System-wide course prefix/number combination, the future Common Course Numbering prefix/number combination, and an indicator of whether the course is deemed Common or Unique throughout the state.

| Current Course | Past Course | Course Type Indicator |
|--|-------------|-----------------------|
| ACCT-ACCOUNTING | | |
| ACCT 2110 | ACCT 221 | Common |
| ACCT 2120 | ACCT 222 | Common |
| ACES-AGRI,CONSUMER & ENV SCIE | | |
| ACES 1120 | ACES 111 | Unique |
| ACES 1210 | ACES 121 | Unique |
| ACES 1220 | ACES 199 | Unique |
| AEEC-AGRICULTURAL ECONOMICS | | |
| AEEC 1110 | AG E 100 | Common |
| AEEC 1120 | AG E 101 | Unique |
| AEEC 2110 | AG E 236 | Unique |
| AEEC 2120 | AG E 260 | Unique |
| AEEC 2130G | AG E 210G | Unique |
| AEEC 2140 | AG E 250 | Unique |
| AEEC 2996 | AG E 200 | Unique |
| AEEC 300 | AG E 300 | N/A |
| AEEC 305 | AG E 305 | N/A |
| AEEC 311 | AG E 311 | N/A |
| AEEC 313 | AG E 313 | N/A |
| AEEC 314 | AG E 314 | N/A |
| AEEC 315V | AG E 315V | N/A |
| AEEC 325 | AG E 325 | N/A |
| AEEC 337V | AG E 337V | N/A |
| AEEC 340 | AG E 340 | N/A |
| AEEC 342 | AG E 342 | N/A |
| AEEC 350 | AG E 350 | N/A |
| AEEC 375 | AG E 375 | N/A |
| AEEC 384 | AG E 384V | N/A |
| AEEC 385 | AG E 385 | N/A |
| AEEC 400 | AG E 400 | N/A |
| AEEC 420 | AG E 420 | N/A |
| AEEC 425 | AG E 425 | N/A |
| AEEC 445V | AG E 445V | N/A |
| AEEC 451 | AG E 451 | N/A |
| AEEC 452 | AG E 452 | N/A |
| AEEC 456 | AG E 456 | N/A |
| AEEC 458 | AG E 458 | N/A |
| AEEC 470 | AG E 470 | N/A |
| AEEC 499 | AG E 499 | N/A |
| AGRO-AGRONOMY | | |
| AGRO 1110G | AGRO 100G | Common |
| AGRO 2160 | AGRO 250 | Unique |
| AGRO 2996 | AGRO 200 | Unique |
| ANSC-ANIMAL SCIENCE | | |
| ANSC 1110 | ANSC 220 | Common |
| ANSC 1120 | ANSC 100 | Common |
| ANSC 1120H | ANSC 100 H | Unique |
| ANSC 1120L | ANSC 100 L | Unique |

| | | |
|--------------------------|------------|--------|
| ANSC 1130 | ANSC 190 | Unique |
| ANSC 1140 | ANSC 205 | Unique |
| ANSC 1160 | ANSC 103 | Unique |
| ANSC 1170 | ANSC 261 | Unique |
| ANSC 1180 | ANSC 112 | Unique |
| ANSC 2120 | ANSC 288 | Common |
| ANSC 2130 | ANSC 290 | Common |
| ANSC 2140 | ANSC 285 | Unique |
| ANSC 2150 | ANSC 289 | Unique |
| ANSC 2310 | ANSC 262 | Common |
| ANSC 2330 | ANSC 200 | Common |
| ANSC 2340 | ANSC 201 | Common |
| ANSC 2996 | ANSC 250 | Unique |
| ANTH-ANTHROPOLOGY | | |
| ANTH 1115G | ANTH 201G | Common |
| ANTH 1135G | ANTH 130G | Common |
| ANTH 1135L | ANTH 130GL | Common |
| ANTH 1136 | ANTH 118 | Unique |
| ANTH 1137G | ANTH 120G | Unique |
| ANTH 1140G | ANTH 125G | Common |
| ANTH 1160G | ANTH 202G | Common |
| ANTH 2140G | ANTH 115 | Common |
| ANTH 2150 | ANTH 116 | Common |
| ANTH 2996 | ANTH 297 | Unique |
| ARCH-ARCHITECTURE | | |
| ARCH 1105 | ARCT 150 | Unique |
| ARCH 1110 | ARCT 104 | Common |
| ARCH 1112 | ARCT 124 | Unique |
| ARCH 1114 | ARCT 154 | Unique |
| ARCH 1120 | ARCT 101 | Common |
| ARCH 1121 | ARCT 170 | Unique |
| ARCH 1122 | ARCT 204 | Unique |
| ARCH 1220 | ARCT 111 | Unique |
| ARCH 2111 | ARCT 210 | Unique |
| ARCH 2113 | ARCT 224 | Unique |
| ARCH 2114 | ARCT 250 | Unique |
| ARCH 2115 | ARCT 254 | Unique |
| ARCH 2116 | ARCT 260 | Unique |
| ARCH 2122 | ARCT 274 | Unique |
| ARCH 2124 | ARCT 295 | Unique |
| ARCH 2220 | ARCT 211 | Unique |
| ARCH 2994 | ARCT 264 | Unique |
| ARCH 2995 | ARCT 291 | Unique |
| ARCH 2996 | ARCT 290 | Unique |
| ARTH-ART HISTORY | | |
| ARTH 1115G | ART 101G | Common |
| ARTH 2110G | ART 295G | Common |
| ARTH 2120G | ART 296G | Common |
| ARTH 2136 | ARTS 2671 | Unique |
| ARTH 300 | ART 300 | N/A |
| ARTH 305 | ART 305 | N/A |
| ARTH 310 | ART 310 | N/A |

| | | |
|------------------------|----------|--------|
| ARTH 311 | ART 311 | N/A |
| ARTH 312 | ART 312 | N/A |
| ARTH 321 | ART 321 | N/A |
| ARTH 323 | ART 323 | N/A |
| ARTH 325 | ART 325 | N/A |
| ARTH 330 | ART 330 | N/A |
| ARTH 336 | ART 336 | N/A |
| ARTH 338 | ART 338 | N/A |
| ARTH 339 | ART 339 | N/A |
| ARTH 342 | ART 342 | N/A |
| ARTH 343 | ART 343 | N/A |
| ARTH 390 | ART 390 | N/A |
| ARTH 444 | ART 444 | N/A |
| ARTH 477 | ART 477 | N/A |
| ARTH 478 | ART 478 | N/A |
| ARTH 479 | ART 479 | N/A |
| ARTH 500 | ART 500 | N/A |
| ARTH 510 | ART 510 | N/A |
| ARTH 511 | ART 511 | N/A |
| ARTH 521 | ART 521 | N/A |
| ARTH 525 | ART 525 | N/A |
| ARTH 536 | ART 536 | N/A |
| ARTH 538 | ART 538 | N/A |
| ARTH 539 | ART 539 | N/A |
| ARTH 542 | ART 542 | N/A |
| ARTH 543 | ART 543 | N/A |
| ARTH 578 | ART 578 | N/A |
| ARTH 579 | ART 579 | N/A |
| ARTH 597 | ART 597 | N/A |
| ARTH 599 | ART 599 | N/A |
| ARTS-ART STUDIO | | |
| ARTS 1121 | ART 125 | Unique |
| ARTS 1145G | ART 110G | Unique |
| ARTS 1240 | ART 155 | Common |
| ARTS 1250 | ART 156 | Common |
| ARTS 1310 | ART 275 | Common |
| ARTS 1320 | ART 276 | Common |
| ARTS 1410 | ART 270 | Common |
| ARTS 1520 | ART 161 | Common |
| ARTS 1520 | ART 272 | Common |
| ARTS 1610 | ART 150 | Common |
| ARTS 1610 | ART 250 | Common |
| ARTS 1630 | ART 260 | Common |
| ARTS 1710 | ART 280 | Common |
| ARTS 1711 | ART 160 | Unique |
| ARTS 1712 | ART 163 | Unique |
| ARTS 1713 | ART 165 | Unique |
| ARTS 1810 | ART 285 | Common |
| ARTS 2010 | ART 267 | Common |
| ARTS 2355 | ART 286 | Unique |
| ARTS 2410 | OEPT 100 | Common |
| ARTS 2430 | OEPT 155 | Common |

| | | |
|-----------|----------|--------|
| ARTS 2431 | ART 255 | Unique |
| ARTS 2440 | OEPT 120 | Unique |
| ARTS 2610 | ART 151 | Common |
| ARTS 2611 | ART 269 | Unique |
| ARTS 2616 | ART 252 | Unique |
| ARTS 2630 | ART 261 | Common |
| ARTS 2635 | ART 262 | Common |
| ARTS 2839 | ART 265 | Unique |
| ARTS 2993 | ART 208 | Unique |
| ARTS 2996 | ART 294 | Unique |
| ARTS 308 | ART 308 | N/A |
| ARTS 340 | ART 340 | N/A |
| ARTS 350 | ART 350 | N/A |
| ARTS 355 | ART 355 | N/A |
| ARTS 360 | ART 360 | N/A |
| ARTS 365 | ART 365 | N/A |
| ARTS 370 | ART 370 | N/A |
| ARTS 373 | ART 373 | N/A |
| ARTS 374 | ART 374 | N/A |
| ARTS 375 | ART 375 | N/A |
| ARTS 376 | ART 376 | N/A |
| ARTS 385 | ART 385 | N/A |
| ARTS 394 | ART 394 | N/A |
| ARTS 401 | ART 401 | N/A |
| ARTS 402 | ART 402 | N/A |
| ARTS 403 | ART 403 | N/A |
| ARTS 404 | ART 404 | N/A |
| ARTS 440 | ART 440 | N/A |
| ARTS 450 | ART 450 | N/A |
| ARTS 455 | ART 455 | N/A |
| ARTS 465 | ART 465 | N/A |
| ARTS 470 | ART 470 | N/A |
| ARTS 474 | ART 474 | N/A |
| ARTS 475 | ART 475 | N/A |
| ARTS 485 | ART 485 | N/A |
| ARTS 490 | ART 490 | N/A |
| ARTS 494 | ART 494 | N/A |
| ARTS 495 | ART 495 | N/A |
| ARTS 496 | ART 496 | N/A |
| ARTS 499 | ART 499 | N/A |
| ARTS 501 | ART 501 | N/A |
| ARTS 502 | ART 502 | N/A |
| ARTS 503 | ART 503 | N/A |
| ARTS 504 | ART 504 | N/A |
| ARTS 540 | ART 540 | N/A |
| ARTS 550 | ART 550 | N/A |
| ARTS 555 | ART 555 | N/A |
| ARTS 560 | ART 560 | N/A |
| ARTS 565 | ART 565 | N/A |
| ARTS 570 | ART 570 | N/A |
| ARTS 575 | ART 575 | N/A |
| ARTS 576 | ART 576 | N/A |

| | | |
|--|-----------|--------|
| ARTS 580 | ART 580 | N/A |
| ARTS 585 | ART 585 | N/A |
| ARTS 595 | ART 595 | N/A |
| ARTS 596 | ART 596 | N/A |
| ARTS 598 | ART 598 | N/A |
| ASTR-ASTRONOMY | | |
| ASTR 1115G | ASTR 110G | Common |
| ASTR 1116 | ASTR 199 | Unique |
| ASTR 1120G | ASTR 105G | Unique |
| AXED-AGRICULTURAL EXTN EDUC | | |
| AXED 1110 | AXED 100 | Unique |
| AXED 1120 | AXED 240 | Unique |
| AXED 1130 | AXED 105 | Unique |
| AXED 2110 | AXED 205 | Common |
| AXED 2120G | AXED 201G | Unique |
| AXED 2130 | AXED 230 | Unique |
| AXED 2140 | AXED 232 | Unique |
| AXED 2996 | AXED 200 | Unique |
| BCIS- BUSINESS COMPUTER SYSTEMS | | |
| BCIS 1110 | BCIS 110 | Common |
| BCIS 1110 | C S 110 | Common |
| BFIN-BUSINESS FINANCE | | |
| BFIN 2110 | FIN 206 | Common |
| BFIN 2110 | FIN 210 | Common |
| BFIN 303V | FIN 303V | N/A |
| BFIN 311 | FIN 311 | N/A |
| BFIN 322 | FIN 322 | N/A |
| BFIN 323 | FIN 323 | N/A |
| BFIN 324 | FIN 324 | N/A |
| BFIN 325 | FIN 325 | N/A |
| BFIN 326 | FIN 326 | N/A |
| BFIN 341 | FIN 341 | N/A |
| BFIN 355 | FIN 355 | N/A |
| BFIN 360 | FIN 360 | N/A |
| BFIN 385 | FIN 385 | N/A |
| BFIN 391 | FIN 391 | N/A |
| BFIN 392 | FIN 392 | N/A |
| BFIN 393 | FIN 393 | N/A |
| BFIN 406 | FIN 406 | N/A |
| BFIN 421 | FIN 421 | N/A |
| BFIN 435 | FIN 435 | N/A |
| BFIN 445 | FIN 445 | N/A |
| BFIN 455 | FIN 455 | N/A |
| BFIN 470 | FIN 470 | N/A |
| BFIN 475 | FIN 475 | N/A |
| BFIN 480 | FIN 480 | N/A |
| BFIN 490 | FIN 490 | N/A |
| BFIN 498 | FIN 498 | N/A |
| BFIN 500 | FIN 500 | N/A |
| BFIN 503 | FIN 503 | N/A |
| BFIN 511 | FIN 511 | N/A |
| BFIN 521 | FIN 521 | N/A |

| | | |
|-------------------------------------|------------|--------|
| BFIN 535 | FIN 535 | N/A |
| BFIN 545 | FIN 545 | N/A |
| BFIN 555 | FIN 555 | N/A |
| BFIN 575 | FIN 575 | N/A |
| BFIN 581 | FIN 581 | N/A |
| BFIN 590 | FIN 590 | N/A |
| BFIN 598 | FIN 598 | N/A |
| BIOL-BIOLOGY | | |
| BIOL 1120G | BIOL 101G | Unique |
| BIOL 1120L | BIOL 101GL | Unique |
| BIOL 1130G | BIOL 154 | Common |
| BIOL 1190G | BIOL 110G | Unique |
| BIOL 1996 | BIOL 150 | Unique |
| BIOL 2110G | BIOL 211G | Unique |
| BIOL 2110L | BIOL 211GL | Unique |
| BIOL 2210 | BIOL 225 | Common |
| BIOL 2221 | BIOL 254 | Unique |
| BIOL 2225 | BIOL 226 | Common |
| BIOL 2310 | BIOL 221 | Common |
| BIOL 2310L | BIOL 221 L | Common |
| BIOL 2320 | BIOL 219 | Unique |
| BIOL 2505 | BIOL 227 | Common |
| BIOL 2511 | BIOL 262 | Common |
| BIOL 2512 | BIOL 263 | Unique |
| BIOL 2610G | BIOL 111G | Common |
| BIOL 2610L | BIOL 111GL | Common |
| BIOL 2996 | BIOL 250 | Unique |
| BLAW-BUSINESS LAW | | |
| BLAW 2110 | BLAW 230 | Common |
| BLAW 2110 | BMGT 231 | Common |
| BLER - BILINGUAL EDUCATION | | |
| BLER 344 | BIL 344 | N/A |
| BLER 483 | BIL 483 | N/A |
| BLER 489 | BIL 489 | N/A |
| BLER 505 | BIL 505 | N/A |
| BLER 520 | BIL 520 | N/A |
| BLER 522 | BIL 522 | N/A |
| BLER 545 | BIL 545 | N/A |
| BLER 550 | BIL 550 | N/A |
| BLER 560 | BIL 560 | N/A |
| BLER 570 | BIL 570 | N/A |
| BLER 583 | BIL 583 | N/A |
| BLER 587 | BIL 587 | N/A |
| BLER 616 | BIL 616 | N/A |
| BLER 617 | BIL 617 | N/A |
| BLER 633 | BIL 633 | N/A |
| BLER 670 | BIL 670 | N/A |
| BLER-BILINGUAL EDUCATION | | |
| BLER 1110 | EDUC 103 | Common |
| BLER 2110 | EDUC 204 | Common |
| BUSA-BUSINESS ADMINISTRATION | | |
| BUSA 1110 | BMGT 110 | Common |

| BUSA 1110 | BUSA 111 | Common |
|---------------------------------------|------------|--------|
| CAST-CHILD ADVOCACY STUDIES | | |
| CAST 1110 | CAST 201 | Unique |
| CAST 2110 | CAST 202 | Unique |
| CAST 2120 | CAST 203 | Unique |
| CEPY-COUNSELING & EDUC PSY | | |
| CEPY 1120G | C EP 110G | Unique |
| CEPY 1150 | C EP 199 | Unique |
| CEPY 2110 | C EP 210 | Common |
| CEPY 2120 | C EP 215 | Unique |
| CEPY 2130 | C EP 240 | Unique |
| CEPY 2140 | C EP 298 | Unique |
| CEPY 2140H | C EP 298 H | Unique |
| CEPY 300V | C EP 300V | N/A |
| CEPY 320 | C EP 320 | N/A |
| CEPY 420 | C EP 420 | N/A |
| CEPY 451V | C EP 451V | N/A |
| CEPY 455 | C EP 455 | N/A |
| CEPY 461 | C EP 461 | N/A |
| CEPY 495 | C EP 495 | N/A |
| CEPY 495 H | C EP 495 H | N/A |
| CEPY 498 | C EP 498 | N/A |
| CEPY 499 | C EP 499 | N/A |
| CEPY 503 | C EP 503 | N/A |
| CEPY 505 | C EP 505 | N/A |
| CEPY 511 | C EP 511 | N/A |
| CEPY 512 | C EP 512 | N/A |
| CEPY 515 | C EP 515 | N/A |
| CEPY 517 | C EP 517 | N/A |
| CEPY 519 | C EP 519 | N/A |
| CEPY 520 | C EP 520 | N/A |
| CEPY 522 | C EP 522 | N/A |
| CEPY 524 | C EP 524 | N/A |
| CEPY 532 | C EP 532 | N/A |
| CEPY 540 | C EP 540 | N/A |
| CEPY 542 | C EP 542 | N/A |
| CEPY 547 | C EP 547 | N/A |
| CEPY 549 | C EP 549 | N/A |
| CEPY 550 | C EP 550 | N/A |
| CEPY 552 | C EP 552 | N/A |
| CEPY 554 | C EP 554 | N/A |
| CEPY 556 | C EP 556 | N/A |
| CEPY 558 | C EP 558 | N/A |
| CEPY 562 | C EP 562 | N/A |
| CEPY 563 | C EP 563 | N/A |
| CEPY 566 | C EP 566 | N/A |
| CEPY 569 | C EP 569 | N/A |
| CEPY 572 | C EP 572 | N/A |
| CEPY 578 | C EP 578 | N/A |
| CEPY 579 | C EP 579 | N/A |
| CEPY 580 | C EP 580 | N/A |
| CEPY 598 | C EP 598 | N/A |

| | | |
|-----------------------|-----------|--------|
| CEPY 599 | C EP 599 | N/A |
| CEPY 607 | C EP 607 | N/A |
| CEPY 608 | C EP 608 | N/A |
| CEPY 612 | C EP 612 | N/A |
| CEPY 615 | C EP 615 | N/A |
| CEPY 616 | C EP 616 | N/A |
| CEPY 617 | C EP 617 | N/A |
| CEPY 618 | C EP 618 | N/A |
| CEPY 619 | C EP 619 | N/A |
| CEPY 622 | C EP 622 | N/A |
| CEPY 624 | C EP 624 | N/A |
| CEPY 630 | C EP 630 | N/A |
| CEPY 632 | C EP 632 | N/A |
| CEPY 634 | C EP 634 | N/A |
| CEPY 636 | C EP 636 | N/A |
| CEPY 637 | C EP 637 | N/A |
| CEPY 642 | C EP 642 | N/A |
| CEPY 647 | C EP 647 | N/A |
| CEPY 648 | C EP 648 | N/A |
| CEPY 651 | C EP 651 | N/A |
| CEPY 652 | C EP 652 | N/A |
| CEPY 658 | C EP 658 | N/A |
| CEPY 662 | C EP 662 | N/A |
| CEPY 670 | C EP 670 | N/A |
| CEPY 671 | C EP 671 | N/A |
| CEPY 672 | C EP 672 | N/A |
| CEPY 673 | C EP 673 | N/A |
| CEPY 675 | C EP 675 | N/A |
| CEPY 676 | C EP 676 | N/A |
| CEPY 677 | C EP 677 | N/A |
| CEPY 678 | C EP 678 | N/A |
| CEPY 679 | C EP 679 | N/A |
| CEPY 680 | C EP 680 | N/A |
| CEPY 681 | C EP 681 | N/A |
| CEPY 682 | C EP 682 | N/A |
| CEPY 684 | C EP 684 | N/A |
| CEPY 685 | C EP 685 | N/A |
| CEPY 693 | C EP 693 | N/A |
| CEPY 698 | C EP 698 | N/A |
| CEPY 699 | C EP 699 | N/A |
| CEPY 700 | C EP 700 | N/A |
| CHEM-CHEMISTRY | | |
| CHEM 1111 | CHEM 100 | Unique |
| CHEM 1120G | CHEM 110G | Common |
| CHEM 1121 | CHEM 101 | Unique |
| CHEM 1122 | CHEM 102 | Unique |
| CHEM 1123 | CHEM 103 | Unique |
| CHEM 1215G | CHEM 111G | Common |
| CHEM 1216 | CHEM 115 | Unique |
| CHEM 1225G | CHEM 112G | Common |
| CHEM 1226 | CHEM 116 | Unique |
| CHEM 2111 | CHEM 242 | Unique |

| | | |
|-----------------------------------|----------|--------|
| CHEM 2115 | CHEM 211 | Common |
| CHEM 2120 | CHEM 210 | Common |
| CHEM 2226 | CHEM 217 | Unique |
| CHEM 2991 | CHEM 241 | Unique |
| CHEM 2996 | CHEM 251 | Unique |
| CHIN-CHINESE | | |
| CHIN 1110 | CHIN 111 | Common |
| CHIN 1120 | CHIN 112 | Common |
| CHIN 2110 | CHIN 211 | Common |
| CHIN 2120 | CHIN 212 | Common |
| CHSS-CONN HEALTH/SOC SRVCS | | |
| CHSS 1110 | CHSS 101 | Unique |
| CHSS 2110 | CHSS 216 | Unique |
| CHSS 2510 | CHSS 299 | Common |
| CHSS 2511 | CHSS 295 | Unique |
| CJUS-CRIMINAL JUSTICE | | |
| CJUS 1110G | C J 101G | Common |
| CJUS 1120 | C J 205 | Common |
| CJUS 1996 | C J 199 | Unique |
| CJUS 2120 | C J 250 | Common |
| CJUS 2140 | C J 221 | Common |
| CJUS 2150 | C J 230 | Common |
| CJUS 2160 | C J 293 | Common |
| CJUS 2220 | C J 210 | Common |
| CJUS 300 | C J 300 | N/A |
| CJUS 301 | C J 301 | N/A |
| CJUS 302 | C J 302 | N/A |
| CJUS 303 | C J 303 | N/A |
| CJUS 304 | C J 304 | N/A |
| CJUS 306 | C J 306 | N/A |
| CJUS 307 | C J 307 | N/A |
| CJUS 321 | C J 321 | N/A |
| CJUS 331 | C J 331 | N/A |
| CJUS 332 | C J 332 | N/A |
| CJUS 333 | C J 333 | N/A |
| CJUS 345 | C J 345 | N/A |
| CJUS 346 | C J 346 | N/A |
| CJUS 347 | C J 347 | N/A |
| CJUS 348 | C J 348 | N/A |
| CJUS 360 | C J 360 | N/A |
| CJUS 380 | C J 380 | N/A |
| CJUS 391 | C J 391 | N/A |
| CJUS 393 | C J 393 | N/A |
| CJUS 399 | C J 399 | N/A |
| CJUS 405 | C J 405 | N/A |
| CJUS 410 | C J 410 | N/A |
| CJUS 412 | C J 412 | N/A |
| CJUS 414 | C J 414 | N/A |
| CJUS 416 | C J 416 | N/A |
| CJUS 417 | C J 417 | N/A |
| CJUS 424 | C J 424 | N/A |
| CJUS 425 | C J 425 | N/A |

| | | |
|---------------------------------------|-----------|--------|
| CJUS 427 | C J 427 | N/A |
| CJUS 428 | C J 428 | N/A |
| CJUS 429 | C J 429 | N/A |
| CJUS 430 | C J 430 | N/A |
| CJUS 431 | C J 431 | N/A |
| CJUS 432 | C J 432 | N/A |
| CJUS 434 | C J 434 | N/A |
| CJUS 435 | C J 435 | N/A |
| CJUS 436 | C J 436 | N/A |
| CJUS 437 | C J 437 | N/A |
| CJUS 440V | C J 440V | N/A |
| CJUS 449 | C J 449 | N/A |
| CJUS 451 | C J 451 | N/A |
| CJUS 453 | C J 453 | N/A |
| CJUS 454 | C J 454 | N/A |
| CJUS 455 | C J 455 | N/A |
| CJUS 484 | C J 484 | N/A |
| CJUS 501 | C J 501 | N/A |
| CJUS 511 | C J 511 | N/A |
| CJUS 514 | C J 514 | N/A |
| CJUS 515 | C J 515 | N/A |
| CJUS 520 | C J 520 | N/A |
| CJUS 524 | C J 524 | N/A |
| CJUS 525 | C J 525 | N/A |
| CJUS 527 | C J 527 | N/A |
| CJUS 529 | C J 529 | N/A |
| CJUS 531 | C J 531 | N/A |
| CJUS 532 | C J 532 | N/A |
| CJUS 535 | C J 535 | N/A |
| CJUS 537 | C J 537 | N/A |
| CJUS 541 | C J 541 | N/A |
| CJUS 545 | C J 545 | N/A |
| CJUS 555 | C J 555 | N/A |
| CJUS 560 | C J 560 | N/A |
| CJUS 581 | C J 581 | N/A |
| CJUS 591 | C J 591 | N/A |
| CJUS 592 | C J 592 | N/A |
| CJUS 593 | C J 593 | N/A |
| CJUS 599 | C J 599 | N/A |
| COMM-COMMUNICATION | | |
| COMM 1115G | COMM 265G | Common |
| COMM 1130G | COMM 253G | Common |
| COMM 2110 | COMM 285 | Unique |
| COMM 2111 | COMM 250 | Unique |
| COMM 2996 | COMM 291 | Unique |
| COMM 2997 | COMM 290 | Unique |
| CTFM-CLTHNG/TXTLS/FSHN MRCHDSG | | |
| CTFM 1110 | CTFM 178 | Unique |
| CTFM 2120 | CTFM 270 | Unique |
| CTFM 2130 | CTFM 273 | Unique |
| CTFM 2990 | CTFM 202 | Unique |
| DANC-DANCE | | |

| | | |
|------------|------------|--------|
| DANC 1110G | DANC 101G | Common |
| DANC 1130 | DANC 123 | Common |
| DANC 1131 | DANC 125 | Unique |
| DANC 1135 | DANC 109 | Unique |
| DANC 1140 | DANC 129 | Common |
| DANC 1150 | DANC 126 | Common |
| DANC 1155 | DANC 102 | Common |
| DANC 1185 | DANC 121 | Unique |
| DANC 1220 | DANC 122 | Unique |
| DANC 1235 | DANC 118 | Unique |
| DANC 2114 | DANC 204 | Unique |
| DANC 2130 | DANC 223 | Common |
| DANC 2130L | DANC 223 L | Unique |
| DANC 2140 | DANC 229 | Common |
| DANC 2140L | DANC 229 L | Unique |
| DANC 2142 | DANC 210 | Unique |
| DANC 2142L | DANC 210 L | Unique |
| DANC 2150 | DANC 226 | Common |
| DANC 2150L | DANC 226 L | Unique |
| DANC 2155 | DANC 207 | Unique |
| DANC 2157 | DANC 212 | Unique |
| DANC 2161 | DANC 227 | Unique |
| DANC 2250 | DANC 205 | Unique |
| DANC 2251 | DANC 206 | Unique |
| DANC 2265 | DANC 289 | Unique |
| DANC 2270 | DANC 280 | Unique |
| DANC 2310 | DANC 222 | Unique |
| DANC 2311 | DANC 225 | Unique |
| DANC 2320 | DANC 232 | Unique |
| DANC 2321 | DANC 235 | Unique |
| DANC 3110 | DANC 345 | N/A |
| DANC 3114 | DANC 304 | N/A |
| DANC 3130 | DANC 323 | N/A |
| DANC 3130L | DANC 323 L | N/A |
| DANC 3140 | DANC 329 | N/A |
| DANC 3140L | DANC 329 L | N/A |
| DANC 3142 | DANC 310 | N/A |
| DANC 3142L | DANC 310 L | N/A |
| DANC 3145 | DANC 339 | N/A |
| DANC 3150 | DANC 326 | N/A |
| DANC 3150L | DANC 326 L | N/A |
| DANC 3155 | DANC 307 | N/A |
| DANC 3157 | DANC 312 | N/A |
| DANC 3175 | DANC 375 | N/A |
| DANC 3250 | DANC 305 | N/A |
| DANC 3251 | DANC 306 | N/A |
| DANC 3265 | DANC 389 | N/A |
| DANC 3310 | DANC 322 | N/A |
| DANC 3311 | DANC 325 | N/A |
| DANC 3320 | DANC 332 | N/A |
| DANC 3321 | DANC 335 | N/A |
| DANC 3510V | DANC 451V | N/A |

| | | |
|---------------------------------------|----------|--------|
| DANC 4250 | DANC 466 | N/A |
| DANC 4265 | DANC 489 | N/A |
| DANC 4310 | DANC 422 | N/A |
| DANC 4311 | DANC 425 | N/A |
| DANC 4320 | DANC 432 | N/A |
| DANC 4321 | DANC 435 | N/A |
| DANC 4610 | DANC 447 | N/A |
| DANC 4710 | DANC 465 | N/A |
| DANC 4990 | DANC 411 | N/A |
| DANC 4990 | DANC 412 | N/A |
| DANC 4990 | DANC 413 | N/A |
| DANC 4996 | DANC 450 | N/A |
| DANC 4997 | DANC 499 | N/A |
| DANC 5114 | DANC 504 | N/A |
| DANC 5130 | DANC 523 | N/A |
| DANC 5140 | DANC 529 | N/A |
| DANC 5142 | DANC 510 | N/A |
| DANC 5145 | DANC 539 | N/A |
| DANC 5150 | DANC 526 | N/A |
| DANC 5155 | DANC 507 | N/A |
| DANC 5157 | DANC 512 | N/A |
| DANC 5250 | DANC 505 | N/A |
| DANC 5251 | DANC 506 | N/A |
| DANC 5310 | DANC 522 | N/A |
| DANC 5311 | DANC 525 | N/A |
| DANC 5320 | DANC 532 | N/A |
| DANC 5321 | DANC 535 | N/A |
| DANC 5510 | DANC 551 | N/A |
| DANC 5550 | DANC 566 | N/A |
| DANC 5710 | DANC 570 | N/A |
| DANC 5900 | DANC 599 | N/A |
| DANC 5992 | DANC 501 | N/A |
| DANC 5996 | DANC 550 | N/A |
| DANC 5998 | DANC 567 | N/A |
| DANC 6998 | DANC 670 | N/A |
| ECED-EARLY CHILDHOOD EDUCATION | | |
| ECED 1110 | ECED 115 | Common |
| ECED 1115 | ECED 125 | Common |
| ECED 1120 | ECED 265 | Common |
| ECED 1125 | ECED 255 | Common |
| ECED 1130 | ECED 135 | Common |
| ECED 2110 | ECED 245 | Common |
| ECED 2115 | ECED 235 | Common |
| ECED 2120 | ECED 215 | Common |
| ECED 2121 | ECED 220 | Common |
| ECED 2130 | ECED 225 | Common |
| ECED 2131 | ECED 230 | Common |
| ECED 2140 | ECED 275 | Common |
| ECED 2141 | ECED 276 | Common |
| ECED 2215 | ECED 270 | Common |
| ECED 2280 | ECED 280 | Common |
| ECED 2281 | ECED 281 | Unique |

ECON-ECONOMICS

| | | |
|------------|------------|--------|
| ECON 1110G | ECON 201G | Common |
| ECON 2110G | ECON 251G | Common |
| ECON 2110H | ECON 251GH | Common |
| ECON 2120G | ECON 252G | Common |
| ECON 2120H | ECON 252GH | Common |

EDLT-EDUCATION

| | | |
|-----------|----------|--------|
| EDLT 2110 | EDLT 268 | Unique |
|-----------|----------|--------|

EDUC-EDUCATION

| | | |
|-----------|----------|--------|
| EDUC 1110 | EDUC 101 | Unique |
| EDUC 1120 | EDUC 250 | Common |
| EDUC 1140 | EDUC 150 | Unique |
| EDUC 1150 | EDUC 151 | Unique |
| EDUC 1185 | EDUC 281 | Unique |
| EDUC 1995 | EDUC 181 | Unique |
| EDUC 1996 | EDUC 195 | Unique |
| EDUC 1998 | EDUC 102 | Unique |
| EDUC 2710 | EDUC 219 | Unique |
| EDUC 2998 | EDUC 202 | Unique |

ELAD-EDUC LEADERSHIP & ADMIN

| | | |
|-----------|----------|--------|
| ELAD 2210 | ELA 255 | Unique |
| ELAD 2340 | ELA 215 | Unique |
| ELAD 2996 | ELA 298 | Unique |
| ELAD 342 | ELA 342 | N/A |
| ELAD 350V | ELA 350V | N/A |
| ELAD 398 | ELA 398 | N/A |
| ELAD 411 | ELA 411 | N/A |
| ELAD 412 | ELA 412 | N/A |
| ELAD 413 | ELA 413 | N/A |
| ELAD 414 | ELA 414 | N/A |
| ELAD 440 | ELA 440 | N/A |
| ELAD 450 | ELA 450 | N/A |
| ELAD 455 | ELA 455 | N/A |
| ELAD 485 | ELA 485 | N/A |
| ELAD 499 | ELA 499 | N/A |
| ELAD 502 | ELA 502 | N/A |
| ELAD 511 | ELA 511 | N/A |
| ELAD 513 | ELA 513 | N/A |
| ELAD 514 | ELA 514 | N/A |
| ELAD 520 | ELA 520 | N/A |
| ELAD 530 | ELA 530 | N/A |
| ELAD 531 | ELA 531 | N/A |
| ELAD 540 | ELA 540 | N/A |
| ELAD 550 | ELA 550 | N/A |
| ELAD 555 | ELA 555 | N/A |
| ELAD 563 | ELA 563 | N/A |
| ELAD 564 | ELA 564 | N/A |
| ELAD 565 | ELA 565 | N/A |
| ELAD 566 | ELA 566 | N/A |
| ELAD 567 | ELA 567 | N/A |
| ELAD 568 | ELA 568 | N/A |
| ELAD 569 | ELA 569 | N/A |

| | | |
|---------------------|------------|--------|
| ELAD 570 | ELA 570 | N/A |
| ELAD 572 | ELA 572 | N/A |
| ELAD 575 | ELA 575 | N/A |
| ELAD 576 | ELA 576 | N/A |
| ELAD 578 | ELA 578 | N/A |
| ELAD 579 | ELA 579 | N/A |
| ELAD 580 | ELA 580 | N/A |
| ELAD 582 | ELA 582 | N/A |
| ELAD 585 | ELA 585 | N/A |
| ELAD 586 | ELA 586 | N/A |
| ELAD 590 | ELA 590 | N/A |
| ELAD 595 | ELA 595 | N/A |
| ELAD 598 | ELA 598 | N/A |
| ELAD 600 | ELA 600 | N/A |
| ELAD 615 | ELA 615 | N/A |
| ELAD 620 | ELA 620 | N/A |
| ELAD 622 | ELA 622 | N/A |
| ELAD 623 | ELA 623 | N/A |
| ELAD 630 | ELA 630 | N/A |
| ELAD 635 | ELA 635 | N/A |
| ELAD 645 | ELA 645 | N/A |
| ELAD 650 | ELA 650 | N/A |
| ELAD 655 | ELA 655 | N/A |
| ELAD 670 | ELA 670 | N/A |
| ELAD 671 | ELA 671 | N/A |
| ELAD 676 | ELA 676 | N/A |
| ELAD 679 | ELA 679 | N/A |
| ELAD 682 | ELA 682 | N/A |
| ELAD 683 | ELA 683 | N/A |
| ELAD 685 | ELA 685 | N/A |
| ELAD 689 | ELA 689 | N/A |
| ELAD 693 | ELA 693 | N/A |
| ELAD 698 | ELA 698 | N/A |
| ELAD 700 | ELA 700 | N/A |
| ENGL-ENGLISH | | |
| ENGL 1105M | SPCD 1110 | Unique |
| ENGL 1110G | ENGL 111G | Common |
| ENGL 1110H | ENGL 111GH | Unique |
| ENGL 1110M | ENGL 111 M | Unique |
| ENGL 1120 | ENGL 112 | Common |
| ENGL 1410G | ENGL 115G | Common |
| ENGL 2130G | ENGL 311G | Common |
| ENGL 2210G | ENGL 203G | Common |
| ENGL 2210G | ENGL 218G | Common |
| ENGL 2215G | ENGL 318G | Unique |
| ENGL 2221G | ENGL 211G | Unique |
| ENGL 2280 | ENGL 263 | Unique |
| ENGL 2310G | ENGL 220G | Common |
| ENGL 2381 | ENGL 232 | Unique |
| ENGL 2382 | ENGL 235 | Unique |
| ENGL 2520G | ENGL 116G | Common |
| ENGL 2521 | ENGL 243 | Unique |

| | | |
|--|------------|--------|
| ENGL 2610 | ENGL 251 | Common |
| ENGL 2620 | ENGL 252 | Common |
| ENGL 2630 | ENGL 271 | Common |
| ENGL 2640 | ENGL 272 | Common |
| ENGL 2650G | ENGL 244G | Common |
| ENGL 2996 | ENGL 299 | Unique |
| ENTR-ENTREPRENEURSHIP | | |
| ENTR 1110 | BMGT 275 | Common |
| ENVS-ENVIRONMENTAL SCIENCE | | |
| ENVS 1110G | E S 110G | Common |
| ENVS 2111 | E S 256 | Unique |
| ENVS 2111L | E S 256 L | Unique |
| ENVS 300 | E S 300 | N/A |
| ENVS 301 | E S 301 | N/A |
| ENVS 312 | E S 312 | N/A |
| ENVS 361 | E S 361 | N/A |
| ENVS 370 | E S 370 | N/A |
| ENVS 391 | E S 391 | N/A |
| ENVS 422 | E S 422 | N/A |
| ENVS 449 | E S 449 | N/A |
| ENVS 451 | E S 451 | N/A |
| ENVS 452 | E S 452 | N/A |
| ENVS 457 | E S 457 | N/A |
| ENVS 460 | E S 460 | N/A |
| ENVS 462 | E S 462 | N/A |
| ENVS 470 | E S 470 | N/A |
| ENVS 471 | E S 471 | N/A |
| ENVS 557 | E S 557 | N/A |
| ENVS 596 | E S 596 | N/A |
| ENVS 599 | E S 599 | N/A |
| ENVS 605 | E S 605 | N/A |
| ENVS 696 | E S 696 | N/A |
| ENVS 700 | E S 700 | N/A |
| EPWS-ENTMLGY/PLNT PTHLGY/WD SCI | | |
| EPWS 1110 | EPWS 100 | Unique |
| EPWS 1110L | EPWS 100 L | Unique |
| EPWS 2996 | EPWS 200 | Unique |
| FCSC-FAMILY & CONSUMER SCI | | |
| FCSC 2250 | FCSE 245 | Unique |
| FCSC 2330 | FCSE 235 | Unique |
| FCSC 345 | FCSE 345 | N/A |
| FCSC 348 | FCSE 348 | N/A |
| FCSC 445 | FCSE 445 | N/A |
| FCSC 446 | FCSE 446 | N/A |
| FCSC 447 | FCSE 447 | N/A |
| FCSC 448 | FCSE 448 | N/A |
| FCSC 492 | FCSE 492 | N/A |
| FCSC 545 | FCSE 545 | N/A |
| FCSC 546 | FCSE 546 | N/A |
| FCSC 547 | FCSE 547 | N/A |
| FCSC 548 | FCSE 548 | N/A |
| FCSC 590 | FCSE 590 | N/A |

FCST-FAMILY AND CHILD STUDIES

| | | |
|-----------|----------|--------|
| FCST 1130 | FCS 181 | Unique |
| FCST 2110 | FCS 210 | Unique |
| FCST 2135 | FCS 212 | Unique |
| FCST 2140 | FCS 213 | Unique |
| FCST 300 | FCS 300 | N/A |
| FCST 301 | FCS 301 | N/A |
| FCST 380 | FCS 380 | N/A |
| FCST 383 | FCS 383 | N/A |
| FCST 424 | FCS 424 | N/A |
| FCST 449V | FCS 449V | N/A |
| FCST 456 | FCS 456 | N/A |
| FCST 492 | FCS 492 | N/A |
| FCST 510 | FCS 510 | N/A |
| FCST 511 | FCS 511 | N/A |
| FCST 512 | FCS 512 | N/A |
| FCST 524 | FCS 524 | N/A |
| FCST 525 | FCS 525 | N/A |
| FCST 548 | FCS 548 | N/A |
| FCST 562 | FCS 562 | N/A |
| FCST 572 | FCS 572 | N/A |
| FCST 582 | FCS 582 | N/A |
| FCST 583 | FCS 583 | N/A |
| FCST 584 | FCS 584 | N/A |
| FCST 585 | FCS 585 | N/A |
| FCST 586 | FCS 586 | N/A |
| FCST 587 | FCS 587 | N/A |
| FCST 589 | FCS 589 | N/A |
| FCST 590 | FCS 590 | N/A |
| FCST 592 | FCS 592 | N/A |
| FCST 598 | FCS 598 | N/A |
| FCST 599 | FCS 599 | N/A |

FDMA-FILM & DIGITAL MEDIA

| | | |
|-----------|---------|--------|
| FDMA 1110 | CMT 170 | Common |
| FDMA 1120 | CMT 140 | Common |
| FDMA 1210 | CMT 190 | Common |
| FDMA 1220 | CMI 216 | Common |
| FDMA 1220 | CMT 195 | Common |
| FDMA 1260 | CMT 108 | Common |
| FDMA 1260 | CMT 120 | Common |
| FDMA 1360 | CMT 130 | Common |
| FDMA 1410 | CMT 247 | Common |
| FDMA 1415 | CMT 206 | Unique |
| FDMA 1510 | CMI 260 | Common |
| FDMA 1510 | CMT 135 | Common |
| FDMA 1515 | CMT 145 | Common |
| FDMA 1531 | CMT 151 | Unique |
| FDMA 1535 | CMT 142 | Common |
| FDMA 1536 | CMT 242 | Unique |
| FDMA 1545 | CMT 115 | Common |
| FDMA 1555 | CMI 100 | Unique |
| FDMA 1630 | CMT 180 | Common |

| | | |
|-----------|---------|--------|
| FDMA 1710 | CMT 150 | Unique |
| FDMA 1715 | CMI 245 | Unique |
| FDMA 1720 | CMT 175 | Unique |
| FDMA 1996 | CMT 155 | Unique |
| FDMA 2111 | CMT 220 | Unique |
| FDMA 2120 | CMT 126 | Common |
| FDMA 2125 | CMT 156 | Common |
| FDMA 2150 | CMT 240 | Common |
| FDMA 2210 | CMT 210 | Unique |
| FDMA 2241 | CMT 258 | Unique |
| FDMA 2285 | CMT 215 | Common |
| FDMA 2287 | CMT 223 | Common |
| FDMA 2310 | CMI 228 | Unique |
| FDMA 2311 | CMI 231 | Unique |
| FDMA 2311 | CMT 253 | Unique |
| FDMA 2312 | CMT 254 | Unique |
| FDMA 2325 | CMT 245 | Common |
| FDMA 2326 | CMT 216 | Unique |
| FDMA 2360 | CMT 230 | Common |
| FDMA 2365 | CMT 235 | Unique |
| FDMA 2370 | CMT 275 | Unique |
| FDMA 2381 | CMI 232 | Unique |
| FDMA 2382 | CMI 235 | Unique |
| FDMA 2410 | CMT 236 | Common |
| FDMA 2510 | CMI 200 | Common |
| FDMA 2520 | CMI 205 | Common |
| FDMA 2520 | CMT 205 | Common |
| FDMA 2530 | CMI 280 | Common |
| FDMA 2530 | CMT 160 | Common |
| FDMA 2535 | CMI 240 | Unique |
| FDMA 2570 | CMT 292 | Unique |
| FDMA 2710 | CMI 250 | Unique |
| FDMA 2715 | CMT 260 | Unique |
| FDMA 2720 | CMI 290 | Unique |
| FDMA 2725 | CMI 270 | Unique |
| FDMA 2730 | CMT 227 | Unique |
| FDMA 2735 | CMT 290 | Unique |
| FDMA 2740 | CMT 291 | Unique |
| FDMA 2745 | CMI 233 | Unique |
| FDMA 2750 | CMT 229 | Unique |
| FDMA 2755 | CMI 220 | Unique |
| FDMA 2770 | CMT 200 | Unique |
| FDMA 2775 | CMT 252 | Unique |
| FDMA 2785 | CMT 228 | Unique |
| FDMA 2993 | CMT 276 | Unique |
| FDMA 2994 | CMT 295 | Unique |
| FDMA 2995 | CMT 226 | Unique |
| FDMA 2996 | CMT 255 | Unique |
| FDMA 2997 | CMT 298 | Unique |
| FDMA 2998 | CMT 221 | Unique |
| FDMA 300 | CMI 300 | N/A |
| FDMA 301 | CMI 301 | N/A |

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|---|-----------|--------|
| FDMA 303 | CMI 303 | N/A |
| FDMA 305 | CMI 305 | N/A |
| FDMA 308 | CMI 308 | N/A |
| FDMA 309 | CMI 309 | N/A |
| FDMA 310 | CMI 310 | N/A |
| FDMA 311 | CMI 311 | N/A |
| FDMA 312 | CMI 312 | N/A |
| FDMA 314 | CMI 314 | N/A |
| FDMA 315 | CMI 315 | N/A |
| FDMA 316 | CMI 316 | N/A |
| FDMA 318 | CMI 318 | N/A |
| FDMA 320 | CMI 320 | N/A |
| FDMA 325 | CMI 325 | N/A |
| FDMA 328 | CMI 328 | N/A |
| FDMA 332 | CMI 332 | N/A |
| FDMA 341 | CMI 341 | N/A |
| FDMA 348 | CMI 348 | N/A |
| FDMA 350 | CMI 350 | N/A |
| FDMA 360 | CMI 360 | N/A |
| FDMA 362 | CMI 362 | N/A |
| FDMA 365 | CMI 365 | N/A |
| FDMA 377 | CMI 377 | N/A |
| FDMA 395 | CMI 395 | N/A |
| FDMA 396 | CMI 396 | N/A |
| FDMA 397 | CMI 397 | N/A |
| FDMA 398 | CMI 398 | N/A |
| FDMA 400 | CMI 400 | N/A |
| FDMA 401 | CMI 401 | N/A |
| FDMA 410 | CMI 410 | N/A |
| FDMA 412 | CMI 412 | N/A |
| FDMA 420 | CMI 420 | N/A |
| FDMA 425 | CMI 425 | N/A |
| FDMA 433 | CMI 433 | N/A |
| FDMA 450 | CMI 450 | N/A |
| FDMA 470 | CMI 470 | N/A |
| FDMA 477 | CMI 477 | N/A |
| FDMA 480 | CMI 480 | N/A |
| FDMA 490 | CMI 490 | N/A |
| FDMA 491 | CMI 491 | N/A |
| FDMA 492 | CMI 492 | N/A |
| FDMA 493 | CMI 493 | N/A |
| FDMA 494 | CMI 494 | N/A |
| FDMA 495 | CMI 495 | N/A |
| FDMA 497 | CMI 497 | N/A |
| FREN-FRENCH | | |
| FREN 1110 | FREN 111 | Common |
| FREN 1120 | FREN 112 | Common |
| FREN 2110 | FREN 211 | Common |
| FREN 2120 | FREN 212 | Common |
| FSTE-FOOD SCIENCE & TECHNOLOGY | | |
| FSTE 1120 | FSTE 175 | Unique |
| FSTE 2110G | FSTE 263G | Unique |

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| FSTE 2120 | FSTE 275 | Unique |
| FSTE 2130G | FSTE 210G | Unique |
| FSTE 2996 | FSTE 200 | Unique |
| FWCE-FISH,WILDLF,CONSERV ECOL | | |
| FWCE 1110G | FWCE 110G | Unique |
| FWCE 1120 | FWCE 109 | Unique |
| FWCE 2110 | FWCE 255 | Unique |
| FYEX-FIRST YEAR EXPERIENCE | | |
| FYEX 1110 | COLL 101 | Common |
| FYEX 1112 | UNIV 150 | Unique |
| FYEX 1116 | COLL 103 | Unique |
| FYEX 1117 | UNIV 114 | Unique |
| FYEX 1131 | UNIV 110 | Unique |
| FYEX 1132 | UNIV 112 | Unique |
| FYEX 1133 | COLL 108 | Unique |
| FYEX 1134 | UNIV 113 | Unique |
| FYEX 1140 | COLL 120 | Unique |
| FYEX 1160 | UNIV 101 | Unique |
| FYEX 1170 | UNIV 161 | Unique |
| FYEX 1995 | UNIV 116 | Unique |
| FYEX 1996 | COLL 155 | Unique |
| FYEX 2111 | COLL 201 | Unique |
| FYEX 2994 | COLL 185 | Unique |
| GENE-GENETICS | | |
| GENE 1110 | GENE 110 | Unique |
| GEOG-GEOGRAPHY | | |
| GEOG 1110G | GEOG 111G | Common |
| GEOG 1120G | GEOG 112G | Common |
| GEOG 1130G | GEOG 120G | Common |
| GEOG 2130 | GEOG 281 | Unique |
| GEOG 2996 | GEOG 291 | Unique |
| GEOL-GEOLOGY | | |
| GEOL 1110G | GEOL 111G | Common |
| GEOL 2130 | GEOL 257 | Common |
| GEOL 2996 | GEOL 220 | Unique |
| GNDR-WOMEN'S STUDIES | | |
| GNDR 2110G | W S 201G | Common |
| GNDR 2120G | HON 218 | Unique |
| GNDR 2120G | W S 202G | Unique |
| GNDR 350 | W S 350 | N/A |
| GNDR 359 | W S 359 | N/A |
| GNDR 360 | W S 360 | N/A |
| GNDR 380V | W S 380V | N/A |
| GNDR 381V | W S 381V | N/A |
| GNDR 401 | W S 401 | N/A |
| GNDR 402 | W S 402 | N/A |
| GNDR 403 | W S 403 | N/A |
| GNDR 405 | W S 405 | N/A |
| GNDR 406 | W S 406 | N/A |
| GNDR 407 | W S 407 | N/A |
| GNDR 408 | W S 408 | N/A |
| GNDR 411 | W S 411 | N/A |

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|---------------------|-----------|--------|
| GNDR 412 | W S 412 | N/A |
| GNDR 433V | W S 433V | N/A |
| GNDR 450 | W S 450 | N/A |
| GNDR 451 | W S 451 | N/A |
| GNDR 453 | W S 453 | N/A |
| GNDR 454 | W S 454 | N/A |
| GNDR 455 | W S 455 | N/A |
| GNDR 461 | W S 461 | N/A |
| GNDR 465 | W S 465 | N/A |
| GNDR 471 | W S 471 | N/A |
| GNDR 474 | W S 474 | N/A |
| GNDR 482 | W S 482 | N/A |
| GNDR 484 | W S 484 | N/A |
| GNDR 501 | W S 501 | N/A |
| GNDR 502 | W S 502 | N/A |
| GNDR 505 | W S 505 | N/A |
| GNDR 507 | W S 507 | N/A |
| GNDR 508 | W S 508 | N/A |
| GNDR 511 | W S 511 | N/A |
| GNDR 512 | W S 512 | N/A |
| GNDR 533 | W S 533 | N/A |
| GNDR 550 | W S 550 | N/A |
| GNDR 554 | W S 554 | N/A |
| GNDR 555 | W S 555 | N/A |
| GNDR 561 | W S 561 | N/A |
| GNDR 565 | W S 565 | N/A |
| GNDR 571 | W S 571 | N/A |
| GNDR 582 | W S 582 | N/A |
| GNDR 584 | W S 584 | N/A |
| GRMN-GERMAN | | |
| GRMN 1110 | GER 111 | Common |
| GRMN 1120 | GER 112 | Common |
| GRMN 2110 | GER 211 | Common |
| GRMN 2120 | GER 212 | Common |
| GRMN 305 | GER 305 | N/A |
| GRMN 313 | GER 313 | N/A |
| GRMN 325 | GER 325 | N/A |
| GRMN 330 | GER 330 | N/A |
| GRMN 333V | GER 333V | N/A |
| GRMN 340 | GER 340 | N/A |
| GRMN 341 | GER 341 | N/A |
| GRMN 343 | GER 343 | N/A |
| GRMN 350 | GER 350 | N/A |
| GRMN 399 | GER 399 | N/A |
| GRMN 410 | GER 410 | N/A |
| GRMN 413 | GER 413 | N/A |
| GRMN 425 | GER 425 | N/A |
| GRMN 451 | GER 451 | N/A |
| GRMN 453 | GER 453 | N/A |
| GRMN 471 | GER 471 | N/A |
| HIST-HISTORY | | |
| HIST 1105G | HIST 110G | Unique |

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|----------------------------|-----------|--------|
| HIST 1110G | HIST 201G | Common |
| HIST 1120G | HIST 202G | Common |
| HIST 1130G | HIST 111G | Common |
| HIST 1140G | HIST 112G | Common |
| HIST 1150G | HIST 101G | Common |
| HIST 1160G | HIST 102G | Common |
| HIST 2110 | HIST 261 | Common |
| HIST 2245G | HIST 221G | Unique |
| HIST 2246G | HIST 222G | Unique |
| HIST 2250G | HIST 211G | Unique |
| HIST 2251G | HIST 212G | Unique |
| HIST 2996 | HIST 269 | Unique |
| HMSV-HUMAN SERVICES | | |
| HMSV 2110 | S WK 253 | Common |
| HNRS-HONORS | | |
| HNRS 1110 | HON 115 | Unique |
| HNRS 2110G | HON 210 | Unique |
| HNRS 2111 | HON 214 | Unique |
| HNRS 2114G | HON 208G | Unique |
| HNRS 2115G | HON 216G | Unique |
| HNRS 2116G | HON 219G | Unique |
| HNRS 2117G | HON 220G | Unique |
| HNRS 2120G | HON 222G | Unique |
| HNRS 2140G | HON 227G | Unique |
| HNRS 2141G | HON 230G | Unique |
| HNRS 2150G | HON 228G | Unique |
| HNRS 2160G | HON 229G | Unique |
| HNRS 2161G | HON 235G | Unique |
| HNRS 2170G | HON 232G | Unique |
| HNRS 2171G | HON 234G | Unique |
| HNRS 2172G | HON 237G | Unique |
| HNRS 2173G | HON 239G | Unique |
| HNRS 2174G | HON 249G | Unique |
| HNRS 2175G | HON 265G | Unique |
| HNRS 2178G | HON 270G | Unique |
| HNRS 2180G | HON 248G | Unique |
| HNRS 2185G | HON 211 | Unique |
| HNRS 2190G | HON 242G | Unique |
| HNRS 2996 | HON 221 | Unique |
| HNRS 304V | HON 304V | N/A |
| HNRS 306V | HON 306V | N/A |
| HNRS 313 | HON 313 | N/A |
| HNRS 314 | HON 314 | N/A |
| HNRS 317V | HON 317V | N/A |
| HNRS 318V | HON 318V | N/A |
| HNRS 321V | HON 321V | N/A |
| HNRS 324V | HON 324V | N/A |
| HNRS 326V | HON 326V | N/A |
| HNRS 328V | HON 328V | N/A |
| HNRS 335V | HON 335V | N/A |
| HNRS 340V | HON 340V | N/A |
| HNRS 341V | HON 341V | N/A |

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|---------------------------------------|-----------|--------|
| HNRS 347V | HON 347V | N/A |
| HNRS 348V | HON 348V | N/A |
| HNRS 349V | HON 349V | N/A |
| HNRS 353V | HON 353V | N/A |
| HNRS 362V | HON 362V | N/A |
| HNRS 370V | HON 370V | N/A |
| HNRS 371V | HON 371V | N/A |
| HNRS 374V | HON 374V | N/A |
| HNRS 378V | HON 378V | N/A |
| HNRS 379V | HON 379V | N/A |
| HNRS 381V | HON 381V | N/A |
| HNRS 384V | HON 384V | N/A |
| HNRS 387V | HON 387V | N/A |
| HNRS 388V | HON 388V | N/A |
| HNRS 390V | HON 390V | N/A |
| HNRS 394V | HON 394V | N/A |
| HNRS 400 | HON 400 | N/A |
| HNRS 410 | HON 410 | N/A |
| HNRS 411V | HON 411V | N/A |
| HNRS 412 | HON 412 | N/A |
| HNRS 413 | HON 413 | N/A |
| HNRS 420 | HON 420 | N/A |
| HNRS 421 | HON 421 | N/A |
| HNRS 422 | HON 422 | N/A |
| HNRS 425V | HON 425V | N/A |
| HNRS 450V | HON 450V | N/A |
| HNRS 521 | HON 521 | N/A |
| HORT-HORTICULTURE | | |
| HORT 1115G | HORT 100G | Unique |
| HORT 2110 | HORT 210 | Unique |
| HORT 2120 | HORT 211 | Unique |
| HORT 2130 | HORT 240 | Unique |
| HORT 2160 | HORT 250 | Unique |
| HORT 2990 | HORT 241 | Unique |
| HORT 2996 | HORT 200 | Unique |
| HRTM-HOTEL/RESTRNT/TOURISM MGT | | |
| HRTM 1120G | HRTM 201 | Unique |
| HRTM 1130 | HRTM 221 | Unique |
| HRTM 2110 | HRTM 231 | Unique |
| HRTM 2120 | HRTM 263 | Unique |
| HRTM 2130 | HRTM 235 | Unique |
| HRTM 2996 | HRTM 200 | Unique |
| JPNS-JAPANESE | | |
| JAPN 1110 | JPNS 111 | Common |
| JAPN 1120 | JPNS 112 | Common |
| JAPN 2110 | JPNS 211 | Common |
| JAPN 2120 | JPNS 212 | Common |
| LIBR-LIBRARY SCIENCE | | |
| LIBR 1110 | LIB 101 | Unique |
| LIBR 1111 | LIB 111 | Unique |
| LIBR 311V | LIB 311V | N/A |
| LING-LINGUISTICS | | |

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|-------------------------|------------|--------|
| LING 2110G | LING 200G | Common |
| MATH-MATHEMATICS | | |
| MATH 1130G | MATH 210G | Common |
| MATH 1134 | MATH 111 | Unique |
| MATH 1215 | MATH 120 | Common |
| MATH 1217 | MATH 101 | Unique |
| MATH 1220G | MATH 121G | Common |
| MATH 1221 | MATH 102 | Unique |
| MATH 1250G | MATH 190G | Common |
| MATH 1350G | A ST 251G | Common |
| MATH 1350G | STAT 251G | Common |
| MATH 1430G | MATH 142G | Common |
| MATH 1435 | MATH 235 | Common |
| MATH 1440 | MATH 236 | Common |
| MATH 1511G | MATH 191G | Unique |
| MATH 1521G | MATH 192G | Unique |
| MATH 1521H | MATH 192GH | Unique |
| MATH 1531 | MATH 279 | Unique |
| MATH 1996 | MATH 107 | Unique |
| MATH 2134G | MATH 112G | Unique |
| MATH 2234 | MATH 215 | Unique |
| MATH 2350G | STAT 271G | Common |
| MATH 2415 | MATH 280 | Unique |
| MATH 2530G | MATH 291G | Common |
| MATH 2992 | MATH 200 | Unique |
| MGMT-MANAGEMENT | | |
| MGMT 2110 | MGT 201 | Common |
| MGMT 309 | MGT 309 | N/A |
| MGMT 310V | MGT 310V | N/A |
| MGMT 315V | MGT 315V | N/A |
| MGMT 332 | MGT 332 | N/A |
| MGMT 333 | MGT 333 | N/A |
| MGMT 335V | MGT 335V | N/A |
| MGMT 344 | MGT 344 | N/A |
| MGMT 347 | MGT 347 | N/A |
| MGMT 351 | MGT 351 | N/A |
| MGMT 361 | MGT 361 | N/A |
| MGMT 375V | MGT 375V | N/A |
| MGMT 388V | MGT 388V | N/A |
| MGMT 391 | MGT 391 | N/A |
| MGMT 448 | MGT 448 | N/A |
| MGMT 449 | MGT 449 | N/A |
| MGMT 451 | MGT 451 | N/A |
| MGMT 453 | MGT 453 | N/A |
| MGMT 454 | MGT 454 | N/A |
| MGMT 458 | MGT 458 | N/A |
| MGMT 460 | MGT 460 | N/A |
| MGMT 461 | MGT 461 | N/A |
| MGMT 465 | MGT 465 | N/A |
| MGMT 470 | MGT 470 | N/A |
| MGMT 490 | MGT 490 | N/A |
| MGMT 491 | MGT 491 | N/A |

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| MGMT 498 | MGT 498 | N/A |
| MGMT 502 | MGT 502 | N/A |
| MGMT 503 | MGT 503 | N/A |
| MGMT 512 | MGT 512 | N/A |
| MGMT 527 | MGT 527 | N/A |
| MGMT 548 | MGT 548 | N/A |
| MGMT 590 | MGT 590 | N/A |
| MGMT 591 | MGT 591 | N/A |
| MGMT 598 | MGT 598 | N/A |
| MGMT 600 | MGT 600 | N/A |
| MGMT 601 | MGT 601 | N/A |
| MGMT 640 | MGT 640 | N/A |
| MGMT 645 | MGT 645 | N/A |
| MGMT 650 | MGT 650 | N/A |
| MGMT 655 | MGT 655 | N/A |
| MGMT 660 | MGT 660 | N/A |
| MGMT 661 | MGT 661 | N/A |
| MGMT 670 | MGT 670 | N/A |
| MGMT 675 | MGT 675 | N/A |
| MGMT 685 | MGT 685 | N/A |
| MGMT 690 | MGT 690 | N/A |
| MGMT 698 | MGT 698 | N/A |
| MGMT 700 | MGT 700 | N/A |
| MKTG-MARKETING | | |
| MKTG 2110 | BMGT 210 | Common |
| MKTG 2110 | MKTG 203 | Common |
| MUSC-MUSIC | | |
| MUSC 1110G | MUS 201G | Common |
| MUSC 1130G | MUS 101G | Common |
| MUSC 1210 | MUS 102 | Common |
| MUSC 1310 | MUS 121 | Common |
| MUSC 1410 | MUS 250 | Common |
| MUSC 1440 | MUS 141 | Unique |
| MUSC 1450 | MUS 103 | Unique |
| MUSC 1451 | MUS 104 | Unique |
| MUSC 1460 | MUS 105 | Unique |
| MUSC 1461 | MUS 106 | Unique |
| MUSC 1470 | MUS 145 | Unique |
| MUSC 1471 | MUS 146 | Unique |
| MUSC 1472 | MUS 147 | Unique |
| MUSC 1992 | MUS 130 | Common |
| MUSC 2110 | MUS 164 | Common |
| MUSC 2110 | MUS 171 | Common |
| MUSC 2120 | MUS 151 | Common |
| MUSC 2120 | MUS 160 | Common |
| MUSC 2120 | MUS 161 | Common |
| MUSC 2120 | MUS 162 | Common |
| MUSC 2120 | MUS 170 | Common |
| MUSC 2120 | MUS 172 | Common |
| MUSC 2120 | MUS 180 | Common |
| MUSC 2120 | MUS 181 | Common |
| MUSC 2130 | MUS 163 | Common |

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|-----------|---------|--------|
| MUSC 2132 | MUS 174 | Unique |
| MUSC 2151 | MUS 202 | Unique |
| MUSC 2210 | MUS 262 | Common |
| MUSC 2220 | MUS 263 | Common |
| MUSC 2240 | MUS 207 | Unique |
| MUSC 2310 | MUS 273 | Common |
| MUSC 2451 | MUS 203 | Unique |
| MUSC 2452 | MUS 204 | Unique |
| MUSC 2460 | MUS 205 | Unique |
| MUSC 2461 | MUS 206 | Unique |
| MUSC 2470 | MUS 261 | Unique |
| MUSC 2510 | MUS 230 | Unique |
| MUSC 2993 | MUS 251 | Unique |
| MUSC 2996 | MUS 260 | Unique |
| MUSC 301 | MUS 301 | N/A |
| MUSC 302 | MUS 302 | N/A |
| MUSC 303 | MUS 303 | N/A |
| MUSC 315 | MUS 315 | N/A |
| MUSC 316 | MUS 316 | N/A |
| MUSC 317 | MUS 317 | N/A |
| MUSC 318 | MUS 318 | N/A |
| MUSC 319 | MUS 319 | N/A |
| MUSC 320 | MUS 320 | N/A |
| MUSC 321 | MUS 321 | N/A |
| MUSC 322 | MUS 322 | N/A |
| MUSC 323 | MUS 323 | N/A |
| MUSC 324 | MUS 324 | N/A |
| MUSC 325 | MUS 325 | N/A |
| MUSC 326 | MUS 326 | N/A |
| MUSC 327 | MUS 327 | N/A |
| MUSC 330 | MUS 330 | N/A |
| MUSC 339 | MUS 339 | N/A |
| MUSC 340 | MUS 340 | N/A |
| MUSC 341 | MUS 341 | N/A |
| MUSC 346 | MUS 346 | N/A |
| MUSC 349 | MUS 349 | N/A |
| MUSC 350 | MUS 350 | N/A |
| MUSC 351 | MUS 351 | N/A |
| MUSC 360 | MUS 360 | N/A |
| MUSC 361 | MUS 361 | N/A |
| MUSC 362 | MUS 362 | N/A |
| MUSC 363 | MUS 363 | N/A |
| MUSC 365 | MUS 365 | N/A |
| MUSC 368 | MUS 368 | N/A |
| MUSC 370 | MUS 370 | N/A |
| MUSC 372 | MUS 372 | N/A |
| MUSC 374 | MUS 374 | N/A |
| MUSC 380 | MUS 380 | N/A |
| MUSC 381 | MUS 381 | N/A |
| MUSC 386 | MUS 386 | N/A |
| MUSC 390 | MUS 390 | N/A |
| MUSC 391 | MUS 391 | N/A |

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| MUSC 392 | MUS 392 | N/A |
| MUSC 413 | MUS 413 | N/A |
| MUSC 415 | MUS 415 | N/A |
| MUSC 417 | MUS 417 | N/A |
| MUSC 421 | MUS 421 | N/A |
| MUSC 422 | MUS 422 | N/A |
| MUSC 424 | MUS 424 | N/A |
| MUSC 429 | MUS 429 | N/A |
| MUSC 430 | MUS 430 | N/A |
| MUSC 440 | MUS 440 | N/A |
| MUSC 441 | MUS 441 | N/A |
| MUSC 450 | MUS 450 | N/A |
| MUSC 455 | MUS 455 | N/A |
| MUSC 470 | MUS 470 | N/A |
| MUSC 471 | MUS 471 | N/A |
| MUSC 475 | MUS 475 | N/A |
| MUSC 477 | MUS 477 | N/A |
| MUSC 486 | MUS 486 | N/A |
| MUSC 498 | MUS 498 | N/A |
| MUSC 511 | MUS 511 | N/A |
| MUSC 513 | MUS 513 | N/A |
| MUSC 518 | MUS 518 | N/A |
| MUSC 519 | MUS 519 | N/A |
| MUSC 521 | MUS 521 | N/A |
| MUSC 522 | MUS 522 | N/A |
| MUSC 523 | MUS 523 | N/A |
| MUSC 527 | MUS 527 | N/A |
| MUSC 529 | MUS 529 | N/A |
| MUSC 530 | MUS 530 | N/A |
| MUSC 531 | MUS 531 | N/A |
| MUSC 535 | MUS 535 | N/A |
| MUSC 540 | MUS 540 | N/A |
| MUSC 574 | MUS 574 | N/A |
| MUSC 575 | MUS 575 | N/A |
| MUSC 576 | MUS 576 | N/A |
| MUSC 577 | MUS 577 | N/A |
| MUSC 578 | MUS 578 | N/A |
| MUSC 579 | MUS 579 | N/A |
| MUSC 580 | MUS 580 | N/A |
| MUSC 582 | MUS 582 | N/A |
| MUSC 586 | MUS 586 | N/A |
| MUSC 598 | MUS 598 | N/A |
| MUSC 599 | MUS 599 | N/A |
| NMNEC-NURSING EDUC CONSORTIUM | | |
| NMNC 3110 | NURS 293 | Common |
| NMNC 3120 | NURS 362 | Common |
| NMNC 3135 | NURS 294 | Common |
| NMNC 3210 | NURS 377 | Common |
| NMNC 3220 | NURS 378 | Common |
| NMNC 3230 | NURS 379 | Common |
| NMNC 3235 | NURS 380 | Common |
| NMNC 4310 | NURS 395 | Common |

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| NMNC 4320 | NURS 396 | Common |
| NMNC 4335 | NURS 398 | Common |
| NMNC 4410 | NURS 466 | Common |
| NMNC 4435 | NURS 467 | Common |
| NMNC 4445 | NURS 468 | Common |
| NMNC 4510 | NURS 486 | Common |
| NMNC 4520 | NURS 487 | Common |
| NMNC 4535 | NURS 488 | Common |
| NMNC 4545 | NURS 489 | Common |
| NUTR-NUTRITION | | |
| NUTR 2110 | HNDS 251 | Common |
| NUTR 2120 | HNDS 201 | Unique |
| NUTR 3110 | HNDS 350 | N/A |
| NUTR 3120 | HNDS 360 | N/A |
| NUTR 3750 | HNDS 440 | N/A |
| NUTR 3996 | HNDS 450 | N/A |
| NUTR 4110 | HNDS 448 | N/A |
| NUTR 4210 | HNDS 403 | N/A |
| NUTR 4220 | HNDS 430 | N/A |
| NUTR 4230 | HNDS 446 | N/A |
| NUTR 4230L | HNDS 446 L | N/A |
| NUTR 4233 | HNDS 420 | N/A |
| NUTR 4235 | HNDS 405 | N/A |
| NUTR 4240 | HNDS 449 | N/A |
| NUTR 4240L | HNDS 449 L | N/A |
| NUTR 4550 | HNDS 455 | N/A |
| NUTR 4560 | HNDS 401 | N/A |
| NUTR 4565 | HNDS 407 | N/A |
| NUTR 4991 | HNDS 492 | N/A |
| NUTR 5110 | HNDS 548 | N/A |
| NUTR 5150 | HNDS 500 | N/A |
| NUTR 5210 | HNDS 551 | N/A |
| NUTR 5220 | HNDS 530 | N/A |
| NUTR 5230 | HNDS 546 | N/A |
| NUTR 5233 | HNDS 520 | N/A |
| NUTR 5240 | HNDS 549 | N/A |
| NUTR 5610 | HNDS 560 | N/A |
| NUTR 5620 | HNDS 562 | N/A |
| NUTR 5630 | HNDS 563 | N/A |
| NUTR 5640 | HNDS 564 | N/A |
| NUTR 5650 | HNDS 565 | N/A |
| NUTR 5660 | HNDS 566 | N/A |
| NUTR 5670 | HNDS 567 | N/A |
| NUTR 5680 | HNDS 568 | N/A |
| NUTR 5991 | HNDS 598 | N/A |
| NUTR 5996 | HNDS 590 | N/A |
| OATS- OFFICE ADMIN TECH SYSTEMS | | |
| OATS 101 | BOT 101 | N/A |
| OATS 102 | BOT 102 | N/A |
| OATS 105 | BOT 105 | N/A |
| OATS 106 | BOT 106 | N/A |
| OATS 110 | BOT 110 | N/A |

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|--------------------------------|---------|--------|
| OATS 120 | BOT 120 | N/A |
| OATS 121 | BOT 121 | N/A |
| OATS 140 | BOT 140 | N/A |
| OATS 150 | BOT 150 | N/A |
| OATS 169 | BOT 169 | N/A |
| OATS 170 | BOT 170 | N/A |
| OATS 171 | BOT 171 | N/A |
| OATS 191 | BOT 191 | N/A |
| OATS 202 | BOT 202 | N/A |
| OATS 203 | BOT 203 | N/A |
| OATS 205 | BOT 205 | N/A |
| OATS 206 | BOT 206 | N/A |
| OATS 207 | BOT 207 | N/A |
| OATS 208 | BOT 208 | N/A |
| OATS 209 | BOT 209 | N/A |
| OATS 211 | BOT 211 | N/A |
| OATS 213 | BOT 213 | N/A |
| OATS 214 | BOT 214 | N/A |
| OATS 215 | BOT 215 | N/A |
| OATS 217 | BOT 217 | N/A |
| OATS 218 | BOT 218 | N/A |
| OATS 220 | BOT 220 | N/A |
| OATS 221 | BOT 221 | N/A |
| OATS 222 | BOT 222 | N/A |
| OATS 223 | BOT 223 | N/A |
| OATS 228 | BOT 228 | N/A |
| OATS 233 | BOT 233 | N/A |
| OATS 239 | BOT 239 | N/A |
| OATS 240 | BOT 240 | N/A |
| OATS 241 | BOT 241 | N/A |
| OATS 244 | BOT 244 | N/A |
| OATS 250 | BOT 250 | N/A |
| OATS 255 | BOT 255 | N/A |
| OATS 260 | BOT 260 | N/A |
| OATS 270 | BOT 270 | N/A |
| PHED-PHYSICAL EDUCATION | | |
| HLED 1154 | P E 134 | Common |
| PHED 1110 | P E 128 | Common |
| PHED 1230 | P E 147 | Common |
| PHED 1230 | P E 148 | Common |
| PHED 1230 | P E 150 | Common |
| PHED 1290 | P E 112 | Common |
| PHED 1290 | P E 113 | Common |
| PHED 1290 | P E 114 | Common |
| PHED 1290 | P E 115 | Common |
| PHED 1290 | P E 117 | Common |
| PHED 1290 | P E 166 | Common |
| PHED 1310 | P E 130 | Common |
| PHED 1320 | P E 131 | Common |
| PHED 1410 | P E 199 | Common |
| PHED 1430 | P E 109 | Common |
| PHED 1510 | P E 102 | Common |

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|------------------------------------|------------|--------|
| PHED 1510 | P E 103 | Common |
| PHED 1510 | P E 127 | Common |
| PHED 1620 | P E 205 | Common |
| PHED 1630 | P E 104 | Common |
| PHED 1670 | P E 129 | Common |
| PHED 1710 | P E 154 | Common |
| PHED 1710 | P E 159 | Common |
| PHED 1830 | P E 173 | Common |
| PHED 1910 | P E 263 | Common |
| PHED 2996 | P E 270 | Common |
| PHIL-PHILOSOPHY | | |
| PHIL 1115G | PHIL 101G | Common |
| PHIL 1120G | PHIL 211G | Common |
| PHIL 1140G | PHIL 136G | Unique |
| PHIL 1145G | PHIL 100G | Unique |
| PHIL 1155G | PHIL 124G | Unique |
| PHIL 2110G | PHIL 223G | Common |
| PHIL 2230G | PHIL 201G | Common |
| PHLS-PUBLIC HEALTH SCIENCES | | |
| PHLS 1110G | PHLS 150G | Common |
| PHLS 2110 | PHLS 275 | Common |
| PHLS 2120 | PHLS 295 | Common |
| PHYS-PHYSICS | | |
| PHYS 1111 | PHYS 150 | Unique |
| PHYS 1112 | PHYS 210 | Unique |
| PHYS 1115G | PHYS 110G | Common |
| PHYS 1125G | PHYS 120G | Common |
| PHYS 1230G | PHYS 211G | Common |
| PHYS 1230L | PHYS 211GL | Common |
| PHYS 1240G | PHYS 212G | Common |
| PHYS 1240L | PHYS 212GL | Common |
| PHYS 1310G | PHYS 215G | Common |
| PHYS 1310L | PHYS 215GL | Common |
| PHYS 1311 | PHYS 205 | Common |
| PHYS 1320G | PHYS 216G | Common |
| PHYS 1320L | PHYS 216GL | Common |
| PHYS 1321 | PHYS 206 | Common |
| PHYS 2110 | PHYS 213 | Unique |
| PHYS 2110L | PHYS 213 L | Unique |
| PHYS 2111 | PHYS 203 | Unique |
| PHYS 2120 | PHYS 217 | Unique |
| PHYS 2120L | PHYS 217 L | Unique |
| PHYS 2121 | PHYS 218 | Unique |
| PHYS 2140 | PHYS 214 | Unique |
| PHYS 2140L | PHYS 214 L | Unique |
| PHYS 2141 | PHYS 204 | Unique |
| PHYS 2230G | PHYS 221G | Unique |
| PHYS 2230L | PHYS 221GL | Unique |
| PHYS 2231 | PHYS 223 | Common |
| PHYS 2240G | PHYS 222G | Unique |
| PHYS 2240L | PHYS 222GL | Unique |
| PHYS 2241 | PHYS 224 | Common |

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|-------------------------------|-----------|--------|
| PHYS 2996 | PHYS 290 | Unique |
| PHYS 2997 | PHYS 280 | Unique |
| POLS-POLITICAL SCIENCE | | |
| POLS 1110G | GOVT 110G | Common |
| POLS 1111 | GOVT 101 | Unique |
| POLS 1120G | GOVT 100G | Common |
| POLS 1130G | GOVT 150G | Common |
| POLS 2120G | GOVT 160G | Common |
| POLS 2996 | GOVT 201 | Unique |
| POLS 300 | GOVT 300 | N/A |
| POLS 308 | GOVT 308 | N/A |
| POLS 313 | GOVT 313 | N/A |
| POLS 314 | GOVT 314 | N/A |
| POLS 315 | GOVT 315 | N/A |
| POLS 320 | GOVT 320 | N/A |
| POLS 321 | GOVT 321 | N/A |
| POLS 324 | GOVT 324 | N/A |
| POLS 330 | GOVT 330 | N/A |
| POLS 331 | GOVT 331 | N/A |
| POLS 335 | GOVT 335 | N/A |
| POLS 343 | GOVT 343 | N/A |
| POLS 344 | GOVT 344 | N/A |
| POLS 345 | GOVT 345 | N/A |
| POLS 348 | GOVT 348 | N/A |
| POLS 350 | GOVT 350 | N/A |
| POLS 353 | GOVT 353 | N/A |
| POLS 354 | GOVT 354 | N/A |
| POLS 360 | GOVT 360 | N/A |
| POLS 361 | GOVT 361 | N/A |
| POLS 362 | GOVT 362 | N/A |
| POLS 366 | GOVT 366 | N/A |
| POLS 367 | GOVT 367 | N/A |
| POLS 370 | GOVT 370 | N/A |
| POLS 371 | GOVT 371 | N/A |
| POLS 372 | GOVT 372 | N/A |
| POLS 373 | GOVT 373 | N/A |
| POLS 378 | GOVT 378 | N/A |
| POLS 379 | GOVT 379 | N/A |
| POLS 380V | GOVT 380V | N/A |
| POLS 382 | GOVT 382 | N/A |
| POLS 383 | GOVT 383 | N/A |
| POLS 385 | GOVT 385 | N/A |
| POLS 386 | GOVT 386 | N/A |
| POLS 387 | GOVT 387 | N/A |
| POLS 390 | GOVT 390 | N/A |
| POLS 391 | GOVT 391 | N/A |
| POLS 392 | GOVT 392 | N/A |
| POLS 394 | GOVT 394 | N/A |
| POLS 395 | GOVT 395 | N/A |
| POLS 396 | GOVT 396 | N/A |
| POLS 399 | GOVT 399 | N/A |
| POLS 405 | GOVT 405 | N/A |

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|------------------------|----------|--------|
| POLS 406 | GOVT 406 | N/A |
| POLS 407 | GOVT 407 | N/A |
| POLS 410 | GOVT 410 | N/A |
| POLS 411 | GOVT 411 | N/A |
| POLS 412 | GOVT 412 | N/A |
| POLS 415 | GOVT 415 | N/A |
| POLS 468 | GOVT 468 | N/A |
| POLS 469 | GOVT 469 | N/A |
| POLS 493 | GOVT 493 | N/A |
| POLS 502 | GOVT 502 | N/A |
| POLS 503 | GOVT 503 | N/A |
| POLS 505 | GOVT 505 | N/A |
| POLS 510 | GOVT 510 | N/A |
| POLS 517 | GOVT 517 | N/A |
| POLS 519 | GOVT 519 | N/A |
| POLS 522 | GOVT 522 | N/A |
| POLS 527 | GOVT 527 | N/A |
| POLS 530 | GOVT 530 | N/A |
| POLS 536 | GOVT 536 | N/A |
| POLS 537 | GOVT 537 | N/A |
| POLS 540 | GOVT 540 | N/A |
| POLS 541 | GOVT 541 | N/A |
| POLS 542 | GOVT 542 | N/A |
| POLS 543 | GOVT 543 | N/A |
| POLS 544 | GOVT 544 | N/A |
| POLS 547 | GOVT 547 | N/A |
| POLS 548 | GOVT 548 | N/A |
| POLS 549 | GOVT 549 | N/A |
| POLS 550 | GOVT 550 | N/A |
| POLS 560 | GOVT 560 | N/A |
| POLS 561 | GOVT 561 | N/A |
| POLS 563 | GOVT 563 | N/A |
| POLS 564 | GOVT 564 | N/A |
| POLS 569 | GOVT 569 | N/A |
| POLS 570 | GOVT 570 | N/A |
| POLS 574 | GOVT 574 | N/A |
| POLS 578 | GOVT 578 | N/A |
| POLS 579 | GOVT 579 | N/A |
| POLS 580 | GOVT 580 | N/A |
| POLS 587 | GOVT 587 | N/A |
| POLS 590 | GOVT 590 | N/A |
| POLS 591 | GOVT 591 | N/A |
| POLS 593 | GOVT 593 | N/A |
| POLS 596 | GOVT 596 | N/A |
| POLS 598 | GOVT 598 | N/A |
| POLS 599 | GOVT 599 | N/A |
| PORT-PORTUGUESE | | |
| PORT 1110 | PORT 213 | Common |
| PORT 1120 | PORT 214 | Common |
| PSYC-PSYCHOLOGY | | |
| PSYC 1110G | PSY 201G | Common |
| PSYC 2221 | PSY 266 | Unique |

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|---------------------------|----------|--------|
| PSYC 2230 | PSY 290 | Common |
| PSYC 2311 | PSY 274 | Unique |
| PSYC 301 | PSY 301 | N/A |
| PSYC 302 | PSY 302 | N/A |
| PSYC 310 | PSY 310 | N/A |
| PSYC 311 | PSY 311 | N/A |
| PSYC 315 | PSY 315 | N/A |
| PSYC 317 | PSY 317 | N/A |
| PSYC 320 | PSY 320 | N/A |
| PSYC 321 | PSY 321 | N/A |
| PSYC 324 | PSY 324 | N/A |
| PSYC 325 | PSY 325 | N/A |
| PSYC 330 | PSY 330 | N/A |
| PSYC 340 | PSY 340 | N/A |
| PSYC 350 | PSY 350 | N/A |
| PSYC 351 | PSY 351 | N/A |
| PSYC 359 | PSY 359 | N/A |
| PSYC 370 | PSY 370 | N/A |
| PSYC 375 | PSY 375 | N/A |
| PSYC 376 | PSY 376 | N/A |
| PSYC 380 | PSY 380 | N/A |
| PSYC 383 | PSY 383 | N/A |
| PSYC 400 | PSY 400 | N/A |
| PSYC 401 | PSY 401 | N/A |
| PSYC 402 | PSY 402 | N/A |
| PSYC 430 | PSY 430 | N/A |
| PSYC 442 | PSY 442 | N/A |
| PSYC 450 | PSY 450 | N/A |
| PSYC 470 | PSY 470 | N/A |
| PSYC 507 | PSY 507 | N/A |
| PSYC 508 | PSY 508 | N/A |
| PSYC 509 | PSY 509 | N/A |
| PSYC 510 | PSY 510 | N/A |
| PSYC 520 | PSY 520 | N/A |
| PSYC 522 | PSY 522 | N/A |
| PSYC 523 | PSY 523 | N/A |
| PSYC 524 | PSY 524 | N/A |
| PSYC 527 | PSY 527 | N/A |
| PSYC 529 | PSY 529 | N/A |
| PSYC 540 | PSY 540 | N/A |
| PSYC 547 | PSY 547 | N/A |
| PSYC 550 | PSY 550 | N/A |
| PSYC 570 | PSY 570 | N/A |
| PSYC 590 | PSY 590 | N/A |
| PSYC 598 | PSY 598 | N/A |
| PSYC 599 | PSY 599 | N/A |
| PSYC 600 | PSY 600 | N/A |
| PSYC 698 | PSY 698 | N/A |
| PSYC 700 | PSY 700 | N/A |
| RGSC-RANGE SCIENCE | | |
| RGSC 1110 | RGSC 150 | Unique |
| RGSC 2110 | RGSC 294 | Common |

| RGSC 2996 | RGSC 250 | Unique |
|---------------------------|----------|--------|
| SIGN-SIGN LANGUAGE | | |
| SIGN 1110 | C D 374 | Common |
| SIGN 1120 | C D 375 | Common |
| SIGN 2110 | C D 476 | Common |
| SIGN 574 | C D 574 | N/A |
| SOCI-SOCIOLOGY | | |
| SOCI 1110G | SOC 101G | Common |
| SOCI 2230 | SOC 263 | Common |
| SOCI 2230 | SOC 269 | Common |
| SOCI 2240 | SOC 258 | Common |
| SOCI 2261 | SOC 262 | Unique |
| SOCI 2310G | SOC 201G | Common |
| SOCI 330V | SOC 330V | N/A |
| SOCI 336V | SOC 336V | N/A |
| SOCI 350 | SOC 350 | N/A |
| SOCI 351 | SOC 351 | N/A |
| SOCI 352 | SOC 352 | N/A |
| SOCI 353 | SOC 353 | N/A |
| SOCI 357 | SOC 357 | N/A |
| SOCI 359 | SOC 359 | N/A |
| SOCI 360V | SOC 360V | N/A |
| SOCI 361V | SOC 361V | N/A |
| SOCI 362 | SOC 362 | N/A |
| SOCI 365 | SOC 365 | N/A |
| SOCI 371 | SOC 371 | N/A |
| SOCI 374V | SOC 374V | N/A |
| SOCI 375 | SOC 375 | N/A |
| SOCI 376V | SOC 376V | N/A |
| SOCI 390 | SOC 390 | N/A |
| SOCI 391 | SOC 391 | N/A |
| SOCI 392 | SOC 392 | N/A |
| SOCI 393 | SOC 393 | N/A |
| SOCI 394V | SOC 394V | N/A |
| SOCI 401 | SOC 401 | N/A |
| SOCI 409 | SOC 409 | N/A |
| SOCI 430 | SOC 430 | N/A |
| SOCI 448 | SOC 448 | N/A |
| SOCI 449 | SOC 449 | N/A |
| SOCI 458V | SOC 458V | N/A |
| SOCI 460 | SOC 460 | N/A |
| SOCI 464 | SOC 464 | N/A |
| SOCI 465V | SOC 465V | N/A |
| SOCI 470 | SOC 470 | N/A |
| SOCI 473 | SOC 473 | N/A |
| SOCI 477 | SOC 477 | N/A |
| SOCI 480 | SOC 480 | N/A |
| SOCI 481 | SOC 481 | N/A |
| SOCI 482 | SOC 482 | N/A |
| SOCI 486 | SOC 486 | N/A |
| SOCI 489 | SOC 489 | N/A |
| SOCI 491 | SOC 491 | N/A |

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|-------------------------|------------|--------|
| SOCI 496 | SOC 496 | N/A |
| SOCI 501 | SOC 501 | N/A |
| SOCI 509 | SOC 509 | N/A |
| SOCI 530 | SOC 530 | N/A |
| SOCI 548 | SOC 548 | N/A |
| SOCI 549 | SOC 549 | N/A |
| SOCI 551 | SOC 551 | N/A |
| SOCI 552 | SOC 552 | N/A |
| SOCI 553 | SOC 553 | N/A |
| SOCI 559 | SOC 559 | N/A |
| SOCI 560 | SOC 560 | N/A |
| SOCI 561 | SOC 561 | N/A |
| SOCI 564 | SOC 564 | N/A |
| SOCI 565 | SOC 565 | N/A |
| SOCI 569 | SOC 569 | N/A |
| SOCI 570 | SOC 570 | N/A |
| SOCI 571 | SOC 571 | N/A |
| SOCI 572 | SOC 572 | N/A |
| SOCI 574 | SOC 574 | N/A |
| SOCI 575 | SOC 575 | N/A |
| SOCI 577 | SOC 577 | N/A |
| SOCI 579 | SOC 579 | N/A |
| SOCI 581 | SOC 581 | N/A |
| SOCI 582 | SOC 582 | N/A |
| SOCI 583 | SOC 583 | N/A |
| SOCI 586 | SOC 586 | N/A |
| SOCI 587 | SOC 587 | N/A |
| SOCI 589 | SOC 589 | N/A |
| SOCI 596 | SOC 596 | N/A |
| SOCI 599 | SOC 599 | N/A |
| SOIL-SOIL | | |
| SOIL 2110 | SOIL 252 | Common |
| SOIL 2110L | SOIL 252 L | Common |
| SOIL 2996 | SOIL 200 | Unique |
| SOWK-SOCIAL WORK | | |
| SOWK 2110G | S WK 221G | Common |
| SOWK 2111 | S WK 251 | Unique |
| SOWK 300 | S WK 300 | N/A |
| SOWK 301 | S WK 301 | N/A |
| SOWK 309 | S WK 309 | N/A |
| SOWK 311 | S WK 311 | N/A |
| SOWK 312 | S WK 312 | N/A |
| SOWK 313 | S WK 313 | N/A |
| SOWK 315 | S WK 315 | N/A |
| SOWK 316 | S WK 316 | N/A |
| SOWK 331V | S WK 331V | N/A |
| SOWK 401 | S WK 401 | N/A |
| SOWK 403 | S WK 403 | N/A |
| SOWK 405 | S WK 405 | N/A |
| SOWK 412 | S WK 412 | N/A |
| SOWK 415 | S WK 415 | N/A |
| SOWK 416 | S WK 416 | N/A |

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| SOWK 417 | S WK 417 | N/A |
| SOWK 418 | S WK 418 | N/A |
| SOWK 419 | S WK 419 | N/A |
| SOWK 443 | S WK 443 | N/A |
| SOWK 449 | S WK 449 | N/A |
| SOWK 490 | S WK 490 | N/A |
| SOWK 497 | S WK 497 | N/A |
| SPAN-SPANISH | | |
| SPAN 1110 | SPAN 111 | Common |
| SPAN 1120 | SPAN 112 | Common |
| SPAN 1210 | SPAN 113 | Common |
| SPAN 1220 | SPAN 213 | Common |
| SPAN 2110 | SPAN 211 | Common |
| SPAN 2120 | SPAN 212 | Common |
| SPAN 2210 | SPAN 214 | Common |
| SPED-SPECIAL EDUCATION | | |
| SPED 2130 | SPED 202 | Unique |
| SPED 2996 | SPED 201 | Unique |
| SPHS-SPEECH & HEARING SCIENCE | | |
| SPHS 2110 | C D 221 | Common |
| SPHS 301 | C D 301 | N/A |
| SPHS 322 | C D 322 | N/A |
| SPHS 323 | C D 323 | N/A |
| SPHS 324 | C D 324 | N/A |
| SPHS 326 | C D 326 | N/A |
| SPHS 421 | C D 421 | N/A |
| SPHS 422 | C D 422 | N/A |
| SPHS 423 | C D 423 | N/A |
| SPHS 424 | C D 424 | N/A |
| SPHS 425 | C D 425 | N/A |
| SPHS 501 | C D 501 | N/A |
| SPHS 502 | C D 502 | N/A |
| SPHS 503 | C D 503 | N/A |
| SPHS 504 | C D 504 | N/A |
| SPHS 505 | C D 505 | N/A |
| SPHS 506 | C D 506 | N/A |
| SPHS 507 | C D 507 | N/A |
| SPHS 508 | C D 508 | N/A |
| SPHS 509 | C D 509 | N/A |
| SPHS 510 | C D 510 | N/A |
| SPHS 521 | C D 521 | N/A |
| SPHS 523 | C D 523 | N/A |
| SPHS 525 | C D 525 | N/A |
| SPHS 530 | C D 530 | N/A |
| SPHS 535 | C D 535 | N/A |
| SPHS 541 | C D 541 | N/A |
| SPHS 542 | C D 542 | N/A |
| SPHS 545 | C D 545 | N/A |
| SPHS 547 | C D 547 | N/A |
| SPHS 548 | C D 548 | N/A |
| SPHS 583 | C D 583 | N/A |
| SPHS 584 | C D 584 | N/A |

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|-----------------------------|------------|--------|
| SPHS 585 | C D 585 | N/A |
| SPHS 586 | C D 586 | N/A |
| SPHS 589 | C D 589 | N/A |
| SPHS 590 | C D 590 | N/A |
| SPHS 591 | C D 591 | N/A |
| SPHS 599 | C D 599 | N/A |
| SPHS 640 | C D 640 | N/A |
| SPMD-SPORTS MEDICINE | | |
| SPMD 1110 | SP M 190 | Unique |
| SPMD 1120 | SP M 191 | Unique |
| SPMD 1190 | SP M 272 | Unique |
| SPMD 1195 | SP M 273 | Unique |
| SPMD 1310 | SP M 175 | Unique |
| SPMD 1350 | PE P 185 | Unique |
| SPMD 2130 | SP M 250 | Unique |
| SPMD 2210 | SP M 271 | Unique |
| SPMD 2210L | SP M 271 L | Unique |
| SPMD 2250 | PE P 208 | Unique |
| SPMD 2310 | SP M 200 | Unique |
| SPMD 3010 | SP M 310 | N/A |
| SPMD 3050 | SP M 375 | N/A |
| SPMD 3090 | SP M 372 | N/A |
| SPMD 3093 | SP M 373 | N/A |
| SPMD 3110 | PE P 323 | N/A |
| SPMD 3120 | PE P 363 | N/A |
| SPMD 3130 | PE P 392 | N/A |
| SPMD 3140 | PE P 394 | N/A |
| SPMD 3150 | PE P 393 | N/A |
| SPMD 3160 | PE P 315 | N/A |
| SPMD 3210 | SP M 371 | N/A |
| SPMD 3210L | SP M 371 L | N/A |
| SPMD 3250 | SP M 324 | N/A |
| SPMD 3310 | PE P 319 | N/A |
| SPMD 3350 | SP M 412 | N/A |
| SPMD 3410 | SP M 308 | N/A |
| SPMD 3450 | SP M 305 | N/A |
| SPMD 3450L | SP M 305 L | N/A |
| SPMD 3550 | SP M 304 | N/A |
| SPMD 3610 | SP M 303 | N/A |
| SPMD 3650 | SP M 341 | N/A |
| SPMD 3710 | SP M 342 | N/A |
| SPMD 4010 | SP M 410 | N/A |
| SPMD 4015 | SP M 415 | N/A |
| SPMD 4020 | SP M 420 | N/A |
| SPMD 4025 | SP M 411 | N/A |
| SPMD 4030 | SP M 425 | N/A |
| SPMD 4090 | SP M 422 | N/A |
| SPMD 4093 | SP M 423 | N/A |
| SPMD 4095 | SP M 424 | N/A |
| SPMD 4098 | SP M 498 | N/A |
| SPMD 4110 | PE P 455 | N/A |
| SPMD 4130 | PE P 466 | N/A |

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| SPMD 4210 | SP M 451 | N/A |
| SPMD 4250 | SP M 460 | N/A |
| SPMD 4250L | SP M 460 L | N/A |
| SPMD 4350 | SP M 330 | N/A |
| SPMD 4410 | SP M 456 | N/A |
| SPMD 4450 | SP M 307 | N/A |
| SPMD 4510 | SP M 309 | N/A |
| SPMD 4550 | SP M 223 | N/A |
| SPMD 4610 | PE P 465 | N/A |
| SPMD 4997 | SP M 499 | N/A |
| SPMD 4998 | SP M 445 | N/A |
| SPMD 5010 | SP M 510 | N/A |
| SPMD 5015 | SP M 513 | N/A |
| SPMD 5020 | SP M 514 | N/A |
| SPMD 5025 | SP M 511 | N/A |
| SPMD 5030 | SP M 515 | N/A |
| SPMD 5310 | SP M 512 | N/A |
| SPMD 5350 | SP M 560 | N/A |
| SPMD 5410 | SP M 509 | N/A |
| SPMD 5450 | SP M 556 | N/A |
| SPMD 5510 | SP M 504 | N/A |
| SPMD 5550 | SP M 545 | N/A |
| SPMD 6310 | PE P 624 | N/A |
| SPMD 6350 | SP M 551 | N/A |
| SPMD 6410 | SP M 608 | N/A |
| SPMD 6450 | SP M 665 | N/A |
| SPMD 6510 | SP M 660 | N/A |
| SPMD 6710 | SP M 597 | N/A |
| SPMD 6750 | SP M 600 | N/A |
| SPMD 6996 | PE P 501 | N/A |
| SPMD 7000 | SP M 700 | N/A |
| THEA-THEATRE | | |
| THEA 1110G | THTR 101G | Common |
| THEA 1210G | THTR 105 | Common |
| THEA 1221 | THTR 110 | Unique |
| THEA 1222 | THTR 120 | Unique |
| THEA 1223 | THTR 130 | Unique |
| THEA 1310 | THTR 142 | Common |
| THEA 1310L | THTR 142 L | Unique |
| THEA 1415 | THTR 149 | Unique |
| THEA 2221 | THTR 210 | Unique |
| THEA 2222 | THTR 206 | Unique |
| THEA 2310 | THTR 141 | Common |
| THEA 2310L | THTR 141 L | Unique |
| THEA 2340 | THTR 250 | Unique |
| THEA 2415 | THTR 249 | Unique |
| THEA 2421 | THTR 220 | Unique |
| THEA 2993 | THTR 200 | Unique |
| THEA 2996 | THTR 222 | Unique |
| THEA 300 | THTR 300 | N/A |
| THEA 303 | THTR 303 | N/A |
| THEA 304 | THTR 304 | N/A |

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|-----------|-----------|-----|
| THEA 305 | THTR 305 | N/A |
| THEA 307V | THTR 307V | N/A |
| THEA 308 | THTR 308 | N/A |
| THEA 310 | THTR 310 | N/A |
| THEA 311 | THTR 311 | N/A |
| THEA 312 | THTR 312 | N/A |
| THEA 313 | THTR 313 | N/A |
| THEA 317 | THTR 317 | N/A |
| THEA 321V | THTR 321V | N/A |
| THEA 322 | THTR 322 | N/A |
| THEA 323 | THTR 323 | N/A |
| THEA 329 | THTR 329 | N/A |
| THEA 330 | THTR 330 | N/A |
| THEA 334 | THTR 334 | N/A |
| THEA 337 | THTR 337 | N/A |
| THEA 341 | THTR 341 | N/A |
| THEA 343 | THTR 343 | N/A |
| THEA 345 | THTR 345 | N/A |
| THEA 346 | THTR 346 | N/A |
| THEA 347 | THTR 347 | N/A |
| THEA 348 | THTR 348 | N/A |
| THEA 349 | THTR 349 | N/A |
| THEA 352 | THTR 352 | N/A |
| THEA 353 | THTR 353 | N/A |
| THEA 354 | THTR 354 | N/A |
| THEA 355 | THTR 355 | N/A |
| THEA 356 | THTR 356 | N/A |
| THEA 357 | THTR 357 | N/A |
| THEA 360 | THTR 360 | N/A |
| THEA 366 | THTR 366 | N/A |
| THEA 384 | THTR 384 | N/A |
| THEA 395 | THTR 395 | N/A |
| THEA 396 | THTR 396 | N/A |
| THEA 408 | THTR 408 | N/A |
| THEA 409 | THTR 409 | N/A |
| THEA 410 | THTR 410 | N/A |
| THEA 414 | THTR 414 | N/A |
| THEA 417 | THTR 417 | N/A |
| THEA 430 | THTR 430 | N/A |
| THEA 435 | THTR 435 | N/A |
| THEA 439 | THTR 439 | N/A |
| THEA 440 | THTR 440 | N/A |
| THEA 450 | THTR 450 | N/A |
| THEA 535 | THTR 535 | N/A |

Associate Degree and Certificate Programs

Programs offered at New Mexico State University - Carlsbad

Program are titled in the following styles:

- **Computer and Information Technology (IT Specialist) - Associate of Applied Science**
 - Major Title (Computer and Information Technology), will appear on diplomas and transcripts
 - Concentration Title (IT Specialist), will appear on diplomas and transcripts
 - Degree Title (Associate of Applied Science), will appear on diplomas and transcripts
- **Business Office Technology - Associate of Applied Science***
 - Major Title (Business Office Technology), will appear on diplomas and transcripts
 - Degree Title (Associate of Applied Science), will appear on diplomas and transcripts

**Note: that some degrees will have emphasis, options, pathways, etc. appear on the degree page, but these items will not appear on transcripts.*

A

- Accounting - Certificate of Completion (p. 115)
- Agriculture - Associate of Applied Science (p. 118)
- Associate in General Studies (p. 120)
- Associate of Arts Degree (p. 121)
- Associate of Science Degree (p. 285)
- Auto Body Collision Repair - Associate of Applied Science (p. 127)
- Automotive Refinishing - Certificate of Completion (p. 129)
- Automotive Technology - Associate of Applied Science (p. 135)
- Automotive Technology - Certificate of Completion (p. 136)

B

- Banking - Certificate of Completion (p. 115)
- Building Technology - Associate of Applied Science (p. 140)
- Building Trades - Certificate of Completion (p. 141)
- Business Management - Associate in Business Management (p. 145)
- Business Office Technology (Accounting) - Associate of Business Office Technology (p. 151)
- Business Office Technology (Administrative Assistant) - Associate of Business Office Technology (p. 153)
- Business Office Technology - Certificate of Completion (p. 154)

C

- Computer and Information Technology (IT Specialist) - Associate of Applied Science (p. 160)
- Computer and Information Technology (Networking) - Associate of Applied Science (p. 162)
- Computer and Information Technology (Programming) - Associate of Applied Science (p. 164)
- Criminal Justice - Associate in Criminal Justice (p. 169)

D

- Digital Animation - Certificate of Completion (p. 187)
- Digital Graphics - Certificate of Completion (p. 187)
- Digital Media Technology (Digital Animation) - Associate of Applied Science (p. 189)
- Digital Media Technology (Digital Graphics) - Associate of Applied Science (p. 192)
- Digital Media Technology (Digital Video) - Associate of Applied Science (p. 194)
- Digital Video - Certificate of Completion (p. 188)
- Digital Video Game Animation - Certificate of Completion (p. 189)
- Drafting and Graphics Technology (Architectural Technology) - Associate of Applied Science (p. 202)
- Drafting and Graphics Technology (General Drafting) - Associate of Applied Science (p. 203)
- Drafting and Graphics Technology - Certificate of Completion (p. 201)

E

- Early Childhood Education - Associate in Early Childhood Education (p. 214)
- Early Childhood Education - Certificate of Completion (p. 217)
- Education - Associate in Education (p. 220)
- Emergency Medical Technician Basic - Certificate of Completion (p. 227)

- Emergency Medical Technician Intermediate - Certificate (p. 227)
- Emergency Medical Technician Paramedic - Associate of Applied Science (p. 228)
- Emergency Medical Technician Paramedic - Certificate of Completion (p. 230)
- Engineering - Associate of Science (p. 234)

G

- Geographical Information Systems - Certificate of Completion (p. 236)

H

- Health Information Technology - Associate of Applied Science (p. 239)
- Health Information Technology - Certificate of Completion (p. 240)
- Heritage Interpretation - Associate of Arts (p. 241)
- Heritage Interpretation - Certificate of Completion (p. 243)
- Hospitality and Tourism (Food & Beverage) - Associate of Applied Science (p. 248)
- Hospitality and Tourism (Lodging & Tourism) - Associate of Applied Science (p. 246)

I

- Industrial Maintenance Technician (Electrical) - Associate of Applied Science (p. 252)
- Industrial Maintenance Technician (Mechanical) - Associate of Applied Science (p. 254)
- Industrial Maintenance Technology (Electrical) - Certificate of Completion (p. 251)
- Industrial Maintenance Technology (Mechanical) - Certificate of Completion (p. 252)
- Instrumentation and Control Technology - Certificate (p. 256)

L

- Licensed Practical Nursing - Certificate of Completion (p. 274)

M

- Manufacturing Technology (Electronics Assembly) - Associate of Applied Science (p. 262)
- Manufacturing Technology (Manufacturing Processes) - Associate of Applied Science (p. 264)
- Microcomputer Applications - Certificate of Completion (p. 166)

N

- Natural Gas Compression Technology - Associate of Applied Science (p. 265)
- Natural Gas Compression Technology - Certificate of Completion (p. 267)
- Non-Structural Collision Repair - Certificate of Completion (p. 129)
- Nursing - Associate in Nursing (p. 275)

P

- Paralegal Studies - Associate of Applied Science (p. 278)
- Paralegal Studies - Certificate of Completion (p. 280)
- Phlebotomist Technician - Certificate of Achievement (p. 281)
- Prebusiness - Associate in Prebusiness (p. 282)

S

- Social Work - Associate of Social Work (p. 289)
- Structural Collision Repair - Certificate of Completion (p. 130)
- Surgical Technology - Associate of Applied Science (p. 293)

W

- Welding Technology - Associate of Applied Science (p. 297)
- Welding Technology - Certificate (p. 298)

Accounting and Banking

The **Certificate in Accounting** prepares students for work within the managerial field of accounting. In addition to accounting principles, practices, and software, the curriculum focuses on business law, management, and operation of the microcomputer and common computer applications.

The **Certificate in Banking** prepares students for work in the banking industry. The curriculum focuses on accounting, banking principles, business law, communications, management, marketing, spreadsheets, and operation of the microcomputer and common computer applications.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Accounting - Certificate (p. 115)

Banking - Certificate (p. 115)

ACCT 101. Supplemental Instruction to ACCT 221

1 Credit (1)

Collaborative workshop for students in ACCT 221 – Financial Accounting. Course does not count toward departmental degree requirements. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

Corequisite(s): ACCT 221.

ACCT 200. A Survey of Accounting

3 Credits (3)

Emphasis on financial statement interpretation and development of accounting information for management. For engineering, computer science, and other non business majors. Community Colleges only.

Prerequisite: one C S course or consent of instructor.

ACCT 2110. Principles of Accounting I

3 Credits (3)

An introduction to financial accounting concepts emphasizing the analysis of business transactions in accordance with generally accepted accounting principles (GAAP), the effect of these transactions on the financial statements, financial analysis, and the interrelationships of the financial statements.

Learning Outcomes

1. Analyze business transactions, their effects on the financial statements and the interrelationships of the financial statements involving the following: Cash transactions; Receivables and Net Realizable Value; Operational Assets and Depreciation; Inventory; Current Liabilities; Long-term Liabilities
2. Define, identify and demonstrate the impact of adjusting entries on financial statements.
3. Explain and demonstrate the differences between cash and accrual basis accounting.
4. Define and identify generally accepted accounting principles.

ACCT 2120. Principles of Accounting II

3 Credits (3)

An introduction to the use of accounting information in the management decision making processes of planning, implementing, and controlling business activities. In addition, the course will discuss the accumulation and classification of costs as well as demonstrate the difference between costing systems.

Prerequisite(s): ACCT 2110.

Learning Outcomes

1. Identify the differences between financial and managerial accounting.
2. Illustrate the accumulation of costs in cost accounting systems.
3. Describe the basic elements of the budgeting process, its objectives and budget preparation.
4. Define and classify cost behavior.
5. Perform cost-volume-profit analysis for decision-making.
6. Perform differential (incremental) analysis for business decision making.
7. Explain the cause of the variance and its effect on the income statement.
8. Explain and demonstrate the difference between traditional costing and activity-based costing.

Accounting - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---------------------------------|-----------|
| Core Curriculum Requirements | | |
| ACCT 200 | A Survey of Accounting | 3 |
| ACCT 2110 | Principles of Accounting I | 3 |
| ACCT 2120 | Principles of Accounting II | 3 |
| BUSA 1110 | Intro to Business | 3 |
| BLAW 2110 | Business Law I | 3 |
| BMGT 150 | Income Taxation | 3 |
| MGMT 2110 | Principles of Management | 3 |
| OECS 200 | Accounting on Microcomputers | 3 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| OECS 220 | Database Application and Design | 3 |
| Total Credits | | 33 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | |
|----------------------|---------------------------------|----------------|
| Fall | | Credits |
| ACCT 200 | A Survey of Accounting | 3 |
| BUSA 1110 | Intro to Business | 3 |
| OECS 211 | Word Processing Applications | 3 |
| Credits | | 9 |
| Spring | | |
| MGMT 2110 | Principles of Management | 3 |
| BLAW 2110 | Business Law I | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Credits | | 9 |
| Second Year | | |
| Fall | | |
| ACCT 2110 | Principles of Accounting I | 3 |
| OECS 220 | Database Application and Design | 3 |
| Credits | | 6 |
| Spring | | |
| ACCT 2120 | Principles of Accounting II | 3 |
| OECS 200 | Accounting on Microcomputers | 3 |
| BMGT 150 | Income Taxation | 3 |
| Credits | | 9 |
| Total Credits | | 33 |

Banking - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|--|---------|
| Core Curriculum Requirements | | |
| BCIS 1110 | Introduction to Information Systems | 3 |
| ACCT 2110 | Principles of Accounting I | 3 |
| ACCT 2120 | Principles of Accounting II | 3 |
| BLAW 2110 | Business Law I | 3 |
| BMGT 112 | Banks and Your Money | 3 |
| BMGT 225 | Introduction to Commercial Lending (or Approved BMGT Elective) | 3 |
| ECON 2110G | Macroeconomic Principles | 3 |
| ENGL 2210G | Professional & Technical Communication | 3 |

| | | |
|------------------------|--------------------------|-----------|
| MGMT 2110 | Principles of Management | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Approved BMGT Elective | | 3 |
| Total Credits | | 33 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------|-------------------------------------|----------|
| ACCT 2110 | Principles of Accounting I | 3 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| BMGT 112 | Banks and Your Money | 3 |
| Credits | | 9 |
| Spring | | |
| ACCT 2120 | Principles of Accounting II | 3 |
| Approved BMGT Elective | | 3 |
| BLAW 2110 | Business Law I | 3 |
| Credits | | 9 |

Second Year

| Fall | | |
|----------------------|--|-----------|
| OECS 215 | Spreadsheet Applications | 3 |
| BMGT 225 | Introduction to Commercial Lending (or Approved BMGT Elective) | 3 |
| ENGL 2210G | Professional & Technical Communication | 3 |
| Credits | | 9 |
| Spring | | |
| ECON 2110G | Macroeconomic Principles | 3 |
| MGMT 2110 | Principles of Management | 3 |
| Credits | | 6 |
| Total Credits | | 33 |

Agriculture

The **Associate of Applied Science in Agriculture** focuses on the general principles and practice of agricultural research and production and prepares individuals to apply this knowledge to the solution of practical agricultural problems. The curriculum includes instruction in basic animal, plant, and soil science as well as agricultural business.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Agriculture - Associate of Applied Science (p. 118)

AEEC 1110. Introduction to Agricultural Economics and Business**3 Credits (3)**

This course is an orientation to agricultural economics and business through the discovery process for the consumer in the food, fiber, and natural resource sectors of the global economy. The course discusses the application of micro-and macro-economic principles as they relate to agricultural economics and business. May be repeated up to 3 credits.

Learning Outcomes

1. Gain a broad understanding of the role of the consumer in the market-place for agricultural commodities, producers, agencies and the global market structure.
2. Apply introductory economic principles to applied global situations.
3. Employ economic concepts in the application of production level decision making.
4. Employ economic principles to the basic and global agricultural community.
5. Understand relationships that exist between producers and consumers.

AEEC 1120. Careers in Food and Agribusiness**1 Credit (1)**

This course is an orientation to agribusiness management including careers available in the food and fiber supply chain. Students will learn about agricultural production and marketing in New Mexico, the United States, and the world. Students will be introduced to faculty and staff within the department, learn about career opportunities available to AEAB graduates, and develop a greater appreciation of agricultural management issues. Students must be in Freshman status only or obtain consent of instructor to enroll.

Learning Outcomes

1. Become familiar with career opportunities in agricultural economics and agricultural business Understand knowledge and skills desired by employers Become acquainted with faculty and staff in the Department of Agricultural Economics and Agricultural Economics and resources available to students within the Department Refine written and verbal communication skills

AEEC 2110. Principles of Food and Agribusiness Management**3 Credits (3)**

This course introduces the business management theory and application of theory related to businesses within the food and fiber supply chain. Topics include management and financial principles, market planning, and organization theory in small business situations.

Learning Outcomes

1. Demonstrate, refine and expand written and oral communication skills
2. Develop an understanding of basic financial statements, their use and analysis
3. Understand the roles management and management styles play in modern agribusiness
4. Learn about the history of agribusiness domestically and internationally
5. Integrate the role of technology into modern agribusiness management

AEEC 2120. Introduction to Food and Agribusiness Accounting**3 Credits (3)**

This course outlines the purpose and methods of keeping and analyzing farm and ranch records. Course topics include financial statements, efficiency measures, analysis of the business, and tax computations.

Learning Outcomes

1. Understand the terminology and principles used in modern farm and ranch financial management statements. Evaluate capital investments, analyze farm business performance, and develop tools for financial planning and analysis Evaluate farm and ranch cash flows

AEEC 2130G. Survey of Food and Agricultural Issues**3 Credits (3)**

Survey of food and agricultural issues, including: geography of food production and consumption; human-agricultural-natural resource relations; agriculture in the United States and abroad; modern agribusiness; food safety; food, agriculture, and natural resources policy; ethical questions; role and impact of technology. Crosslisted with: FSTE 2130G.

Learning Outcomes

1. Understand of global agriculture including production techniques used in various geographical regions, consumption trends, and political and social constraints.
2. Synthesis information about agricultural issues and make informed arguments
3. Articulate modern issues in agriculture
4. Write coherent arguments relative to personal beliefs regarding agricultural issues

AEEC 2140. Technology and Communication for Business Management**3 Credits (2+2P)**

This course helps students improve their skills related to data analysis, information management, and communication. Drawing examples from a variety of management, business, technological and research situations, students discover the versatility and functionality of modern computer software. The course emphasizes a 'hands-on' approach.

Learning Outcomes

1. Demonstrate an understanding of the meaning of terms used to describe common techniques and concepts in business information systems.
Demonstrate the use and application of tools to develop spreadsheets and documents at a professional level

AEEC 2996. Special Topics**1-4 Credits**

Specific subjects and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester. No more than 9 credits toward a degree. Consent of instructor required.

Learning Outcomes

1. Varies

Agriculture - Associate of Applied Science

The **Associate of Applied Science in Agriculture** program prepares student with classes in the basic agricultural and foundation sciences; business and economics, education, communication, technology, agronomy, animal science, mechanics and horticulture. The purpose of this program is to prepare individuals to apply the broad-based curriculum towards an agricultural career as professional educators, communicators and leaders of agricultural, natural resource, technology and related disciplines. The courses provided through this program will assist in building a strong base of students who are willing to pursue further education opportunities in the agriculture industry. New Mexico has a viable and productive agricultural industry, with cash receipts totaling more than \$3 billion and a total economic impact with over \$6 billion. These facts alone constitute an educated workforce that is prepared for the ever-changing markets and production of the state's food supply, natural resources, and environment. This degree will equip student with the necessary skills for employment within this growing industry.

Program Entrance Requirements

1. Apply for admission to NMSU Carlsbad. Anyone who did not attend the previous year must reapply.
2. Request official transcripts from high school or GED and any college attended be sent to NMSU Carlsbad.
3. Complete NMSU Carlsbad placement tests.
4. Meet with an academic advisor once admission is complete (application and transcripts received) and register.

Previous college credits will be considered and evaluated for credit following admission to the University. Placement tests, with the exception of reading, may be waived if the applicant has completed courses equivalent to MATH 1215 Intermediate Algebra and ENGL 1110G Composition I with a grade of "C" or higher.

Graduation Requirements

1. Demonstrate proficiency in reading, math, and English as evidenced by sufficient scores on the WorkKeys® assessments (for certificates) and the college placement test (for associate degrees). Additional proficiency in typing may be required for Business Office Technology (BOT) majors.
2. Earn a cumulative grade point average of 2.0 or higher.
3. Complete coursework as specified on the curriculum.
4. Submit a graduation application and pay the designated fee.
5. The last 15 credits must be taken at NMSU.

Additional coursework in developmental studies may be required based on WorkKeys® and/or college placement test results. Courses are included in calculating GPA but not in total graduation credits.

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|--|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| This degree requires courses from Areas I, III and IV students must select one course from the remaining areas to complete General Education requirements | | |
| Area I: Communications | | |
| AXED 2120G | Effective Leadership and Communication in Agriculture (Core Requirement) | |

| | | |
|--|---|--------------|
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| AGRO 1110G | Introduction to Plant Science (Lecture & Lab) (Core Requirement) | |
| Area IV: Social/Behavioral Sciences | | |
| AEEC 2130G | Survey of Food and Agricultural Issues (Core Requirement) | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| <i>General Education Elective</i> | | |
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | 4 |
| Core Requirements | | |
| AEEC 1110 | Introduction to Agricultural Economics and Business | 3 |
| AEEC 2110 | Principles of Food and Agribusiness Management | 3 |
| AGRO 2160 | Plant Propagation | 3 |
| ANSC 1120 & 1120L | Introduction to Animal Science and Introduction to Animal Science Lab | 4 |
| ANSC 2330 | Animal Production | 3 |
| AXED 1130 | Techniques in Agricultural Mechanization | 3 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| ECON 2110G or ECON 2120G | Macroeconomic Principles Principles of Microeconomics | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| POLS 1120G | American National Government | 3 |
| WELD 105 | Introduction to Welding | 3 |
| Electives, to bring the total credits to 60³ | | 10 |
| Total Credits | | 60-62 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

³ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|--|--------------|
| ANSC 1120 & 1120L | Introduction to Animal Science and Introduction to Animal Science Lab | 4 |
| AGRO 1110G | Introduction to Plant Science (Lecture & Lab) | 4 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| GEN Ed Course - One course from Areas II, V or, VI ¹ | | 3-4 |
| Credits | | 14-15 |
| Spring | | |
| ANSC 2330 | Animal Production | 3 |
| AEEC 2130G | Survey of Food and Agricultural Issues | 3 |
| AXED 2120G | Effective Leadership and Communication in Agriculture | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| WELD 105 | Introduction to Welding | 3 |
| Credits | | 15 |

Second Year

| Fall | | |
|-----------|---|---|
| AEEC 1110 | Introduction to Agricultural Economics and Business | 3 |
| AXED 1130 | Techniques in Agricultural Mechanization | 3 |

| | | |
|------------------------------|---|--------------|
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | 4 |
| Elective Course ² | | 3 |
| Elective Course ² | | 3-4 |
| Credits | | 16-17 |
| Spring | | |
| AEEC 2110 | Principles of Food and Agribusiness Management | 3 |
| AGRO 2160 | Plant Propagation | 3 |
| ECON 2110G or ECON 2120G | Macroeconomic Principles or Principles of Microeconomics | 3 |
| POLS 1120G | American National Government | 3 |
| Elective Course ² | | 3 |
| Credits | | 15 |
| Total Credits | | 60-62 |

¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

² Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Associate of Arts and General Studies

The **New Mexico General Education Common Core Certificate** is an academic credential that recognizes accomplishment of the New Mexico Common Core and serves as an intermediate step towards completion of an associate degree for students who plan to transfer to a four-year college or university.

The **Associate Degree in General Studies** equips students with the freedom to design their own two-year program by selecting classes that meet their needs governed only by departmental prerequisites. **Note:** A student who has previously earned an associate degree from NMSU or from any other institution is ineligible to receive an Associate Degree in General Studies.

The **Associate of Arts Degree** allows students to complete general education requirements for most bachelor degree programs. Students should choose electives to meet other requirements for their planned baccalaureate degree such as foreign language requirements or specific requirements within the major.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

General Studies - Associate Degree (p. 120)

Associate of Arts Degree (p. 121)

Associate in General Studies

The **Associate Degree in General Studies** equips students with the freedom to design their own two-year program by selecting classes that meet their needs governed only by departmental prerequisites. **Note:** A student who has previously earned an associate degree from NMSU or from any other institution is ineligible to receive an Associate Degree in General Studies.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU; complete a total of 60 credits (excluding noncredit courses such as any "N" suffix course)

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---|--------------|
| General Education | | |
| <i>Area I: Communications</i> ¹ | | 10 |
| | <i>English Composition - Level 1</i> | |
| | <i>English Composition - Level 2</i> | |
| | <i>Oral Communication</i> | |
| <i>Area II: Mathematics</i> ¹ | | 3-4 |
| <i>Area III/IV: Laboratory Sciences and Social/Behavioral Science</i> | | |
| | <i>Area III: Laboratory Science Course (4 credits)</i> ¹ | |
| | <i>Area IV: Social/Behavioral Science Course (3 credits)</i> ¹ | |
| | <i>Either an Area III/IV: Laboratory Science or Social/Behavioral Sciences Course (4 or 3 credits)</i> ¹ | |
| <i>Area V: Humanities</i> ¹ | | 3 |
| <i>Area VI: Creative and Fine Arts</i> ¹ | | 3 |
| <i>General Education Elective</i> ¹ | | 3-4 |
| Electives, to bring the total credits to 60 ² | | 36-38 |
| Total Credits | | 60 |

- ¹ **Note:** According to the requirements outlined in the desired bachelor's degree, it is recommended to utilize elective credit to complete any required second language courses. Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework. A list of General Education courses sorted by Area can be found here (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>).
- ² Student to select electives that are 100-200 level to bring the total credits to 60. Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Associate of Arts Degree

The **Associate of Arts Degree** allows students to complete general education requirements for most bachelor degree programs. Students should choose electives to meet other requirements for their planned baccalaureate degree such as foreign language requirements or specific requirements within the major.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU.

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|--|---------|
| General Education | | |
| <i>Area I: Communication</i> | | |
| | <i>English Composition - Level 1</i> | |
| ENGL 1110G | Composition I | 4 |
| | <i>English Composition - Level 2</i> | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| <i>Oral Communication</i> | | |
| COMM 1130G | Public Speaking | 3 |
| or COMM 1115G | Introduction to Communication | |
| <i>Area II: Mathematics</i> | | 3-4 |
| Complete one "G" course from MATH ^{1, 2} | | |
| <i>Area III/IV: Laboratory Science and Social/Behavioral Sciences</i> | | |
| <i>Area III: Laboratory Sciences Course (4 credits)</i> ^{2, 3} | | 10-11 |
| <i>Area IV: Social/Behavioral Sciences Course (3 credits)</i> ^{2, 3} | | |
| <i>Either an Area III/IV: Laboratory Science or Social/Behavioral Sciences Course (4 or 3 credits)</i> ^{2, 3} | | |

| | |
|---|--------------|
| Area V: Humanities | 3 |
| A "G" course from ENGL or HIST is recommended. ² | |
| Area VI: Creative and Fine Arts | 3 |
| A "G" course from ARTH/ARTS, MUSC, or THEA is recommended. ² | |
| General Education Elective ² | 3-4 |
| Electives, to bring the total credits to 60 ⁴ | 28 |
| Total Credits | 60-63 |

- ¹ A Mathematics course is required for the degree but students may need to take any prerequisites needed to enter the course first.
- ² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ Area III/IV: Laboratory Sciences and Social/Behavioral Sciences recommended are "G" courses from ASTR, BIOL, CHEM, ENVS, GEOG (must be GEOG 1110G Physical Geography if selected), GEOL, PHYS, ANTH, CJUS, CEPY, ECON, GEOG (must be GEOG 1120G World Regional Geography or GEOG 1130G Human Geography if selected), POLS, PHLS, LING, PSYC, SOCI, or SOWK.
- ⁴ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor. No more than 9 credits may be from any combination of: BOT, FDMA, NURS, RDG, OE, FYEX (excluding FYEX 1112 The Freshman Year Experience), or applied ARTS/ARTH/MUSC/THEA. Also, no more than 9 credits of PHED may apply.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|--|--------------|
| ENGL 1110G | Composition I | 4 |
| Area III: Laboratory Sciences Course ¹ | | 4 |
| Area V: Humanities Course ¹ | | 3 |
| Area IV: Social/Behavioral Sciences Course ¹ | | 3 |
| Credits | | 14 |
| Spring | | |
| Area II: Mathematics Course ^{1,2} | | 3-4 |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| Either an Area III/IV: Laboratory Science or Social/Behavioral Sciences Course ¹ | | 3-4 |
| Elective Course ³ | | 3 |
| An additional Area V: Humanities course is recommended | | |
| Elective Course ³ | | 3 |
| An additional Area IV: Social/Behavioral Sciences course is recommended | | |
| Credits | | 15-17 |

Second Year

| Fall | | |
|--|---|--------------|
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| Area VI: Creative and Fine Arts Course ¹ | | 3 |
| General Education Elective Course ¹ | | 3-4 |
| Elective Course ³ | | 3 |
| Elective Course ³ | | 4 |
| An additional Area III: Laboratory Sciences course is recommended | | |
| Credits | | 16-17 |
| Spring | | |
| Elective Course ³ | | 3 |
| Either an additional Area IV/V: Social/Behavioral Sciences or Humanities course is recommended | | |
| Elective Course ³ | | 3 |
| Elective Course ³ | | 3 |

| | |
|------------------------------|--------------|
| Elective Course ³ | 4 |
| Elective Course ³ | 2 |
| Credits | 15 |
| Total Credits | 60-63 |

- ¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ² A Mathematics course is required for the degree but students may need to take any prerequisites needed to enter the course first.
- ³ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor. No more than 9 credits may be from any combination of: BOT, FDMA, NURS, RDG, OE, FYEX (excluding FYEX 1112 The Freshman Year Experience), or applied ARTS/ARTH/MUSC/THEA. Also, no more than 9 credits of PHED may apply.

Auto Body Collision and Repair

The **Auto Body Collision and Repair** program prepares individuals for employment in the auto body repair industry in positions such as

- Automotive Refinish Technician,
- Auto Body Painter,
- Collision Technician, and
- Automotive Body Technician.

Students in Automotive Refinishing learn surface preparation, paint safety, refinishing fundamentals; application of acrylic enamel and base coat/clear coat refinishing systems as well as how to match paint type and color; color theory, evaluation, matching, multiple panel paint blending techniques.

The Collision Repair curriculum has two certificates:

- Structural Repair and
- Non-Structural Repair.

Structural repair students learn how to diagnose and repair various types of damage, identify structural components, separate spot welds, position and weld new body panels in place. Non-Structural Repair students learn how to repair heavy collision damage using current I-CAR repair standards and procedures.

Graduation Requirements

Certificate in Automotive Refinishing, Structural Repair, and Non-Structural Repair: WorkKeys® scores of level 4 in Reading for Information, Locating Information, and Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Auto Body Collision and Repair: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Auto Body Collision Repair - Associate of Applied Science (p. 127)

Automotive Refinishing - Certificate (p. 129)

Non-Structural Collision Repair - Certificate (p. 129)

Structural Collision Repair - Certificate (p. 130)

AUTO 102. Electrical Measuring Instruments

2 Credits (1+2P)

Selection, operation, and care of electrical measuring instruments.

AUTO 111. Automotive Mechanics Basics

4 Credits (4)

Basic maintenance procedures of the major components of the automobile using service repair manuals, hand and power tools, precision measurement equipment, fasteners and chemicals. Restricted to: Community Colleges only.

AUTO 112. Basic Gasoline Engines**5 Credits (2+6P)**

Principles of gasoline engine operation. Identification, design, function of engine components; engine disassembly and reassembly; trouble shooting, and rebuilding heads.

AUTO 113. Automotive Electricity and Electronics PT I**4 Credits (2+4P)**

Topics include mastery of DC electricity, use of digital multimeters, troubleshooting electrical problems in starting, charging and accessory systems. Restricted to Community Colleges only.

AUTO 114. Automotive Electricity and Electronics PT II**4 Credits (2+4P)**

Advanced AC and DC automotive electronic circuits. Troubleshooting electronically controlled components including supplemental restraint systems and convenience accessories. Restricted to Community Colleges campuses only.

Prerequisite: AUTO 113.

Learning Outcomes

1. Understand and demonstrate safety rules related to electronically controlled automotive systems. Diagnosis and demonstrate knowledge of series, parallel, and combination circuits, and their applications as applied to automotive repair. Demonstrate use of wiring diagrams as a diagnostic aide. Demonstrate use of meters, handheld labsopes, scan tools, and other diagnostic equipment. Demonstrate use of repair manuals, both hard copy and electronic. Demonstrate knowledge, diagnose and repair Air Bag Supplemental Inflatable Restraint systems Demonstrate knowledge, diagnose and repair various convenience electronic systems. Interpret customer concerns, create and complete a diagnostic routine and successfully repair an electrical problem. Diagnose and repair starting and charging systems.

AUTO 115. Automotive Engine Repair**5 Credits (2+6P)**

Principles of gasoline engine operation. Identification of engine parts, operation, and function. Disassembly and reassembly. Engine problem diagnoses (cooling system, lubrication system, engine noises). Restricted to Community Colleges only.

AUTO 117. Electronic Analysis and Tune-Up of Gasoline Engines**5 Credits (2+6P)**

Theory and operation of ignition and emission control systems and fuel system. Use of troubleshooting equipment and diagnostic equipment.

Prerequisite: AUTO 120 or consent of instructor.

AUTO 119. Manual Transmission/Clutch**5 Credits (2+6P)**

Manual transmission, transfer cases, and clutch operating principles. Students will diagnose problems, remove and replace, disassemble, repair, and assemble units.

AUTO 120. Electrical Systems**4 Credits (2+4P)**

Troubleshooting and repair of starters, alternators, and associated circuits. Reading electrical diagrams, diagnosis and repair of electrical accessories.

Prerequisite: consent of instructor.

AUTO 122. Automotive Brakes**4 Credits (2+4P)**

Focus is on theory, diagnosis, and service of drum, disc, and anti-lock braking systems, brake component machining, hydraulic component reconditioning, friction and hardware replacement. Restricted to Community Colleges only.

AUTO 124. Automotive Heating and Air Conditioning**4 Credits (2+4P)**

R12 and R134A air conditioning systems maintenance diagnosis and repair. R12 to R134A conversion procedures. Troubleshooting automatic temperature controls and leak detection. Restricted to Community Colleges only.

AUTO 125. Brakes**5 Credits (2+6P)**

Theory of operation, diagnosis, repair, and maintenance of disc and drum brakes; safety and use of special tools.

AUTO 126. Suspension, Steering, and Alignment**5 Credits (2+6P)**

Types of steering systems, suspension maintenance and repair, four- wheel alignment procedures.

AUTO 127. Basic Automatic Transmission**4 Credits (2+4P)**

Theory and operation of the automatic transmission; maintenance, troubleshooting, diagnosis, and repair of components.

AUTO 129. Automotive Steering and Suspension**4 Credits (2+4P)**

Diagnosis/service of suspension components including shocks, springs, ball joints, manual and power steering systems and four wheel alignment are some areas covered. Restricted to Community Colleges only.

AUTO 130. Introduction to Transportation Industry**3 Credits (3)**

State and national traffic statutes that relate to the trucking industry. A Commercial Driver's License Learner's Permit will be obtained through successful completion of the course.

Prerequisites: Must be 18 years of age, have a current driver's license and consent of instructor.

AUTO 131. Class A CDL**3 Credits (1+4P)**

Instruction in how to perform proper pre-trip inspection; hands-on training with a tractor-trailer unit on the backing range and street driving to develop skills necessary to pass Class A DCL exam. Restricted to Community Colleges campuses only.

Prerequisite(s): Class A CDL restricted license (permit) and either restriction of D.O.T.

AUTO 132. Automotive Air-Conditioning and Heating Systems**4 Credits (2+4P)**

Theory and operation, reading schematic diagrams, troubleshooting, repair, and replacement operations performed.

AUTO 137. Fuel Systems and Emission Controls**4 Credits (2+4P)**

Covers theory and operation of fuel system and emission control. Troubleshooting, vacuum diagrams, overhaul, repair and adjustment of carburetion and fuel injection.

Prerequisites: AUTO 117 or consent of instructor.

AUTO 139. Automotive Computer Controls**4 Credits (2+4P)**

Same as OEPM 139.

AUTO 162. Advanced Non-Structural Repair I**4 Credits (2+4P)**

This course will involve the students in all phases of minor non-structural collision damage repairs. It will encompass sheet metal repair, advanced panel replacement and alignment.

Prerequisite(s): AUTO 161.

AUTO 163. Advanced Non-Structural Repair II**4 Credits (2+4P)**

This course is a continuation of AUTO 162 with emphasis in all phases of minor non-structural damage repair. The student will be instructed in sheet metal repair and panel alignment as well as the R&I of automotive glass and related components.

Prerequisite(s): AUTO 162.

AUTO 164. Automotive Industry Collision Repair I**4 Credits (2+4P)**

This advanced course is a continuation of AUTO 161, 162, and 163. This course will incorporate all areas of major non-structural collision damage repair. Through practical application the student will learn how to effectively repair all heavy collision damage using current I-CAR repair standards and procedures.

Prerequisite(s): AUTO 163.

AUTO 165. Automotive Industry Collision Repair II**4 Credits (2+4P)**

This advanced course is a continuation of AUTO 164 with emphasis on time efficiency. This course will involve the student in all areas of major collision damage repair. The student will be exposed to all applicable I-CAR industry procedures and standards involved in sheet metal and composite panel repair.

Prerequisite(s): AUTO 164.

AUTO 172. Introduction to Automotive Refinishing**4 Credits (2+4P)**

This course is designed to incorporate all aspects of surface preparation, paint safety, refinishing materials, and refinishing fundamentals. Students will receive instructions for the application of acrylic enamel and base coat/clear coat refinishing systems.

AUTO 174. Intermediate Automotive Refinishing**4 Credits (2+4P)**

This course encompasses all areas of surface preparation, damage repair and refinishing procedures that are necessary for achieving a proper spot repair. Students will also be exposed to safe work habits in the refinishing area and correct automotive detailing procedures.

Prerequisite(s): AUTO 172.

AUTO 176. Automotive Color Adjustment & Blending**4 Credits (2+4P)**

This course will help develop the skills needed to match any type of paint. It will expose the student to color theory, color evaluation, color matching, and other color adjustment factors. The student will be instructed in multiple panel paint blending techniques as well.

Prerequisite(s): AUTO 174.

AUTO 178. Automotive Overall Refinishing**4 Credits (2+4P)**

This course encompasses all areas of automotive refinishing. This advanced course is a continuation of AUTO 176 with emphasis in achieving industry refinishing times and standards consistent with that of I-CAR. The student will be exposed to surface preparation and refinishing techniques involved with overall coat/clear coat refinishing system.

Prerequisite(s): AUTO 176.

AUTO 181. Frame and Structural Repair**4 Credits (2+4P)**

This course will involve the student in all areas of frame and structural damage repairs. Through theory and practical application, the student will learn how to diagnose and repair various types of damage include: mash, twist, sag, and side sway. This course will expose the students to safe work habits while using measuring and straightening equipment.

Prerequisite(s): AUTO 165.

AUTO 182. Structural Panel Replacement**4 Credits (2+4P)**

This course is a continuation of AUTO 181 with infancies in structural panel replacement. The student will be exposed to frame and unibody measuring equipment and their proper use in sectioning procedures. Through theory and practical application the student will learn how to ID structural components, properly separate spot welds, position and weld new body panels in place.

Prerequisite(s): AUTO 181.

AUTO 201. Engine Performance I**4 Credits (2+4P)**

Theory, function, service and analysis of engine related subsystems including ignition, fuel, starting, and charging systems. Emphasis is placed on diagnosis and operation of electronic engine control management systems. Restricted to Community Colleges only.

AUTO 203. Engine Performance II**4 Credits (2+4P)**

Study of engine management systems and emission control systems, their function and relationship to vehicle performance and air pollution. Emphasis is placed on the analysis and repair of non-compliant vehicles. Restricted to Community Colleges only.

Prerequisite: AUTO 201.

Learning Outcomes

1. Be able to explain basic electrical theories. Be able to explain basic and advanced engine designs and engine operating theory. Be able to explain engine cooling and lubricating systems. Be able to explain intake and exhaust systems Test battery, starting and charging systems Test ignition systems including point type, electronic trigger type, and distributor-less systems. Test automotive fuel system including fuel tanks, lines, filters and pumps. Test basic electronic fuel injection systems. Test automotive computer input devices and controlled devices 1Demonstrate ability to work with PC based automotive software including Alldata,

AUTO 204. Engine Performance III**4 Credits (2+4P)**

Study of advanced level diagnostic test procedures and the equipment used to analyze OBD-II emission and drivability concerns. Use of Digital Storage Oscilloscopes, current ramping, Scan Tool analysis of 4 and 5 gas analyzers is mastered. Hybrid vehicles and the latest engine control systems are introduced. Restricted to Community Colleges only.

AUTO 205. Manual Drive Train and Axles**4 Credits (2+4P)**

Operation, diagnosis, maintenance, repair or replacement of manual transmissions, clutch assemblies, differentials, drivelines, axles, and manual transaxles. Restricted to Community Colleges only.

AUTO 206. Automatic Transmissions**5 Credits (2+6P)**

Operation, diagnosis, maintenance, and repair of automatic transmissions including rear wheel drive, front wheel drive, and electronically controlled transmissions and transaxles. Restricted to Community Colleges only.

AUTO 208. Introduction to Alternative Fueled Vehicles**3 Credits (3)**

Course will familiarize student with conditions that are resulting in the alternative fueled vehicle movement as well as the design and safety precautions unique to each alternative fuel. Propulsion systems covered include electric vehicles, bio-fueled vehicles, hybrid-electric vehicles and hydrogen powered vehicles, along with other emerging technologies as appropriate. Restricted to: Community Colleges only.

Prerequisite(s): AUTO 113 and AUTO 114.

AUTO 209. Hybrid Vehicle Service Techniques**3 Credits (3)**

Designed for experienced automotive technicians, this course will cover safety procedures, design, operational overview and service techniques as well as minor diagnosis and repair of all classifications of hybrid-electric vehicles. Each student must possess legal Class 'O' high voltage gloves and liners to attend this class. Restricted to: Community Colleges only.

Prerequisite(s): AUTO 113 and AUTO 114.

AUTO 221. Cooperative Experience I**1-6 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U.

Prerequisite: consent of instructor.

AUTO 255. Special Problems in Automotive Technology**1-5 Credits**

Individual studies in areas directly related to automotive technologies. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

AUTO 290. ASE Certification Preparation**1 Credit (1)**

This is the capstone course for the Automotive Technology Program and is a requirement for graduation. Consent of Instructor required. Restricted to: AUTO majors. Restricted to Community Colleges campuses

Learning Outcomes

1. write technical reports explaining customers complaint(s), specific component malfunction(s) and related problems to include repair procedures, specifications, parts and costs associated with each specific repair
2. determine, categorize and document component or systems malfunctions which will be discussed in class
3. adequately identify safety hazards associated with electrical, electronic, hydraulic, pneumatic and mechanical systems before participating in any lab project
4. use a systematic approach to identify, diagnose and repair new hydro, electrical and mechanical systems
5. identify all related parts and components before attempting to repair each system
6. clearly identify and understand the specific function of each component before these systems and subsystems are dismantled for repairs
7. demonstrate proficiency in locating, identifying and following procedures for repairs as outlined on the Mitchell and All-DATA computer information systems
8. retrieve all phases of automotive information needed to repair the following: Electrical and Electronics, Engine Repair, Engine Performance, Automatic transmissions, Heating And Air Conditioning Systems
9. demonstrate proficiency in the proper usage of on-board computer scanners used to identify and properly diagnose possible malfunction within a specific on-board computer system
10. 1 demonstrate proficiency in the proper use of scanners, information and vehicle specifications to determine needed repairs
11. 1 identify, evaluate, diagnosis and repair electrical, electronic and mechanical systems and subsystems

AUTO 295. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes.

Auto Body Collision Repair - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 75 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|-----------------------------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| ENGL 1110G | Composition I (Recommended) | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |

Core Requirements

| | | |
|--------------------------------|---|----|
| OETS 118 | Mathematics for Technicians | 3 |
| AUTO 120 | Electrical Systems | 4 |
| AUTO 221 | Cooperative Experience I | 3 |
| AUTO 162 | Advanced Non-Structural Repair I | 4 |
| AUTO 163 | Advanced Non-Structural Repair II | 4 |
| AUTO 164 | Automotive Industry Collision Repair I | 4 |
| AUTO 165 | Automotive Industry Collision Repair II | 4 |
| AUTO 172 | Introduction to Automotive Refinishing | 4 |
| AUTO 174 | Intermediate Automotive Refinishing | 4 |
| AUTO 176 | Automotive Color Adjustment & Blending | 4 |
| AUTO 178 | Automotive Overall Refinishing | 4 |
| AUTO 181 | Frame and Structural Repair | 4 |
| AUTO 182 | Structural Panel Replacement | 4 |
| Approved AUTO Elective Courses | | 10 |

Total Credits **75-78**

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|--|----------------|
| OETS 118 | Mathematics for Technicians | 3 |
| AUTO 172 | Introduction to Automotive Refinishing | 4 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| Approved AUTO Elective | | 3 |
| Credits | | 13 |

| Spring | | |
|------------------------|-------------------------------------|-----------|
| AUTO 120 | Electrical Systems | 4 |
| Approved AUTO Elective | | 4 |
| AUTO 174 | Intermediate Automotive Refinishing | 4 |
| AUTO 221 | Cooperative Experience I | 3 |
| Credits | | 15 |

Second Year

| Fall | | |
|--|--|-----------|
| AUTO 162 | Advanced Non-Structural Repair I | 4 |
| AUTO 176 | Automotive Color Adjustment & Blending | 4 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 11 |

| Spring | | |
|--|-----------------------------------|--------------|
| AUTO 163 | Advanced Non-Structural Repair II | 4 |
| AUTO 178 | Automotive Overall Refinishing | 4 |
| Approved AUTO Elective | | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 14-15 |

Third Year

| Fall | | |
|--|---|--------------|
| AUTO 164 | Automotive Industry Collision Repair I | 4 |
| AUTO 165 | Automotive Industry Collision Repair II | 4 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| ENGL 1110G | Composition I (Recommended) | |
| Credits | | 11-12 |

Spring

| | | |
|--|------------------------------|--------------|
| AUTO 181 | Frame and Structural Repair | 4 |
| AUTO 182 | Structural Panel Replacement | 4 |
| General Education Elective - Any "G" Course ² | | 3-4 |
| Credits | | 11-12 |
| Total Credits | | 75-78 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Automotive Refinishing - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|--|-----------|
| Core Curriculum Requirements | | |
| OETS 118 | Mathematics for Technicians | 3 |
| AUTO 172 | Introduction to Automotive Refinishing | 4 |
| AUTO 174 | Intermediate Automotive Refinishing | 4 |
| AUTO 176 | Automotive Color Adjustment & Blending | 4 |
| AUTO 178 | Automotive Overall Refinishing | 4 |
| AUTO 221 | Cooperative Experience I | 3 |
| Approved AUTO Elective | | 3 |
| Total Credits | | 25 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------|--|----------------|
| OETS 118 | Mathematics for Technicians | 3 |
| Approved AUTO Elective | | 3 |
| AUTO 172 | Introduction to Automotive Refinishing | 4 |
| AUTO 176 | Automotive Color Adjustment & Blending | 4 |
| Credits | | 14 |
| Spring | | |
| AUTO 174 | Intermediate Automotive Refinishing | 4 |
| AUTO 178 | Automotive Overall Refinishing | 4 |
| AUTO 221 | Cooperative Experience I | 3 |
| Credits | | 11 |
| Total Credits | | 25 |

Non-Structural Collision Repair - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---|-----------|
| Core Curriculum Requirements | | |
| OETS 118 | Mathematics for Technicians | 3 |
| AUTO 162 | Advanced Non-Structural Repair I | 4 |
| AUTO 163 | Advanced Non-Structural Repair II | 4 |
| AUTO 164 | Automotive Industry Collision Repair I | 4 |
| AUTO 165 | Automotive Industry Collision Repair II | 4 |
| Approved AUTO Elective | | 4 |
| Approved AUTO Elective | | 3 |
| Total Credits | | 26 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------|---|-----------|
| AUTO 162 | Advanced Non-Structural Repair I | 4 |
| AUTO 164 | Automotive Industry Collision Repair I | 4 |
| OETS 118 | Mathematics for Technicians | 3 |
| Credits | | 11 |
| Spring | | |
| AUTO 163 | Advanced Non-Structural Repair II | 4 |
| AUTO 165 | Automotive Industry Collision Repair II | 4 |
| Approved AUTO Elective | | 3 |
| Approved Auto Elective | | 4 |
| Credits | | 15 |
| Total Credits | | 26 |

Structural Collision Repair - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|-----------------------------------|-----------|
| Core Curriculum Requirements | | |
| OETS 118 | Mathematics for Technicians | 3 |
| AUTO 162 | Advanced Non-Structural Repair I | 4 |
| AUTO 163 | Advanced Non-Structural Repair II | 4 |
| AUTO 181 | Frame and Structural Repair | 4 |
| AUTO 182 | Structural Panel Replacement | 4 |
| Approved AUTO Elective | | 4 |
| Approved AUTO Elective | | 3 |
| Total Credits | | 26 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------|-----------------------------------|-----------|
| OETS 118 | Mathematics for Technicians | 3 |
| AUTO 181 | Frame and Structural Repair | 4 |
| AUTO 162 | Advanced Non-Structural Repair I | 4 |
| Credits | | 11 |
| Spring | | |
| AUTO 163 | Advanced Non-Structural Repair II | 4 |
| AUTO 182 | Structural Panel Replacement | 4 |
| Approved AUTO Elective | | 3 |
| Approved AUTO Elective | | 4 |
| Credits | | 15 |
| Total Credits | | 26 |

Automotive Technology

The **Automotive Technology** program teaches individuals the technical knowledge and skills needed to repair, service, and maintain all types of automobiles. Students study brake systems, electrical systems, engine performance and repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems. The program is competency-based as required by the National Automotive Foundation (NAF).

Graduation Requirements

Certificate in Automotive Technology: WorkKeys® scores of level 4 in Reading for Information, Locating Information, and Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Automotive Technology: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. **TOTAL CREDITS REQUIRED FOR DEGREE: (63)**

Automotive Technology - Certificate (p. 136)

Automotive Technology - Associate of Applied Science (p. 135)

AUTO 102. Electrical Measuring Instruments

2 Credits (1+2P)

Selection, operation, and care of electrical measuring instruments.

AUTO 111. Automotive Mechanics Basics

4 Credits (4)

Basic maintenance procedures of the major components of the automobile using service repair manuals, hand and power tools, precision measurement equipment, fasteners and chemicals. Restricted to: Community Colleges only.

AUTO 112. Basic Gasoline Engines

5 Credits (2+6P)

Principles of gasoline engine operation. Identification, design, function of engine components; engine disassembly and reassembly; trouble shooting, and rebuilding heads.

AUTO 113. Automotive Electricity and Electronics PT I

4 Credits (2+4P)

Topics include mastery of DC electricity, use of digital multimeters, troubleshooting electrical problems in starting, charging and accessory systems. Restricted to Community Colleges only.

AUTO 114. Automotive Electricity and Electronics PT II

4 Credits (2+4P)

Advanced AC and DC automotive electronic circuits. Troubleshooting electronically controlled components including supplemental restraint systems and convenience accessories. Restricted to Community Colleges campuses only.

Prerequisite: AUTO 113.

Learning Outcomes

1. Understand and demonstrate safety rules related to electronically controlled automotive systems. Diagnosis and demonstrate knowledge of series, parallel, and combination circuits, and their applications as applied to automotive repair. Demonstrate use of wiring diagrams as a diagnostic aide. Demonstrate use of meters, handheld labsopes, scan tools, and other diagnostic equipment. Demonstrate use of repair manuals, both hard copy and electronic. Demonstrate knowledge, diagnose and repair Air Bag Supplemental Inflatable Restraint systems Demonstrate knowledge, diagnose and repair various convenience electronic systems. Interpret customer concerns, create and complete a diagnostic routine and successfully repair an electrical problem. Diagnose and repair starting and charging systems.

AUTO 115. Automotive Engine Repair

5 Credits (2+6P)

Principles of gasoline engine operation. Identification of engine parts, operation, and function. Disassembly and reassembly. Engine problem diagnoses (cooling system, lubrication system, engine noises). Restricted to Community Colleges only.

AUTO 117. Electronic Analysis and Tune-Up of Gasoline Engines

5 Credits (2+6P)

Theory and operation of ignition and emission control systems and fuel system. Use of troubleshooting equipment and diagnostic equipment.

Prerequisite: AUTO 120 or consent of instructor.

AUTO 119. Manual Transmission/Clutch

5 Credits (2+6P)

Manual transmission, transfer cases, and clutch operating principles. Students will diagnose problems, remove and replace, disassemble, repair, and assemble units.

AUTO 120. Electrical Systems

4 Credits (2+4P)

Troubleshooting and repair of starters, alternators, and associated circuits. Reading electrical diagrams, diagnosis and repair of electrical accessories.

Prerequisite: consent of instructor.

AUTO 122. Automotive Brakes**4 Credits (2+4P)**

Focus is on theory, diagnosis, and service of drum, disc, and anti-lock braking systems, brake component machining, hydraulic component reconditioning, friction and hardware replacement. Restricted to Community Colleges only.

AUTO 124. Automotive Heating and Air Conditioning**4 Credits (2+4P)**

R12 and R134A air conditioning systems maintenance diagnosis and repair. R12 to R134A conversion procedures. Troubleshooting automatic temperature controls and leak detection. Restricted to Community Colleges only.

AUTO 125. Brakes**5 Credits (2+6P)**

Theory of operation, diagnosis, repair, and maintenance of disc and drum brakes; safety and use of special tools.

AUTO 126. Suspension, Steering, and Alignment**5 Credits (2+6P)**

Types of steering systems, suspension maintenance and repair, four- wheel alignment procedures.

AUTO 127. Basic Automatic Transmission**4 Credits (2+4P)**

Theory and operation of the automatic transmission; maintenance, troubleshooting, diagnosis, and repair of components.

AUTO 129. Automotive Steering and Suspension**4 Credits (2+4P)**

Diagnosis/service of suspension components including shocks, springs, ball joints, manual and power steering systems and four wheel alignment are some areas covered. Restricted to Community Colleges only.

AUTO 130. Introduction to Transportation Industry**3 Credits (3)**

State and national traffic statutes that relate to the trucking industry. A Commercial Driver's License Learner s Permit will be obtained through successful completion of the course.

Prerequisites: Must be 18 years of age, have a current driver's license and consent of instructor.

AUTO 131. Class A CDL**3 Credits (1+4P)**

Instruction in how to perform proper pre-trip inspection; hands-on training with a tractor-trailer unit on the backing range and street driving to develop skills necessary to pass Class A DCL exam. Restricted to Community Colleges campuses only.

Prerequisite(s): Class A CDL restricted license (permit) and either restriction of D.O.T.

AUTO 132. Automotive Air-Conditioning and Heating Systems**4 Credits (2+4P)**

Theory and operation, reading schematic diagrams, troubleshooting, repair, and replacement operations performed.

AUTO 137. Fuel Systems and Emission Controls**4 Credits (2+4P)**

Covers theory and operation of fuel system and emission control. Troubleshooting, vacuum diagrams, overhaul, repair and adjustment of carburetion and fuel injection.

Prerequisites: AUTO 117 or consent of instructor.

AUTO 139. Automotive Computer Controls**4 Credits (2+4P)**

Same as OEPM 139.

AUTO 162. Advanced Non-Structural Repair I**4 Credits (2+4P)**

This course will involve the students in all phases of minor non-structural collision damage repairs. It will encompass sheet metal repair, advanced panel replacement and alignment.

Prerequisite(s): AUTO 161.

AUTO 163. Advanced Non-Structural Repair II**4 Credits (2+4P)**

This course is a continuation of AUTO 162 with emphasis in all phases of minor non-structural damage repair. The student will be instructed in sheet metal repair and panel alignment as well as the R&I of automotive glass and related components.

Prerequisite(s): AUTO 162.

AUTO 164. Automotive Industry Collision Repair I**4 Credits (2+4P)**

This advanced course is a continuation of AUTO 161, 162, and 163. This course will incorporate all areas of major non-structural collision damage repair. Through practical application the student will learn how to effectively repair all heavy collision damage using current I-CAR repair standards and procedures.

Prerequisite(s): AUTO 163.

AUTO 165. Automotive Industry Collision Repair II**4 Credits (2+4P)**

This advanced course is a continuation of AUTO 164 with emphasis on time efficiency. This course will involve the student in all areas of major collision damage repair. The student will be exposed to all applicable I-CAR industry procedures and standards involved in sheet metal and composite panel repair.

Prerequisite(s): AUTO 164.

AUTO 172. Introduction to Automotive Refinishing**4 Credits (2+4P)**

This course is designed to incorporate all aspects of surface preparation, paint safety, refinishing materials, and refinishing fundamentals. Students will receive instructions for the application of acrylic enamel and base coat/clear coat refinishing systems.

AUTO 174. Intermediate Automotive Refinishing**4 Credits (2+4P)**

This course encompasses all areas of surface preparation, damage repair and refinishing procedures that are necessary for achieving a proper spot repair. Students will also be exposed to safe work habits in the refinishing area and correct automotive detailing procedures.

Prerequisite(s): AUTO 172.

AUTO 176. Automotive Color Adjustment & Blending**4 Credits (2+4P)**

This course will help develop the skills needed to match any type of paint. It will expose the student to color theory, color evaluation, color matching, and other color adjustment factors. The student will be instructed in multiple panel paint blending techniques as well.

Prerequisite(s): AUTO 174.

AUTO 178. Automotive Overall Refinishing**4 Credits (2+4P)**

This course encompasses all areas of automotive refinishing. This advanced course is a continuation of AUTO 176 with emphasis in achieving industry refinishing times and standards consistent with that of I-CAR. The student will be exposed to surface preparation and refinishing techniques involved with overall coat/clear coat refinishing system.

Prerequisite(s): AUTO 176.

AUTO 181. Frame and Structural Repair**4 Credits (2+4P)**

This course will involve the student in all areas of frame and structural damage repairs. Through theory and practical application, the student will learn how to diagnose and repair various types of damage include: mash, twist, sag, and side sway. This course will expose the students to safe work habits while using measuring and straightening equipment.

Prerequisite(s): AUTO 165.

AUTO 182. Structural Panel Replacement**4 Credits (2+4P)**

This course is a continuation of AUTO 181 with infancies in structural panel replacement. The student will be exposed to frame and unibody measuring equipment and their proper use in sectioning procedures. Through theory and practical application the student will learn how to ID structural components, properly separate spot welds, position and weld new body panels in place.

Prerequisite(s): AUTO 181.

AUTO 201. Engine Performance I**4 Credits (2+4P)**

Theory, function, service and analysis of engine related subsystems including ignition, fuel, starting, and charging systems. Emphasis is placed on diagnosis and operation of electronic engine control management systems. Restricted to Community Colleges only.

AUTO 203. Engine Performance II**4 Credits (2+4P)**

Study of engine management systems and emission control systems, their function and relationship to vehicle performance and air pollution. Emphasis is placed on the analysis and repair of non-compliant vehicles. Restricted to Community Colleges only.

Prerequisite: AUTO 201.

Learning Outcomes

1. Be able to explain basic electrical theories. Be able to explain basic and advanced engine designs and engine operating theory. Be able to explain engine cooling and lubricating systems. Be able to explain intake and exhaust systems Test battery, starting and charging systems Test ignition systems including point type, electronic trigger type, and distributor-less systems. Test automotive fuel system including fuel tanks, lines, filters and pumps. Test basic electronic fuel injection systems. Test automotive computer input devices and controlled devices 1 Demonstrate ability to work with PC based automotive software including Alldata,

AUTO 204. Engine Performance III**4 Credits (2+4P)**

Study of advanced level diagnostic test procedures and the equipment used to analyze OBD-II emission and drivability concerns. Use of Digital Storage Oscilloscopes, current ramping, Scan Tool analysis of 4 and 5 gas analyzers is mastered. Hybrid vehicles and the latest engine control systems are introduced. Restricted to Community Colleges only.

AUTO 205. Manual Drive Train and Axles**4 Credits (2+4P)**

Operation, diagnosis, maintenance, repair or replacement of manual transmissions, clutch assemblies, differentials, drivelines, axles, and manual transaxles. Restricted to Community Colleges only.

AUTO 206. Automatic Transmissions**5 Credits (2+6P)**

Operation, diagnosis, maintenance, and repair of automatic transmissions including rear wheel drive, front wheel drive, and electronically controlled transmissions and transaxles. Restricted to Community Colleges only.

AUTO 208. Introduction to Alternative Fueled Vehicles**3 Credits (3)**

Course will familiarize student with conditions that are resulting in the alternative fueled vehicle movement as well as the design and safety precautions unique to each alternative fuel. Propulsion systems covered include electric vehicles, bio-fueled vehicles, hybrid-electric vehicles and hydrogen powered vehicles, along with other emerging technologies as appropriate. Restricted to: Community Colleges only.

Prerequisite(s): AUTO 113 and AUTO 114.

AUTO 209. Hybrid Vehicle Service Techniques**3 Credits (3)**

Designed for experienced automotive technicians, this course will cover safety procedures, design, operational overview and service techniques as well as minor diagnosis and repair of all classifications of hybrid-electric vehicles. Each student must possess legal Class 'O' high voltage gloves and liners to attend this class. Restricted to: Community Colleges only.

Prerequisite(s): AUTO 113 and AUTO 114.

AUTO 221. Cooperative Experience I**1-6 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U.

Prerequisite: consent of instructor.

AUTO 255. Special Problems in Automotive Technology**1-5 Credits**

Individual studies in areas directly related to automotive technologies. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

AUTO 290. ASE Certification Preparation**1 Credit (1)**

This is the capstone course for the Automotive Technology Program and is a requirement for graduation. Consent of Instructor required. Restricted to: AUTO majors. Restricted to Community Colleges campuses

Learning Outcomes

1. write technical reports explaining customers complaint(s), specific component malfunction(s) and related problems to include repair procedures, specifications, parts and costs associated with each specific repair
2. determine, categorize and document component or systems malfunctions which will be discussed in class
3. adequately identify safety hazards associated with electrical, electronic, hydraulic, pneumatic and mechanical systems before participating in any lab project
4. use a systematic approach to identify, diagnose and repair new hydro, electrical and mechanical systems
5. identify all related parts and components before attempting to repair each system
6. clearly identify and understand the specific function of each component before these systems and subsystems are dismantled for repairs
7. demonstrate proficiency in locating, identifying and following procedures for repairs as outlined on the Mitchell and All-DATA computer information systems
8. retrieve all phases of automotive information needed to repair the following: Electrical and Electronics, Engine Repair, Engine Performance, Automatic transmissions, Heating And Air Conditioning Systems
9. demonstrate proficiency in the proper usage of on-board computer scanners used to identify and properly diagnose possible malfunction within a specific on-board computer system
10. 1 demonstrate proficiency in the proper use of scanners, information and vehicle specifications to determine needed repairs
11. 1 identify, evaluate, diagnosis and repair electrical, electronic and mechanical systems and subsystems

AUTO 295. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes.

Automotive Technology - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 62 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Curriculum Requirements | | |
| AUTO 112 | Basic Gasoline Engines | 5 |
| AUTO 117 | Electronic Analysis and Tune-Up of Gasoline Engines | 5 |
| OETS 118 | Mathematics for Technicians | 3 |
| AUTO 119 | Manual Transmission/Clutch | 5 |
| AUTO 120 | Electrical Systems | 4 |
| AUTO 125 | Brakes | 5 |
| AUTO 126 | Suspension, Steering, and Alignment | 5 |
| AUTO 127 | Basic Automatic Transmission | 4 |
| or AUTO 132 | Automotive Air-Conditioning and Heating Systems | |
| AUTO 137 | Fuel Systems and Emission Controls | 4 |
| Related Requirements | | |
| Approved BMGT Elective | | 3 |
| OECS 105 | Introduction to Information Technology | 3 |
| or OECS 227 | Computer Applications for Technicians | |

| | | |
|----------|--|---|
| OETS 102 | Career Readiness Certification Preparation | 1 |
|----------|--|---|

| | | |
|----------------------|--|--------------|
| Total Credits | | 62-65 |
|----------------------|--|--------------|

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------|---|-----------|
| AUTO 112 | Basic Gasoline Engines | 5 |
| AUTO 120 | Electrical Systems | 4 |
| AUTO 126 | Suspension, Steering, and Alignment | 5 |
| Credits | | 14 |
| Spring | | |
| AUTO 117 | Electronic Analysis and Tune-Up of Gasoline Engines | 5 |
| AUTO 125 | Brakes | 5 |
| AUTO 119 | Manual Transmission/Clutch | 5 |
| OETS 102 | Career Readiness Certification Preparation | 1 |
| Credits | | 16 |

Second Year

| Fall | | |
|--|--|--------------|
| GEN Ed Course - One course from Areas I-VI ^{1,2} | | 3 |
| OETS 118 | Mathematics for Technicians | 3 |
| OECS 105 or OECS 227 | Introduction to Information Technology or Computer Applications for Technicians | 3 |
| GEN Ed Course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| ENGL 1110G | Composition I (Recommended) | |
| GEN Ed Course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 15-17 |
| Spring | | |
| AUTO 127 or AUTO 132 | Basic Automatic Transmission or Automotive Air-Conditioning and Heating Systems | 4 |
| AUTO 137 | Fuel Systems and Emission Controls | 4 |
| Approved BMGT Elective | | 3 |
| GEN Ed Course - One course from Areas I-VI ^{1,2} | | 3 |
| General Education Elective - Any "G" Course ² | | 3-4 |
| Credits | | 17-18 |
| Total Credits | | 62-65 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Automotive Technology - Certificate of Completion

| Prefix | Title | Credits |
|------------------------------|---|---------|
| Core Curriculum Requirements | | |
| AUTO 112 | Basic Gasoline Engines | 5 |
| AUTO 117 | Electronic Analysis and Tune-Up of Gasoline Engines | 5 |
| AUTO 119 | Manual Transmission/Clutch | 5 |
| AUTO 120 | Electrical Systems | 4 |
| AUTO 125 | Brakes | 5 |
| AUTO 126 | Suspension, Steering, and Alignment | 5 |

| | | |
|-------------------------------------|---|-----------|
| AUTO 127 | Basic Automatic Transmission | 4 |
| or AUTO 132 | Automotive Air-Conditioning and Heating Systems | |
| AUTO 137 | Fuel Systems and Emission Controls | 4 |
| Related Program Requirements | | |
| OETS 102 | Career Readiness Certification Preparation | 1 |
| OETS 118 | Mathematics for Technicians | 3 |
| DRFT 190 | Finding and Maintaining Employment | 2 |
| Total Credits | | 43 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | Credits |
|----------------|---|-----------|
| Fall | | |
| AUTO 112 | Basic Gasoline Engines | 5 |
| AUTO 120 | Electrical Systems | 4 |
| AUTO 126 | Suspension, Steering, and Alignment | 5 |
| Credits | | 14 |
| Spring | | |
| AUTO 117 | Electronic Analysis and Tune-Up of Gasoline Engines | 5 |
| AUTO 125 | Brakes | 5 |
| AUTO 137 | Fuel Systems and Emission Controls | 4 |
| Credits | | 14 |

Second Year

| | | |
|----------------------|--|-----------|
| Fall | | |
| AUTO 119 | Manual Transmission/Clutch | 5 |
| OETS 118 | Mathematics for Technicians | 3 |
| Credits | | 8 |
| Spring | | |
| AUTO 127 | Basic Automatic Transmission | 4 |
| or AUTO 132 | or Automotive Air-Conditioning and Heating Systems | |
| DRFT 190 | Finding and Maintaining Employment | 2 |
| OETS 102 | Career Readiness Certification Preparation | 1 |
| Credits | | 7 |
| Total Credits | | 43 |

Building Technology

Building Construction Technology is a program that will prepare you to enter the growing construction industry. Your hands-on education will encompass project management, sustainable (green) building, construction law, blueprint reading, basic surveying, use of wood building materials, concrete work, and weatherization, and masonry, correct use of hand and power tools, safety procedures, math skills, painting, and communication skills to help you work with both colleagues and clients.

Graduation Requirements

Certificate in Building Trades: WorkKeys® scores of level 4 in Reading for Information, Locating Information, and Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Building Technology: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. TOTAL CREDITS REQUIRED FOR DEGREE: (61)

Building Trades - Certificate (p. 141)

Building Technology - Associate of Applied Science (p. 140)

BCT 100. Building Trades I**8 Credits (2+12P)**

Equipment and general safety. Human relations, building construction surveying, footings, foundation form work, framing, sheathing, insulation. Basic electrical wiring and plumbing. Classroom instruction, on- the-job training, and problem solving.

BCT 101. Introduction to Construction I**2 Credits (2+1P)**

Basic safety, including personal protective equipment, how to perform basic construction tasks safely, and what to do if an accident occurs. Includes basic construction methods. May be repeated up to 2 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 102;BCT 103.

BCT 102. Introduction to Construction II**2 Credits (2+1P)**

Introduction to power and hand tools, blueprints, and basic rigging hardware and techniques. May be repeated up to 2 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 101;BCT 103.

BCT 103. Introduction to Construction Laboratory**3 Credits (3)**

Provides students the opportunity to practice skills they have acquired in BCT 101 and BCT 102. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCER) Carpentry Program. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 101; BCT 102.

BCT 104. Woodworking Skills I**3 Credits (1+4P)**

Use and care of hand tools and elementary power tools, safety procedures, and supervised project construction.

BCT 105. Woodworking Skills II**3 Credits (1+4P)**

Advanced woodworking skills to include use of advanced power tools, power tool safety, and supervised construction.

Prerequisite: BCT 104 or consent of instructor.

BCT 106. Woodworking Theory and Practice**3 Credits (2+2P)**

History of wood manufacturing, industrial techniques, wood characteristics, stains and finishes. Design and construction of minor wood projects.

BCT 107. Painting I**4 Credits (2+4P)**

Types and applications of paints and clear coatings. Use of fasteners, caulks, and sealants. Restricted to: Community Colleges only.

BCT 109. Plumbing I**3 Credits (2+3P)**

Covers orientation to the trade. Students will learn about materials used in the plumbing industry and the different types of plumbing fixtures. It includes task-oriented projects in which the students apply many of the skills and knowledge that are presented through the National Center for Construction and Education Research (NCCER) Plumbing Program. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): BCT 101, BCT 102. Restricted to Community Colleges campuses only.

BCT 110. Blueprint Reading for Building Trades**4 Credits (2+4P)**

Same as DRFT 151, OEET 101, OEPB 110.

BCT 111. Small Equipment Maintenance and Repair**4 Credits (2+4P)**

Covers small engine theory, troubleshooting and repair, auto maintenance, hydraulic theory and repair lubricants, batteries and scheduled tool maintenance. Restricted to: Community Colleges only.

BCT 114. Basic Carpentry**3 Credits (1+4P)**

Covers orientation to the trade; wood building materials, fasteners, and adhesives; detailed description and explanations of hand-operated and power tools, including safety; framing basics including laying out and constructing of wood floors, walls and ceilings and includes roughing in of door and window openings. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 115; BCT 116.

BCT 115. Carpentry Level I**3 Credits (1+4P)**

Describes the various kinds of roofs and provides instructions for lay out of the different roofing systems. Describes the various types of windows, skylights, and exterior doors and provides instruction for installation. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 114; BCT 116.

BCT 116. Basic Carpentry Lab**2 Credits (2)**

Provides students the opportunity to practice skills they have acquired in BCT 114 and BCT 115. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCER) Carpentry Program. May be repeated up to 2 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 114; BCT 115.

BCT 117. Plumbing 1A**3 Credits (2+2P)**

This course will introduce students to the plumbing profession. Students will become familiar with the tasks and responsibilities of plumbing professionals in the construction industry and gain a basic knowledge of the plumbing field. Restricted to Community Colleges campuses only.

BCT 118. Math for Building Trades**3 Credits (3)**

Geometry, algebra, arithmetic, and basic trigonometry pertaining to mathematical applications in the building trades field. Same as OEET 118, DRFT 118, OEPB 118.

Prerequisite: CCDM 103 N.

BCT 123. Residential Wiring I**3 Credits (2+3P)**

Introduction to residential electrical wiring trade, electrical safety practices, basic electrical circuits and theory, reading and interpreting applicable construction prints/drawings, introduction to basic National Electric Code (NEC), and preparation for entry-level employment in residential electrical wiring. Restricted to Community Colleges campuses only.

BCT 130. Professional Development and Leadership**1 Credit (1)**

As members and/or officers of various student professional organizations, students gain experience in leadership, team building, and community service. Students competing or participating in Skills USA are required to register for the course. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: BCT majors. Graded: S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

BCT 150. Forklift Operation**1 Credit (1)**

Classroom instruction and hands-on practice to prepare students to operate a forklift safely in the workplace. Students will have the opportunity to earn a forklift operator's permit. Consent of Instructor required. Restricted to Community Colleges campuses only.

BCT 200. Building Trades II**8 Credits (2+12P)**

Continuation of BCT 100: roofing; exterior and interior finish; masonry; door, window, and cabinet installation.

BCT 206. Advanced Cabinetmaking**3 Credits (1+3P)**

Advanced cabinetmaking skills, to include expert use of hand and power tools, professional construction and finishing techniques.

Prerequisites: BCT 105, BCT 106, or consent of instructor.

BCT 209. Plumbing II**3 Credits (2+3P)**

Continuation of BCT 109. Provides students the opportunity to gain more practice in the skills and knowledge learned in Plumbing I. Students will install fixtures and run the various plumbing supply lines from Plumbing Level I. The course included hands on projects in which the students apply many of the competencies that have been presented through the National Center for Construction and Education Research (NCCER) Plumbing Program. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): BCT 109.

BCT 217. Building and the Environment**3 Credits (3)**

Introduction to LEED's, and Green Building Fundamentals, sustainability, sustainable design and green building evaluating cost implication of green building. Describes site development; managing site water runoff, improving a project's water use efficiency. Discusses renewable energy sources, and introduces student to generating power on-site using renewable energy sources, improving a building's indoor environment quality, improving the building industries' environmental performance and environmental aspects of building maintenance, re-use and conservation. Restricted to: Community Colleges only.

BCT 218. Plumbing 2**4 Credits (2+4P)**

This course builds on the skills and knowledge students have gained in previous BCT introduction to plumbing courses, focusing on installation of plumbing systems. Students will become familiar with the tasks and responsibilities of plumbing professionals in the construction industry and gain a basic knowledge of the plumbing field.

Prerequisite(s): BCT 117 and BCT 119.

BCT 219. Weatherization in Construction**3 Credits (2+2P)**

Introduction to industry weatherization standards and practices utilized in the construction of buildings for the purpose of energy conservation. Economic and environmental impacts of the use of energy in heating and cooling building will be examined.

Prerequisite(s): BCT 101, BCT 102 and BCT 103.

BCT 221. Cooperative Experience I**1-4 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and is supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U.

Prerequisite: consent of instructor.

BCT 223. Residential Wiring II**3 Credits (2+3P)**

Introduction to electrical raceways and fittings; electrical conductors and cables; basic electrical construction drawings, residential electrical services, and electrical test equipment. Restricted to Community Colleges campuses only.

Prerequisite(s): BCT 123.

BCT 255. Special Topics**1-6 Credits (1-6)**

Topics to be announced in the Schedule of Classes . May be repeated up to 12 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

BCT 290. Special Problems in Building Technology**1-4 Credits**

Individual studies in areas directly related to building technologies.

Prerequisite: consent of instructor.

Building Technology - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-63 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---------------------------------------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1,2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| <i>Prerequisite Requirements</i> | | |
| DRFT 105 | Technical Drawing for Industry | 3 |
| DRFT 130 | General Building Codes | 3 |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| BCT 118 | Math for Building Trades | 3 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| BCT 100 | Building Trades I | 8 |
| BCT 104 | Woodworking Skills I | 3 |
| BCT 105 | Woodworking Skills II | 3 |
| BCT 110 | Blueprint Reading for Building Trades | 4 |
| BCT 200 | Building Trades II | 8 |

| | | |
|----------------------|---|--------------|
| BCT 255 | Special Topics | 4 |
| BCT 290 | Special Problems in Building Technology | 3 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | Credits |
|---|---------------------------------------|----------------|
| Fall | | |
| BCT 100 | Building Trades I | 8 |
| BCT 104 | Woodworking Skills I | 3 |
| DRFT 130 | General Building Codes | 3 |
| Credits | | 14 |
| Spring | | |
| BCT 200 | Building Trades II | 8 |
| BCT 105 | Woodworking Skills II | 3 |
| BCT 110 | Blueprint Reading for Building Trades | 4 |
| GEN Ed course - One course from Areas I-VI ¹ | | 3 |
| Credits | | 18 |

Second Year

| | | |
|--|---|--------------|
| Fall | | |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| BCT 255 | Special Topics | 4 |
| BCT 118 | Math for Building Trades | 3 |
| DRFT 105 | Technical Drawing for Industry | 3 |
| GEN Ed course - One course from Areas I-VI ¹ | | 3 |
| Credits | | 16 |
| Spring | | |
| BCT 290 | Special Problems in Building Technology | 3 |
| GEN Ed course - One course from Areas I-VI ¹ | | 3-4 |
| GEN Ed course - One course from Areas I-VI ¹ | | 3-4 |
| General Education Elective - Any "G" course ¹ | | 3-4 |
| Credits | | 12-15 |
| Total Credits | | 60-63 |

¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Building Trades - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---|----------------|
| Core Curriculum Requirements | | |
| BCT 100 | Building Trades I | 8 |
| BCT 104 | Woodworking Skills I | 3 |
| BCT 105 | Woodworking Skills II | 3 |
| BCT 110 | Blueprint Reading for Building Trades | 4 |
| BCT 200 | Building Trades II | 8 |
| BCT 255 | Special Topics | 1-6 |
| BCT 290 | Special Problems in Building Technology | 1-4 |
| Total Credits | | 28-36 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------------|---|--------------|
| BCT 100 | Building Trades I | 8 |
| BCT 104 | Woodworking Skills I | 3 |
| BCT 255 | Special Topics | 1-6 |
| Credits | | 12-17 |
| Spring | | |
| BCT 200 | Building Trades II | 8 |
| BCT 105 | Woodworking Skills II | 3 |
| BCT 290 | Special Problems in Building Technology | 1-4 |
| BCT 110 | Blueprint Reading for Building Trades | 4 |
| Credits | | 16-19 |
| Total Credits | | 28-36 |

Business Management

The **Associate of Applied Science in Business Management** prepares students for managerial and supervisory positions in a variety of businesses and industry. The curriculum emphasizes accounting, economics, finance, data analysis, marketing, business communication, and human resources. Students will apply their knowledge and skills through a capstone course as well as a cooperative experience.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Business Management - Associate of Applied Science (p. 145)

BMGT 112. Banks and Your Money

3 Credits (3)

Banking in today's economy: language and documents of banking, check processing, teller functions, deposit function, trust services, bank bookkeeping, loans, and investments. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

BMGT 126. Retail Management

3 Credits (3)

Phases of retailing, including types of retail outlets and basic problems of organizing and operating a retail store. Restricted to: Community Colleges only.

BMGT 132. Principles of Selling

3 Credits (3)

Analysis of customer behavior, persuasive communication, process of the sales interview. Restricted to: Community Colleges only.

BMGT 136. Forecasting Business Activity

3 Credits (3)

Course covers the important elements of forecasting all types of business activities including inventory control, revenue forecasts, staffing, and other industry specific activities using metrics and data analysis processes. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BUSA 1110.

BMGT 138. Advertising

3 Credits (3)

Psychological approach to non-personal consumer persuasion; applied techniques in media selection, layout mechanics, production methods, and campaign structures. Restricted to: Community Colleges only.

BMGT 140. Principles of Supervision I

3 Credits (3)

Principles of supervision emphasizing planning, organization, rating of employees and procedures to develop good morale. Introduction to interpretation of case studies. Restricted to: Community Colleges only.

BMGT 150. Income Taxation**3 Credits (3)**

Federal income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates with particular reference to CLU, life insurance and annuities. Restricted to: Community Colleges only.

BMGT 155. Special Topics I**1-3 Credits (1-3)**

Introductory special topics of lower division level work that provides a variety of timely subjects and content material. May be repeated up to 9 credits. Restricted to Community Colleges campuses only.

BMGT 160. Self-Presentation and Etiquette**3 Credits (3)**

Introduction to business etiquette based on tradition, social expectations, and professional behavior standards. Restricted to: Community Colleges only.

BMGT 201. Work Readiness and Preparation**3 Credits (3)**

Instruction in methods of selection, seeking, acquiring and retaining employment. Addresses work success skills, business etiquette, employer expectation and workplace norms. Restricted to Community Colleges campuses only.

BMGT 205. Customer Service in Business**3 Credits (3)**

Establishes concepts of service quality in relationship to business success and maximization of returns to the organization. Explores techniques for delivering quality and service in a variety of business settings. Restricted to: Community Colleges only.

BMGT 208. Business Ethics**3 Credits (3)**

The course examines the underlying dimensions of ethics in business, investigating ethics in relationship to the organization, the stakeholders, and society. Exploration of ethical issues from a historical context, analyzing actual events through the lens of business decision making, including legal/political, sociocultural, economic, and environmental considerations will be undertaken. Restricted to Community Colleges campuses only.

BMGT 216. Business Math**3 Credits (3)**

Application of basic mathematical procedures to business situations, including percentage formula applications, markup, statement analysis, simple and compound interest, and annuities. Restricted to: Community Colleges only.

Prerequisite(s): CCDM 103 N or satisfactory math score on ACT.

BMGT 221. Internship I**1-3 Credits (1-3)**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: BMGT majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

BMGT 225. Introduction to Commercial Lending**3 Credits (3)**

Commercial lending overview, the lending process, portfolio management, and regulation and business development. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 112.

BMGT 232. Personal Finance**3 Credits (3)**

Budgeting, saving, credit, installment buying, insurance, buying vs. renting a home, income tax statement preparation, investment, and estate disposal through will and trust. Restricted to: Community Colleges only.

BMGT 236. Small Business Start-Up**3 Credits (3)**

Starting a small business is a complex endeavor that requires specialized knowledge. This course prepares students to take the first step in business ownership and operations. Restricted to Community Colleges campuses

Learning Outcomes

1. Identify the unique challenges of starting a small business.
2. Identify opportunities to start up a business and conduct a needs analysis.
3. Develop value proposition/market fit for proposed products and services.
4. Develop an appropriate business model.
5. Identify the availability of necessary resources.

BMGT 237. Managing Small Businesses**3 Credits (3)**

Managing a small business requires the owner/operator to be proficient in a number of skills and technical areas. This course provides small business owners/operators with the training and essential knowledge to manage a small business. Restricted to Community Colleges campuses

Learning Outcomes

1. Identify the strengths and weaknesses of small businesses
2. Define entrepreneurship and identifying its traits
3. Demonstrate a capability to explore and research business opportunities
4. Explain how to plan to start a new business, identifying legal structures, financing options, and organizing a management team
5. Identify and analyze financial statements
6. Review the importance of management information systems
7. Identify their own managerial leadership style
8. Review purchasing and inventories, taxation and insurance
9. Describe the process of writing a business plan

BMGT 240. Human Relations**3 Credits (3)**

Human interactions in business and industrial settings. Motivation and learning experiences as related to problems of the worker and supervisor. Practical applications of human behavior. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

BMGT 247. Customer Relationship Management**3 Credits (3)**

The course addresses the application of positive customer relationship practices and demonstrates the connection between managing excellent customer experiences and business success. Customer related decision making processes through the use of data based decision matrices are introduced. Restricted to Community Colleges campuses

Learning Outcomes

1. Recognize and explain the concept of customer service.
2. Describe the basic factors in Customer Relationship Management (CRM).
3. Explain how technological tools can support CRM processes.
4. Discuss the impact of CRM on the marketing processes.
5. Describe how effectively using CRM techniques impacts customer satisfaction.
6. Demonstrate the use of data to make effective CRM decisions.

BMGT 250. Diversity in the Workplace**3 Credits (3)**

Concepts of culture, diversity, prejudice, and discrimination within the domestic workforce/society. Restricted to Community Colleges campuses only.

Prerequisite(s): BUSA 1110.

BMGT 272. E-Commerce Operations**3 Credits (3)**

Includes the many forms of e-commerce and emerging technologies that will impact the business of tomorrow. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 105 or BCIS 1110.

BMGT 277. Entrepreneurship II - Small Business Management**3 Credits (3)**

This course is designed to acquaint the student with the opportunities encountered in the management and operations of a small business enterprise. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): ENTR 1110.

BMGT 280. Introduction to Human Resources**3 Credits (3)**

Personnel functions encompassing job analysis, recruitment, selection, training, appraisals, discipline, and terminations. Prerequisite(S): BUSA 1110 or B A 104. Restricted to Community Colleges campuses only.

BMGT 282. Introduction to International Business Management**3 Credits (3)**

Overview of the social, economic and cultural environment of international business transactions. Restricted to Community Colleges only.

Prerequisite(s): BUSA 1110.

BMGT 285. Introduction to Manufacturing Operations**3 Credits (3)**

Introduction to issues related to manufacturing, including an overview of the production function, product design and development, location, layout, forecasting, planning, purchasing, materials/inventory, and quality management. Restricted to Community Colleges campuses only.

Prerequisite(s): BUSA 1110 and (BMGT 140 or MGMT 2110).

BMGT 286. Introduction to Logistics**3 Credits (3)**

Overview on the planning, organizing, and controlling of transportation, inventory maintenance, order processing, purchasing, warehousing, materials, handling, packaging, customer service standards, and product scheduling. Restricted to: Community Colleges only.

BMGT 287. Introduction to Export/Import**3 Credits (3)**

Procedures and documentation for exporting and importing products. Emphasis on NAFTA regulations and other U.S. border operations crossings. Restricted to Community Colleges only.

Prerequisite(s): BUSA 1110.

BMGT 290. Applied Business Capstone**3 Credits (3)**

Refines skills and validates courses taken in BMGT program. Business simulations, case studies and projects used to test and improve business practices. Student must be within 25 credits of graduation. Restricted to: BMGT majors. Restricted to Community Colleges campuses only.

Prerequisite: BUSA 1110, and (BMGT 140 or MGMT 2110), and (BMGT 240 or SOCI 1110G or PSYC 1110G), and MKTG 2110.

Learning Outcomes

1. Plan, design, and create a real world project related to their field of study. Participate in job shadowing in positions related to their field of study. Create a portfolio in preparation for career applications. Collaborate as a member of a team in their field of study. Identify and use ethical decision-making in working on individual projects, job shadowing, and a team.

BMGT 298. Independent Study**3 Credits (3)**

Individual studies directed by consenting faculty with prior approval of department chair. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Sophomore standing with 3.0 GPA.

Business Management - Associate in Business Management

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|-----------------------------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Related Requirements | | |
| ACCT 2110 | Principles of Accounting I | 3 |
| or OATS 120 | Accounting Procedures I | |
| BMGT 140 | Principles of Supervision I | 3 |
| or MGMT 2110 | Principles of Management | |
| BUSA 1110 | Intro to Business | 3 |
| MKTG 2110 | Principles of Marketing | 3 |
| BFIN 2110 | Introduction to Finance | 3 |
| OATS 106 | Business Mathematics | 3 |
| or MATH 1215 | Intermediate Algebra | |
| Choose one from the following: | | 3 |
| OECS 215 | Spreadsheet Applications | |

| | | |
|-----------------------------------|---|--------------|
| OECS 220 | Database Application and Design | |
| OATS 207 | Machine Transcription | |
| OATS 211 | Information Processing I | |
| Technical Requirements | | |
| BMGT 201 | Work Readiness and Preparation | 3 |
| BMGT 221 | Internship I | 3 |
| BLAW 2110 | Business Law I | 3 |
| or BLAW 316 | Legal Environment of Business | |
| BMGT 290 | Applied Business Capstone | 3 |
| <i>General Management Courses</i> | | |
| Select four from the following: | | 12 |
| BMGT 250 | Diversity in the Workplace | |
| BMGT 277 | Entrepreneurship II - Small Business Management | |
| BMGT 280 | Introduction to Human Resources | |
| BMGT 282 | Introduction to International Business Management | |
| BMGT 285 | Introduction to Manufacturing Operations | |
| BMGT 286 | Introduction to Logistics | |
| BMGT 287 | Introduction to Export/Import | |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | |
|--|---------------------------------|----------------|
| Fall | | Credits |
| ACCT 2110 | Principles of Accounting I | 3 |
| or OATS 120 | or Accounting Procedures I | |
| BUSA 1110 | Intro to Business | 3 |
| BMGT 201 | Work Readiness and Preparation | 3 |
| GEN Ed Course - One course from Areas I-VI | ^{1, 2} | 3 |
| GEN Ed Course - One course from Areas I-VI | ^{1, 2} | 3 |
| Credits | | 15 |
| Spring | | |
| BMGT 140 | Principles of Supervision I | 3 |
| or MGMT 2110 | or Principles of Management | |
| OATS 106 | Business Mathematics | 3 |
| or MATH 1215 | or Intermediate Algebra | |
| GEN Ed Course - One course from Areas I-VI | ^{1, 2} | 3-4 |
| GEN Ed Course - One course from Areas I-VI | ^{1, 2} | 3-4 |
| Choose one from the following: | | 3 |
| OECS 215 | Spreadsheet Applications | |
| OECS 220 | Database Application and Design | |
| OATS 207 | Machine Transcription | |
| OATS 211 | Information Processing I | |
| Credits | | 15-17 |

Second Year

| | | |
|---|----------------------------------|-----|
| Fall | | |
| BLAW 2110 | Business Law I | 3 |
| or BLAW 316 | or Legal Environment of Business | |
| General Education Elective - Any "G" course | ² | 3-4 |
| BFIN 2110 | Introduction to Finance | 3 |
| General Management course | ³ | 3 |

| | | |
|--|---------------------------|--------------|
| General Management course ³ | | 3 |
| Credits | | 15-16 |
| Spring | | |
| BMGT 221 | Internship I | 3 |
| MKTG 2110 | Principles of Marketing | 3 |
| BMGT 290 | Applied Business Capstone | 3 |
| General Management course ³ | | 3 |
| General Management course ³ | | 3 |
| Credits | | 15 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses

³ **General Management Courses**

- BMGT 250 Diversity in the Workplace
- BMGT 277 Entrepreneurship II - Small Business Management
- BMGT 280 Introduction to Human Resources
- BMGT 282 Introduction to International Business Management
- BMGT 285 Introduction to Manufacturing Operations
- BMGT 286 Introduction to Logistics
- BMGT 287 Introduction to Export/Import

Business Office Technology

The **Business Office Technology** program is for students interested in acquiring or updating skills for employment in an office environment. The curriculum covers basic computer skills as well as software programs such as word processing and spreadsheet applications, record keeping, filing, or database management. At the certificate level, students may complete a Certificate of Business Office Technology. The Associate degree offers concentrations in Accounting and Administrative Assistant. At the certificate level, students may complete a Certificate of Business Office Technology.

Graduation Requirements

Certificate in Business Office Technology: WorkKeys® scores of level 4 in Reading for Information, Locating Information, and Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

Associate of Applied Science in Business Office Technology: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Business Office Technology - Certificate (p. 154)

Business Office Technology (Accounting) - Associate of Applied Science (p. 151)

Business Office Technology (Administrative Assistant) - Associate of Applied Science (p. 153)

BOT 298. Independent Study

1-3 Credits

Individual studies directed by consenting faculty with prior approval of department head. May be repeated for a maximum of 3 credits.

Prerequisite: sophomore standing with 3.0 GPA.

OATS 101. Keyboarding Basics**3 Credits (2+2P)**

Covers the skills necessary to touch type on the computer keyboard using correct techniques. This includes the development of speed, accuracy, and formatting of basic business documents. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Learning Outcomes

1. Demonstrate the correct operation of the alphabetic, numeric, symbol keys, space bar, shift keys, and return (enter) keys.
2. Have a thorough knowledge of correct hand position and posture for accurate keyboarding.
3. Keyboard words, sentences, and paragraphs smoothly, quickly, and accurately using the touch typing method.
4. Have the ability to keyboard with speed and accuracy.
5. Perform keyboarding and basic formatting functions to create professional business documents.

OATS 102. Keyboarding: Document Formatting**3 Credits (2+2P)**

Designed to improve keyboarding speed and accuracy; introduce formats of letters, tables and reports. A speed and accuracy competency requirement must be met.

Prerequisite: OATS 101 or consent of instructor.

OATS 105. Business English**3 Credits (3)**

Training and application of the fundamentals of basic grammar, capitalization, punctuation, basic writing, sentence structure, and editing skills. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Learning Outcomes

1. Identify and apply the rules for each of the parts of speech.
2. Construct four basic sentence patterns.
3. Apply punctuation, capitalization and numbers style to writing proficiently.
4. Utilize proofreader's marks in the editing of business correspondence.
5. Make use of appropriate reference materials to locate answers to language questions.

OATS 106. Business Mathematics**3 Credits (2+2P)**

Mathematical applications for business. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): CCDM 103 N or adequate score on math placement exam.

Learning Outcomes

1. Apply fundamental concepts to personal and business math operations.
2. Maintain a checkbook.
3. Solve percent and percentage applications.
4. Calculate discounts, markups, and markdowns.
5. Calculate wages, salaries, deductions, and net pay.
6. Compare various borrowing options and identify the most cost effective option.
7. Interpret consumer loans and credit card accounts.
8. Compare various home ownership options.
9. Calculate taxes and identify insurance options.

OATS 110. Records Management**3 Credits (3)**

Principles, methods and procedures for the selection, operation and control of manual and automated records systems.

OATS 120. Accounting Procedures I**3 Credits (2+2P)**

Business accounting principles and procedures. Use of special journals, cash control, and merchandising concepts. Reports for sole proprietorships.

OATS 121. Accounting Procedures II**3 Credits (2+2P)**

Continuation of OATS 120, emphasizing accounting principles and procedures for notes and interest, depreciation, partnerships and corporations, cash flow and financial statement analysis. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 120 or ACCT 2110.

OATS 140. Payroll Accounting**3 Credits (2+2P)**

Payroll procedures including payroll tax forms and deposits. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): ACCT 2110 or OATS 120.

OATS 150. Medical Terminology**3 Credits (3)**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as NURS 150 and OEHO 120. May be repeated up to 3 credits. Crosslisted with: NURS 150, AHS 120 and HIT 150. Restricted to Community Colleges campuses only.

OATS 169. Spanish Grammar for Business Administration**3 Credits (3)**

Introductory course in Spanish grammar and practical business terms required for the proper application of fundamental oral and written business communication skills for Spanish speakers in the field of business administration. Restricted to Community Colleges campuses only.

Prerequisite(s): Spanish-speaking ability and computer keyboarding ability.

OATS 170. Office Communications in Spanish I**3 Credits (3)**

Develop oral and written communications skills of native or near-native speakers of Spanish. The student will learn basic letter writing skills, customer service techniques, and telephone etiquette in Spanish. Spanish speaking ability is required to enroll in this course. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses

OATS 171. Office Communications in Spanish II**3 Credits (3)**

Develop oral and written communications skills of native or near-native speakers of Spanish. Emphasis placed on learning the office assistant's role within the office environment. Compose complex business correspondence and learn to make international travel arrangements. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s): OATS 170, Spanish speaking ability.

OATS 191. Taking Minutes & Proofreading**3 Credits (3)**

Preparation and practice producing minutes suited for different meeting types and purposes. Provides strategies to prepare for meetings, to record proceedings, and to transcribe minutes while incorporating proofreading skills practice. Topics include legal requirements, meeting types, minute formats, and duties/expectations of the minute taker and the meeting chair. Graded: S/U. May be repeated up to 3 credits. Restricted to Community Colleges campuses

OATS 202. Keyboarding Document Production**3 Credits (2+2P)**

Further development of keyboarding speed and accuracy. Production of complex letters, memos, tables, reports and business forms. A speed and accuracy competency requirement must be met. Restricted to Community Colleges campuses

OATS 203. Office Equipment and Procedures I**3 Credits (2+2P)**

Office organization, telephone techniques, equipment and supplies, handling meetings, human relations, mail procedures, and travel. May be repeated up to 3 credits. Restricted to Community Colleges campuses

OATS 205. Accounting Software I**3 Credits (2+2P)**

Introduction to accounting software. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Working knowledge of computers and accounting or consent of instructor.

OATS 206. Accounting Software II**3 Credits (2+2P)**

Accounting software and office applications. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 121 or OATS 215.

OATS 207. Machine Transcription**3 Credits (2+2P)**

Creating office documents using transcribing equipment and word processing software. Emphasis on proofreading, editing and grammar. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): BOT 105.

OATS 208. Medical Office Procedures**3 Credits (2+2P)**

Current computerized and traditional administrative medical office procedures will be introduced. Practical knowledge on managing required record keeping in a medical office environment will be emphasized. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): HIT 150 or AHS 120, and computer keyboarding ability or consent of instructor.

OATS 209. Business and Technical Communications**3 Credits (3)**

Effective written communication skills and techniques for career success in the work place. Composition of letters, memos, short reports, forms, and proposals, and technical descriptions and directions.

Prerequisites: ENGL 1110G and computer keyboarding ability or consent of instructor.

OATS 211. Information Processing I**3 Credits (2+2P)**

Defining and applying fundamental information processing concepts and techniques using the current version of leading software. May be repeated up to 6 credits. Restricted to Community Colleges campuses

OATS 213. Word Processing I**3 Credits (2+2P)**

Operation and function of a word processor. Specific equipment to be announced in the Schedule of Classes.

Prerequisite: OATS 101 or keyboarding proficiency.

OATS 214. Word Processing II**3 Credits (2+2P)**

Advanced operation and functions of a word processor. Specific equipment to be announced in the Schedule of Classes.

Prerequisite: OATS 213 or consent of instructor.

OATS 215. Spreadsheet Applications**1-3 Credits**

Use of spreadsheets to include graphics and business applications. Same as OECS 215. May be repeated under different subtitles listed in the Schedule of Classes.

OATS 217. Powerpoint Presentation**3 Credits (3)**

Comprehensive, hands-on approach to learning and applying basic and advanced features of PowerPoint. These include text enhancements, objects, fills, colors, animation, charts, sound, video, and hyperlinks. Students demonstrate appropriate audience and communication tools to deliver presentations.

Prerequisites: OATS 211 or ability to demonstrate keyboarding and Windows proficiency.

OATS 218. Information Processing II**3 Credits (2+2P)**

Advanced information processing techniques using current version of leading software. May be repeated for a maximum of 6 credits.

Prerequisite: OATS 211 or consent of instructor.

OATS 220. Internship in Business Office Technology**2 Credits (2)**

Experience in a supervised office position. Student must work at least eight hours per week. May be repeated for a maximum of 4 credits.

Prerequisites: sophomore standing and consent of instructor.

OATS 221. Internship I**1-3 Credits**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. C- or better in the course is required. Consent of Instructor required. Restricted to: BOT, HIT. majors. Restricted to Community Colleges campuses

OATS 222. Internship II**1-3 Credits**

Continuation of OATS 221. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: OATS & HIT majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 221 and consent of instructor.

OATS 223. Medical Transcription I**3 Credits (2+2P)**

Concepts in medical transcription are introduced on how to produce a variety of reports required in a medical office or facility utilizing accurate medical terminology, spelling, grammar, and document formatting. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 150 or AHS 120 and HIT 158 and OATS 209.

OATS 228. Medical Insurance Billing**3 Credits (2+2P)**

Comprehensive overview of the insurance concepts and applications required for successfully and accurately completing and submitting insurance claims and reimbursement processes for various insurance carriers, both private and government, will be emphasized. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): HIT 150 or AHS 120.

OATS 233. Advanced Medical Transcription**3 Credits (2+2P)**

Builds upon the concepts introduced in Medical Transcription I providing greater understanding of how to produce advanced reports dictated by physicians with increasing speed and accuracy. Emphasis will be on proofreading and editing of operative reports, patient history and physicals, office notes, labor and delivery reports, consultation reports, discharge summaries, and other medical reports. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 223 and HIT 130.

OATS 239. Personal Development**3 Credits (3)**

Development of a marketable, employable office systems person, to include interview, voice, manners, and apparel.

OATS 240. Introduction to Individual Taxation**3 Credits (3)**

Overview of Individual Federal Taxation; awareness of tax problems pitfalls and planning opportunities; focus on individual personal financial concerns and tax planning. One semester of accounting principles/procedures is recommended.

OATS 241. Auditing and Business Issues**3 Credits (3)**

Introduction to basic auditing concepts, the purpose for the auditing process, and requirements of persons assisting with the audit process. The course will also deal with issues of business law including contracts, sales, torts, strict liability, and business ethics. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 120 or ACCT 2110.

OATS 244. Tax Preparation**3 Credits (3)**

Introduces basic federal and state tax codes for preparing individual income tax returns. Emphasis on use of tax software.

Prerequisite: keyboarding proficiency.

OATS 250. Electronic Office Systems**3 Credits (2+2P)**

Management of the electronic office. Office use of computers, printers, fax machines, copiers, and scanner concepts will be covered.

Prerequisite: OATS 211.

OATS 255. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes.

OATS 260. Bookkeeping Simulation Capstone**3 Credits (2+2P)**

Refines the professional and technical skills students have learned while completing the Bookkeeping Assistant Option curriculum by demonstrating how coursework ties together. Designed as a bookkeeping assistant capstone course.

Prerequisite(s): OATS 121 or ACCT 2110, OATS 140, OATS 205, and OATS 244, or consent of instructor.

OATS 270. Office Administration Technology Capstone**3 Credits (2+2P)**

Refines professional skills learned in the BOT program and ties all BOT coursework together. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s): OATS 102 or OATS 129; and OATS 120; and OAT S 209 or ENGL 2210G; and OATS 211 or OECS 211.

Learning Outcomes

1. Construct professional, error-free business documents that demonstrate appropriate formats and ideas in clear, concise, and correct written and spoken language.
2. Utilize effective administration skills to enhance the productive operation of the workplace.
3. Demonstrate professional behaviors and workplace ethics for the professional office environment.
4. Demonstrate proficiency in the use of productivity software in business applications

Business Office Technology (Accounting) - Associate of Business Office Technology

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| <i>Technical Requirements</i> | | |
| ACCT 200 | A Survey of Accounting | 3 |
| OATS 102 | Keyboarding: Document Formatting | 3 |
| OATS 105 | Business English | 3 |
| OATS 106 | Business Mathematics | 3 |
| OATS 110 | Records Management | 3 |
| OATS 239 | Personal Development | 3 |
| or BMGT 201 | Work Readiness and Preparation | 3 |
| OATS 270 | Office Administration Technology Capstone | 3 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| <i>Additional Business Related Courses</i> | | |
| BLAW 2110 | Business Law I | 3 |
| BUSA 1110 | Intro to Business | 3 |
| Major Requirements | | |
| Concentrations Coursework | | |
| ACCT 2110 | Principles of Accounting I | 3 |
| ACCT 2120 | Principles of Accounting II | 3 |
| BMGT 150 | Income Taxation | 3 |
| OECS 200 | Accounting on Microcomputers | 3 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|----------------------------------|--------------|
| OATS 102 | Keyboarding: Document Formatting | 3 |
| OATS 106 | Business Mathematics | 3 |
| BUSA 1110 | Intro to Business | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 15 |
| Spring | | |
| ACCT 200 | A Survey of Accounting | 3 |
| OATS 110 | Records Management | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Credits | | 15-16 |

Second Year**Fall**

| | | |
|--|---|--------------|
| OATS 105 | Business English | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| OATS 239 or BMGT 201 | Personal Development or Work Readiness and Preparation | 3 |
| General Education Elective - Any "G" course ² | | 3-4 |
| ACCT 2110 | Principles of Accounting I | 3 |
| Credits | | 15-17 |

Spring

| | | |
|----------------------|---|--------------|
| BLAW 2110 | Business Law I | 3 |
| ACCT 2120 | Principles of Accounting II | 3 |
| BMGT 150 | Income Taxation | 3 |
| OATS 270 | Office Administration Technology Capstone | 3 |
| OECS 200 | Accounting on Microcomputers | 3 |
| Credits | | 15 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Business Office Technology (Administrative Assistant) - Associate of Business Office Technology

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|--|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| <i>Technical Requirements</i> | | |
| ACCT 200 | A Survey of Accounting | 3 |
| OATS 102 | Keyboarding: Document Formatting | 3 |
| OATS 105 | Business English | 3 |
| OATS 106 | Business Mathematics | 3 |
| OATS 110 | Records Management | 3 |
| OATS 239 or BMGT 201 | Personal Development Work Readiness and Preparation | 3 |
| OATS 270 | Office Administration Technology Capstone | 3 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| <i>Additional Business Related Courses</i> | | |
| BLAW 2110 | Business Law I | 3 |
| BUSA 1110 | Intro to Business | 3 |
| Major Requirements | | |
| Concentrations Coursework | | |
| OATS 202 | Keyboarding Document Production | 3 |

| | | |
|--------------------------|--|--------------|
| OATS 191 | Taking Minutes & Proofreading | 3 |
| OECS 280 or FDMA 1120 | Desktop Publishing I Desktop Publishing | 3 |
| OECS 220 | Database Application and Design | 3 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|----------------------------------|----------------|
| BUSA 1110 | Intro to Business | 3 |
| OATS 102 | Keyboarding: Document Formatting | 3 |
| OATS 106 | Business Mathematics | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 15 |

| Spring | | |
|--|------------------------------|--------------|
| ACCT 200 | A Survey of Accounting | 3 |
| OATS 110 | Records Management | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Credits | | 15-16 |

Second Year

| Fall | | |
|--|---|--------------|
| OATS 105 | Business English | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| OATS 239 or BMGT 201 | Personal Development or Work Readiness and Preparation | 3 |
| General Education Elective - Any "G" course ² | | 3-4 |
| OECS 280 or FDMA 1120 | Desktop Publishing I or Desktop Publishing | 3 |
| Credits | | 15-17 |

| Spring | | |
|----------------------|---|--------------|
| BLAW 2110 | Business Law I | 3 |
| OATS 270 | Office Administration Technology Capstone | 3 |
| OATS 202 | Keyboarding Document Production | 3 |
| OATS 191 | Taking Minutes & Proofreading | 3 |
| OECS 220 | Database Application and Design | 3 |
| Credits | | 15 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Business Office Technology - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|------------------------|---------|
| Core Curriculum Requirements | | |
| ACCT 200 | A Survey of Accounting | 3 |

| | | |
|--------------------------------|--|---|
| BUSA 1110 | Intro to Business | 3 |
| ENGL 1110G | Composition I | 4 |
| ENGL 2210G | Professional & Technical Communication | 3 |
| OATS 102 | Keyboarding: Document Formatting | 3 |
| OATS 106 | Business Mathematics | 3 |
| OATS 110 | Records Management | 3 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Choose one from the following: | | 3 |
| ECON 1110G | Survey of Economics | |
| ECON 2110G | Macroeconomic Principles | |
| ECON 2120G | Principles of Microeconomics | |

Total Credits**31**

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--------------------------------|--|-----------|
| OATS 102 | Keyboarding: Document Formatting | 3 |
| OATS 106 | Business Mathematics | 3 |
| BUSA 1110 | Intro to Business | 3 |
| Choose one from the following: | | 3 |
| ECON 1110G | Survey of Economics | |
| ECON 2110G | Macroeconomic Principles | |
| ECON 2120G | Principles of Microeconomics | |
| ENGL 1110G | Composition I | 4 |
| Credits | | 16 |
| Spring | | |
| ACCT 200 | A Survey of Accounting | 3 |
| OATS 110 | Records Management | 3 |
| ENGL 2210G | Professional & Technical Communication | 3 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Credits | | 15 |
| Total Credits | | 31 |

Computer and Information Technology

The **Certificate in Microcomputer Applications** is designed for students interested in microcomputer operations and systems. Upon completion, students are prepared to take the Microsoft Office Specialist certification exams in Word and Excel.

The **Associate of Applied Science Degree in Computer and Information Technology** equips students for employment which involves the analysis and design of computerized information and management decision systems. Graduates of the program are prepared to take the CompTIA A+ certification exam which demonstrates competency in the maintenance of PCs, mobile devices, operating systems and printers. The program is broken down into three concentrations. Students must take 15 credit hours in one of the following concentrations to obtain their degree in that field: IT Specialist Concentration, Networking Concentration or Programming Concentration.

Graduation Requirements

Certificate in Microcomputer Applications: WorkKeys® scores of level 5 in Reading for Information, level 4 in Locating Information, and level 5 in Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Computer and Information Technology: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Microcomputer Applications - Certificate (p. 166)

Computer and Information Technology (IT Specialist) - Associate of Applied Science (p. 160)

Computer and Information Technology (Networking) - Associate of Applied Science (p. 162)

Computer and Information Technology (Programming) - Associate of Applied Science (p. 164)

OECS 101. Computer Basics

1 Credit (1)

Hands-on instruction to introduce computer use and commonly used software. Graded S/U.

OECS 105. Introduction to Information Technology

3 Credits (3)

Examination of information systems and their impact on commerce, education, and personal activities. Utilization of productivity tools for communication, data analysis, information management and decision-making. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

OECS 110. Introduction to Power Point

1-3 Credits (1-3)

An introduction to Power Point software to develop business presentations. Includes concepts of basic presentation methods and graphic design principles. Students will create and deliver presentations using text, charts, digitized images, and sound. Restricted to Community Colleges campuses only.

OECS 125. Operating Systems

1-3 Credits

Installation, configuration and optimization of current operating systems. Restricted to: Community Colleges only.

OECS 128. Operating Systems Linux/Unix

3 Credits (3)

Installation, configuration, and use of Linux/Unix operating system software and utilities including hardware management, file management, use of command line, and scripting. Restricted to: Community Colleges only.

OECS 140. Introduction to Game Production Industry

1-3 Credits (1-3)

Students explore the business behind game production, understanding how game companies are organized and funded, positions within the game industry, and what skills game producers need. Restricted to Community Colleges campuses only.

OECS 141. Introduction to Interactive Game Programming

1-3 Credits (1-3)

This introductory programming class reviews the basics of programming, including the object-oriented approach. Students will de-construct existing games, develop their own code, and gain an appreciation for coding strategies. May be repeated for a maximum of 6 credits. Restricted to Community Colleges campuses only.

OECS 145. Mobile Application Development

1-3 Credits (1-3)

Introduction to elements of mobile application coding including concepts, design strategies, tools needed to create, test and deploy applications for mobile devices. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

OECS 155. Special Topics - Introductory Computer Technology

0.5-4 Credits (.5-4)

Topics to be announced in the Schedule of Classes. May be repeated up to 8 credits.

OECS 185. PC Maintenance and Repair I

1-3 Credits

Introduction to most common types of PC configurations, installations, and failures. This course will explore troubleshooting skills for maintaining and repairing common hardware and software related problems. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

OECS 192. C++ Programming I

3 Credits (3)

Development of skills in programming using the C++ programming language. Restricted to: Community Colleges only.

OECS 195. Java Programming I

1-3 Credits

Developing of skills in programming using the Java programming language. Restricted to: Community Colleges only.

OECS 200. Accounting on Microcomputers**3 Credits (3)**

Fundamental accounting principles using popular microcomputer software to include G/L, A/R, A/P, purchase order, billing, inventory, and forecasting modules.

Prerequisite: ACCT 2110 or OATS 121.

OECS 204. Linux Operating System**1-3 Credits**

Install and configure the Linux operating system on X86 systems. Covers issues involved in maintaining operating system, networking, creating and managing users, and installing and updating software. General procedures for working with operating system includes maintaining disk space, preserving system security, and other related topics. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

OECS 205. Advanced Operating Systems: Administration**3 Credits (3)**

Examines operating systems designed for PC, minicomputers and mainframes. Covers maintaining operating systems, creating and managing users, and installing and updating software. General procedures for working with operating systems will include maintaining disk space, preserving system security, providing mail services, among other topics. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 128.

OECS 207. Windows**0.5-3 Credits**

Covers local installation, configuration of core local services, managing users, and the general local management and maintenance of Windows workstations. May be repeated up to 6 credits.

Prerequisite(s)/Corequisite(s): OECS 185. Restricted to Community Colleges campuses only.

OECS 208. Internet Applications**1-3 Credits**

Survey of the Internet to include e-mail, file transfer, current search techniques, the World Wide Web and basic Web page development. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

OECS 209. Computer Graphic Arts**1-3 Credits**

Basic graphics composition using computer programs to include editing and manipulating graphic images, clip-art, and printing of pictures. May be repeated for a maximum of 6 credits under different subtitles listed in the Schedule of Classes.

Prerequisite: OECS 105, BCIS 1110, or OECS 101.

OECS 211. Word Processing Applications**1-3 Credits**

Basic word processing to include composing, editing, formatting, and printing of documents. May be repeated under different subtitles listed in the Schedule of Classes for a maximum of 6 credits.

Prerequisites: BCIS 1110 or OECS 105.

OECS 215. Spreadsheet Applications**1-3 Credits**

Use of spreadsheets to include graphics and business applications. May be repeated for a maximum of 6 credits.

Prerequisites: BCIS 1110 or OECS 105.

OECS 220. Database Application and Design**1-3 Credits**

Creating, sorting, and searching of single and multifile databases to include report generation and programming database commands. May be repeated for a maximum of 6 credits under different subtitles listed in the Schedule of Classes. Restricted to: Community Colleges only.

Prerequisite(s): BCIS 1110 OR E T 120 OR E T 122 OR OECS 105.

OECS 221. Internship I**1-3 Credits**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OECS majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of instructor.

OECS 222. Internship II**1-3 Credits**

Continuation of OECS 221. Each credit requires specified number of hours of on-the-job work experience. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OECS majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 221 and consent of instructor.

OECS 223. Web Design for Business**3 Credits (3)**

Design and create a website using HTML, CSS, web development tools and industry-recognized software while applying best practices in site management and business web presence.

Learning Outcomes

1. Students will identify and apply best practices for web design in a business setting. Students will create a basic web page utilizing WC3 principles. Students will explain the importance and impact of web presence in today's business environment. Students will determine and utilize web page features and techniques for a specific business. Students will create a web design management plan for business. Students will discuss web page tools for performance and web traffic analytics. Students will identify web design components for a motble society.

OECS 227. Computer Applications for Technicians**3 Credits (3)**

Computer applications for service technicians in various disciplines. Hardware and software applications explored. Includes operating systems, high level programming, and networking hardware and software.

OECS 230. Data Communications and Networks I**1-3 Credits**

Definition of data communication; survey of hardware applications and teleprocessor software; examination and design of networks. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 185.

OECS 231. Data Communications and Networks II**1-3 Credits**

Installation and application of popular microcomputer network software. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 230.

OECS 234. Linux Server**3-4 Credits (3-4)**

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Linux Server(s). It provides in-depth, hands-on training for planning, implementation, management and support of Linux networking services. May be repeated up to 8 credits.

Prerequisite(s)/Corequisite(s): OECS 204. Restricted to: OECS majors. Restricted to Community Colleges campuses only.

OECS 235. Structured Query Language (SQL)**1-3 Credits**

Installation, configuration, administration, and troubleshooting of SQL client/server database management system. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): OECS 220. Restricted to Community Colleges campuses only.

OECS 237. Windows Server**3-4 Credits (3-4)**

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Microsoft Windows Server Active Directory Domain Services in medium to large businesses. It provides in-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows Active Directory services. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 207. Restricted to Community Colleges campuses only.

OECS 245. Game Programming I**3 Credits (3)**

Development of programming skills for games and animation using current programming languages and tools. May be repeated for a maximum of 6 credits.

Prerequisite: consent of instructor.

OECS 246. Game Programming II**3 Credits (3)**

Continuation of OECS 245. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 245.

OECS 250. Systems Analysis and Design I**3 Credits (3)**

Analysis, configuration, design and testing of organizations' work flow as it relates to hardware, software, data, procedures and personnel. Systems Life Cycle approach matching end users' needs to feasible financial, technical and operational solutions. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 220.

OECS 253. Applied Data Analysis and Management**3 Credits (3)**

Applied use of advanced spreadsheet tools for data analysis and database tools for data and information management. Connect emerging topics in business to tools used in analyzing data and making raw data useful for business decision making.

Prerequisite: BCIS 1110.

Learning Outcomes

1. Manage, integrate, and analyze data with data tools. Generate and summarize data. Use tools for business projections, comparisons, trends, and informed decisions. Create advanced queries and enhance table design. Use form tools and create custom forms. Use automation tools for efficiency. Secure and maintain data. Plan, research, create, and revise spreadsheets and databases for a specific business application. Discuss emerging topics in business related to data analysis and management.

OECS 255. Special Topics**1-4 Credits**

Topics to be announced in the Schedule of Classes.

OECS 261. Introduction to Networks**3-4 Credits (3-4)**

Introduction to networking principles including the practical and conceptual skills for understanding basic networking, planning and designing networks, implementing IP addressing schemes, examining the OSI and TCP/IP layers, and performing basic configurations for routers and switches. Aligns to the first course of the Cisco Networking Academy CCNA curriculum. Restricted to Community Colleges campuses only.

OECS 262. Essentials of Routing and Switching**3-4 Credits (3-4)**

Examination of the architecture, components, and operations of routers and switches in a small network. Student will learn how to configure, verify and troubleshoot: routers and switches, static routing, default routing, VLANs, and ACLs. Aligns to the second course of the Cisco Networking Academy CCNA curriculum. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 261. Restricted to Community Colleges campuses only.

OECS 263. Network Fundamentals**3-4 Credits (3-4)**

Fundamentals of networking architecture, components, and operations including practical and conceptual skills using routers and switches. Student will learn how to configure, verify and troubleshoot static routing, default routing, VLANs, and ACLs. This course aligns to the third course of the Cisco Networking Academy CCNA curriculum. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 262. Restricted to Community Colleges campuses only.

OECS 264. Network Routing Protocols**3-4 Credits (3-4)**

Fundamentals of routing protocols for troubleshooting advanced network operations. Covers common networking issues such as RIP, OSPF, and EIGRP for IPv4 and IPv6 networks. This course aligns to the fourth course of the Cisco Networking Academy CCNA curriculum. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 263. Restricted to Community Colleges campuses only.

OECS 269. Network Security**3-4 Credits (3-4)**

Fundamentals of design and implementation of network security solutions that will reduce the risk of system vulnerability. May be repeated up to 8 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 204 or OECS 207 or OECS 261 or consent of instructor.

OECS 275. PC Maintenance and Repair II**1-3 Credits**

Continuation of OECS 185. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 185.

OECS 280. Desktop Publishing I**3 Credits (3)**

Design and production of publication materials to fill the needs of business communities, using a microcomputer. May be repeated for a maximum of 6 credits. Same as OATS 280.

Prerequisites: either BCIS 1110, OECS 105.

OECS 290. Computer Technology Capstone**1-3 Credits**

Refines skills learned in the OECS program. Culminates in a review and practice of advanced software applications. May be repeated up to 3 credits. Restricted to: OECS & OECT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): (OECS 125, OECS 128, OECS 207, OR OECS 203) AND (OECS 185 OR E T 283).

OECS 299. Independent Study**1-3 Credits**

Specific subjects to be determined based on need. Restricted to: Community Colleges only.

Computer and Information Technology (IT Specialist) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-64 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| Select one from the following: | | 3 |
| BCIS 1110 | Introduction to Information Systems | |
| E T 120 | Computation Software | |
| MATH 1215 | Intermediate Algebra (or Approved technology-related math course) | 3 |
| OECS 220 | Database Application and Design | 3 |
| <i>Business/Computer Electives</i> | | |
| Select one from the following: | | 3 |
| ACCT 2120 | Principles of Accounting II | |
| BCIS 1110 | Introduction to Information Systems | |
| BFIN 2110 | Introduction to Finance | |
| BUSA 1110 | Intro to Business | |
| E T 120 | Computation Software | |
| MGMT 2110 | Principles of Management | |
| MKTG 2110 | Principles of Marketing | |
| Approved programming-related course | | 3 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| OECS 128 | Operating Systems Linux/Unix | 3 |
| Select 3 credits from the following: | | 3 |
| E T 283 | Hardware PC Maintenance | |
| OECS 185 | PC Maintenance and Repair I | |
| OECS 227 | Computer Applications for Technicians | |
| OECS 207 | Windows | 3 |
| Select 3-4 credits from the following: | | 3-4 |
| OECS 290 | Computer Technology Capstone | 3 |
| or OECS 255 | Special Topics | |
| OECS 261 | Introduction to Networks | |
| E T 153 | Fundamentals of Networking Communications | |
| E T 155 | Network Operating Systems I | |
| <i>Concentration Coursework</i> | | |
| Approved computer-related courses | | 15 |
| Total Credits | | 60-64 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | Credits |
|--|-------------------------------------|--------------|
| Fall | | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| MATH 1215 | Intermediate Algebra (or alternate) | 3 |
| Select one from the following: | | 3 |
| BCIS 1110 | Introduction to Information Systems | |
| E T 120 | Computation Software | |
| Concentration course ³ | | 3 |
| Approved programming-related course | | 3 |
| Credits | | 15 |
| Spring | | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| OECS 128 | Operating Systems Linux/Unix | 3 |
| OECS 207 | Windows | 3 |
| Concentration course ³ | | 3 |
| Credits | | 15-16 |

Second Year

| | | |
|--|---|--------------|
| Fall | | |
| OECS 220 | Database Application and Design | 3 |
| Select one from the following: | | 3 |
| E T 283 | Hardware PC Maintenance | |
| OECS 185 | PC Maintenance and Repair I | |
| OECS 227 | Computer Applications for Technicians | |
| Choose one from the following: | | 3-4 |
| E T 153 | Fundamentals of Networking Communications | |
| E T 155 | Network Operating Systems I | |
| OECS 261 | Introduction to Networks | |
| Concentration course ³ | | 3 |
| Business/Computer elective Course ⁴ | | 3 |
| Credits | | 15-16 |
| Spring | | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| General Education Elective - Any "G" course ² | | 3-4 |
| Concentration course ³ | | 3 |
| OECS 290 or OECS 255 | Computer Technology Capstone or Special Topics | 3 |
| Concentration course ³ | | 3 |
| Credits | | 15-17 |
| Total Credits | | 60-64 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ See the Requirements Tab (p. 160) for specific courses.

4

Business/Computer Electives:

- ACCT 2120 Principles of Accounting II
- BCIS 1110 Introduction to Information Systems
- BUSA 1110 Intro to Business
- E T 120 Computation Software
- BFIN 2110 Introduction to Finance
- MGMT 2110 Principles of Management
- MKTG 2110 Principles of Marketing

Computer and Information Technology (Networking) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-64 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| Select one from the following: | | 3 |
| BCIS 1110 | Introduction to Information Systems | |
| E T 120 | Computation Software | |
| MATH 1215 | Intermediate Algebra (or Approved technology-related math course) | 3 |
| OECS 220 | Database Application and Design | 3 |
| <i>Business/Computer Electives</i> | | |
| Select one from the following: | | 3 |
| ACCT 2120 | Principles of Accounting II | |
| BCIS 1110 | Introduction to Information Systems | |
| BFIN 2110 | Introduction to Finance | |
| BUSA 1110 | Intro to Business | |
| E T 120 | Computation Software | |
| MGMT 2110 | Principles of Management | |
| MKTG 2110 | Principles of Marketing | |
| Approved programming-related course | | 3 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| OECS 128 | Operating Systems Linux/Unix | 3 |
| Select 3 credits from the following: | | 3 |
| E T 283 | Hardware PC Maintenance | |
| OECS 185 | PC Maintenance and Repair I | |
| OECS 227 | Computer Applications for Technicians | |
| OECS 207 | Windows | 3 |
| Select 3-4 credits from the following: | | 3-4 |
| OECS 290 | Computer Technology Capstone | 3 |
| or OECS 255 | Special Topics | |
| OECS 261 | Introduction to Networks | |
| E T 153 | Fundamentals of Networking Communications | |
| E T 155 | Network Operating Systems I | |
| <i>Concentration Coursework</i> | | |

| | |
|---------------------------------------|-------------------------------------|
| Select 15 credits from the following: | 15 |
| E T 253 | Networking Operating Systems II |
| OECS 230 | Data Communications and Networks I |
| OECS 231 | Data Communications and Networks II |
| OECS 234 | Linux Server |
| OECS 235 | Structured Query Language (SQL) |
| OECS 262 | Essentials of Routing and Switching |
| OECS 263 | Network Fundamentals |
| OECS 264 | Network Routing Protocols |
| OECS 269 | Network Security |

Total Credits **60-64**

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | Credits |
|--|-------------------------------------|
| Fall | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | 3 |
| MATH 1215 | Intermediate Algebra (or alternate) |
| Select one from the following: | 3 |
| BCIS 1110 | Introduction to Information Systems |
| E T 120 | Computation Software |
| Concentration course ³ | 3 |
| Approved programming-related course | 3 |
| Credits | 15 |

| | |
|--|------------------------------|
| Spring | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | 3-4 |
| OECS 128 | Operating Systems Linux/Unix |
| OECS 207 | Windows |
| Concentration course ³ | 3 |
| Credits | 15-16 |

Second Year

| | |
|--|---|
| Fall | |
| OECS 220 | Database Application and Design |
| Select one from the following: | 3 |
| E T 283 | Hardware PC Maintenance |
| OECS 185 | PC Maintenance and Repair I |
| OECS 227 | Computer Applications for Technicians |
| Choose one from the following: | 3-4 |
| E T 153 | Fundamentals of Networking Communications |
| E T 155 | Network Operating Systems I |
| OECS 261 | Introduction to Networks |
| Concentration course ³ | 3 |
| Business/Computer elective Course ⁴ | 3 |
| Credits | 15-16 |

| | |
|--|------------------------------|
| Spring | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | 3-4 |
| General Education Elective - Any "G" course ² | 3-4 |
| Concentration course ³ | 3 |
| OECS 290 | Computer Technology Capstone |
| or OECS 255 | or Special Topics |

Concentration course³

3

| Credits | 15-17 |
|----------------------|--------------|
| Total Credits | 60-64 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ See the Requirements Tab (p. 162) for specific courses.
- ⁴ **Business/Computer Electives:**
 - ACCT 2120 Principles of Accounting II
 - BCIS 1110 Introduction to Information Systems
 - BUSA 1110 Intro to Business
 - E T 120 Computation Software
 - BFIN 2110 Introduction to Finance
 - MGMT 2110 Principles of Management
 - MKTG 2110 Principles of Marketing

Computer and Information Technology (Programming) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-64 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---------------------------------------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| Select one from the following: | | 3 |
| BCIS 1110 | Introduction to Information Systems | |
| E T 120 | Computation Software | |
| MATH 1215 | Intermediate Algebra | 3 |
| OECS 220 | Database Application and Design | 3 |
| <i>Business/Computer Electives</i> | | |
| Select one from the following: | | 3 |
| ACCT 2120 | Principles of Accounting II | |
| BCIS 1110 | Introduction to Information Systems | |
| BFIN 2110 | Introduction to Finance | |
| BUSA 1110 | Intro to Business | |
| E T 120 | Computation Software | |
| MGMT 2110 | Principles of Management | |
| MKTG 2110 | Principles of Marketing | |
| Approved programming-related course | | 3 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| OECS 128 | Operating Systems Linux/Unix | 3 |
| Select 3 credits from the following: | | 3 |
| E T 283 | Hardware PC Maintenance | |
| OECS 185 | PC Maintenance and Repair I | |
| OECS 227 | Computer Applications for Technicians | |

| | | |
|--|---|-----|
| OECS 207 | Windows | 3 |
| Select 3-4 credits from the following: | | 3-4 |
| OECS 290 | Computer Technology Capstone | 3 |
| or OECS 255 | Special Topics | |
| OECS 261 | Introduction to Networks | |
| E T 153 | Fundamentals of Networking Communications | |
| E T 155 | Network Operating Systems I | |
| <i>Concentration Coursework</i> | | |
| Select 15 credits from the following: | | 15 |
| E T 253 | Networking Operating Systems II | |
| E T 283 | Hardware PC Maintenance | |
| OECS 192 | C++ Programming I | |
| OECS 195 | Java Programming I | |
| OECS 235 | Structured Query Language (SQL) | |
| OECS 245 | Game Programming I | |

Total Credits 60-64

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | |
|--|-------------------------------------|----------------|
| Fall | | Credits |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| MATH 1215 | Intermediate Algebra (or alternate) | 3 |
| Select one from the following: | | 3 |
| BCIS 1110 | Introduction to Information Systems | |
| E T 120 | Computation Software | |
| Concentration course ³ | | 3 |
| Approved programming-related course | | 3 |
| Credits | | 15 |
| Spring | | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| OECS 128 | Operating Systems Linux/Unix | 3 |
| OECS 207 | Windows | 3 |
| Concentration course ³ | | 3 |
| Credits | | 15-16 |

Second Year

| | | |
|--|---|--------------|
| Fall | | |
| OECS 220 | Database Application and Design | 3 |
| Select one from the following: | | 3 |
| E T 283 | Hardware PC Maintenance | |
| OECS 185 | PC Maintenance and Repair I | |
| OECS 227 | Computer Applications for Technicians | |
| Choose one from the following: | | 3-4 |
| E T 153 | Fundamentals of Networking Communications | |
| E T 155 | Network Operating Systems I | |
| OECS 261 | Introduction to Networks | |
| Concentration course ³ | | 3 |
| Business/Computer elective Course ⁴ | | 3 |
| Credits | | 15-16 |

Spring

| | | |
|--|---|--------------|
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| General Education Elective - Any "G" course ² | | 3-4 |
| Concentration course ³ | | 3 |
| OECS 290 or OECS 255 | Computer Technology Capstone or Special Topics | 3 |
| Concentration course ³ | | 3 |
| Credits | | 15-17 |
| Total Credits | | 60-64 |

- 1 Each course selected must be from a different area and students cannot take multiple courses in the same area.
- 2 See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- 3 See the Requirements Tab (p. 164) for specific courses.
- 4 **Business/Computer Electives:**
- ACCT 2120 Principles of Accounting II
 - BCIS 1110 Introduction to Information Systems
 - BUSA 1110 Intro to Business
 - E T 120 Computation Software
 - BFIN 2110 Introduction to Finance
 - MGMT 2110 Principles of Management
 - MKTG 2110 Principles of Marketing

Microcomputer Applications - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|-------------------------------------|-----------|
| Core Curriculum Requirements | | |
| BCIS 1110 | Introduction to Information Systems | 3 |
| COMM 1115G | Introduction to Communication | 3 |
| OECS 110 | Introduction to Power Point | 1 |
| OECS 255 | Special Topics | 1 |
| OECS 125 | Operating Systems | 3 |
| OECS 200 | Accounting on Microcomputers | 3 |
| OECS 209 | Computer Graphic Arts | 3 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| OECS 220 | Database Application and Design | 3 |
| Approved OECS Course | | 3 |
| OECS 280 | Desktop Publishing I | 3 |
| Total Credits | | 32 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

| Course | Title | Credits |
|-------------------|-------------------------------------|-----------|
| First Year | | |
| Fall | | |
| BCIS 1110 | Introduction to Information Systems | 3 |
| OECS 125 | Operating Systems | 3 |
| OECS 211 | Word Processing Applications | 3 |
| OECS 255 | Special Topics | 1 |
| OECS 220 | Database Application and Design | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Credits | | 16 |
| Spring | | |
| OECS 209 | Computer Graphic Arts | 3 |

| | | |
|----------------------|-------------------------------|-----------|
| OECS 200 | Accounting on Microcomputers | 3 |
| Approved OECS Course | | 3 |
| COMM 1115G | Introduction to Communication | 3 |
| OECS 280 | Desktop Publishing I | 3 |
| OECS 110 | Introduction to Power Point | 1 |
| Credits | | 16 |
| Total Credits | | 32 |

Criminal Justice

The **Associate in Criminal Justice** introduces the graduate to three facets of the Criminal Justice System (e.g., Police, Courts, and Corrections). This degree plan is broadly interdisciplinary in nature embracing the study of the humanities, law, and natural, behavioral, and social sciences. The curriculum seeks to balance theoretical inquiry with applied knowledge.

This degree plan is designed to prepare students to transfer to NMSU Las Cruces to complete a Bachelor of Criminal Justice Degree. NMSU Las Cruces, through the College of Distance Education, also offers an online Criminal Justice Bachelor's degree with required upper division courses offered online. Note that 100 and 200 level Bachelor degree requirements are not part of that online offering therefore students who are planning on taking the Criminal Justice Online degree program are advised to take a second English 200 level course as the recommended elective in the Associate degree and to complete a second or heritage language sequence at the 200 level (that is, 211-212; 213-214).

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Criminal Justice - Associate in Criminal Justice (p. 169)

CJUS 1110G. Introduction to Criminal Justice

3 Credits (3)

This course provides an overall exploration of the historical development and structure of the United States criminal justice system, with emphasis on how the varied components of the justice system intertwine to protect and preserve individual rights. The course covers critical analysis of criminal justice processes and the ethical, legal, and political factors affecting the exercise of discretion by criminal justice professionals.

Learning Outcomes

1. Describe the history, structure and function of the criminal justice system in the United States.
2. Discuss the role of law enforcement, court systems, corrections, and security in maintaining social order.
3. Identify and describe crime causation theories, various measures of crime and their reliability and victimization theories.
4. Relate fundamental principles, concepts and terminology used in criminal justice to current events.
5. Apply basic analytical and critical thinking skills in evaluating criminal justice issues, policies, trends and disparities.

CJUS 1120. Criminal Law

3 Credits (3)

This course covers basic principles of substantive criminal law including elements of crimes against persons, property, public order, public morality, defenses to crimes, and parties to crime. May be repeated up to 3 credits.

Learning Outcomes

1. Explain the concepts of substantive criminal liability in the United States, including actus reas, mens rea, causation, concurrence, and parties to crime.
2. Define the differences between criminal law and civil law in the United States.
3. Demonstrate basic knowledge of legal terminology as it relates to criminal law.
4. Identify the elements of crimes against persons, property, public order and the administration of justice, public morality, and the inchoate crimes.
5. Describe the various defenses to crimes.

CJUS 1996. Special Topics in Criminal Justice

1-3 Credits

Specific subjects to be announced in the Schedule of Classes. May be repeated under different topics for a maximum of 6 credits.

Learning Outcomes

1. Varies

CJUS 2120. Criminal Courts and Procedure**3 Credits (3)**

This course covers the structures and functions of American trial and appellate courts, including the roles of attorneys, judges, and other court personnel, the formal and informal process of applying constitutional law, rules of evidence, case law and an understanding of the logic used by the courts.

Learning Outcomes

1. Explain the application of the Constitutional Amendments that apply to criminal justice.
2. Explain and describe the dual court system in the U.S. and how courts enforce the rule of law.
3. Identify and list the duties and requirements of the courtroom workgroup.
4. Describe courtroom procedures, rules of the court, and due process of law.
5. Articulate basic knowledge of the U.S. criminal court system.
6. Define legal terms.
7. Explain the use of discretion in criminal procedure.
8. Differentiate the role of courts of limited jurisdiction, courts of general jurisdiction, and the appellate courts in the processing of criminal cases.

CJUS 2140. Criminal Investigations**3 Credits (3)**

This course introduces criminal investigations with in the various local, state, and federal law enforcement agencies. Emphasis is given to the theory, techniques, aids, technology, collection, and preservation procedures which insure the evidentiary integrity. Courtroom evidentiary procedures and techniques will be introduced. Community Colleges only. (Note: students completing CJUS 2140 may not take CJUS 321.)

Learning Outcomes

1. Identify developments in investigation technology.
2. Identify common types of criminal investigations and their key components.
3. Apply proper crime scene investigative protocols.
4. Explain proper evidentiary gathering and handing procedures, and utilize various interviewing techniques.
5. Identify and compare different law enforcement agencies and the role they play in criminal investigations.
6. Describe proper collection, evidence preservation, documentation, and court presentation.
7. Develop effective search authorization.

CJUS 2150. Corrections System**3 Credits (3)**

This course introduces the corrections system in the United States, including the processing of an offender in the system and the responsibilities and duties of correctional professionals. The course covers the historical development, theory, and practice, as well as the institutional and community-based alternatives available in the corrections process.

Learning Outcomes

1. Describe the purposes of the corrections system and the issues facing the corrections system.
2. Explain the components of the corrections system and describe their functions.
3. Compare and contrast the different forms of correction practices.
4. Explain the goals of corrections, the different factors affecting the sentencing process, the legal rights of prisoners, and the issues concerning prison violence.
5. Explain the impact of reentry into society.
6. Identify the issues concerning capital punishment.
7. Describe the effectiveness of various correction programs on offenders.

CJUS 2160. Field Experience in Criminal Justice**3-6 Credits**

This course is designed to provide actual experience working for a criminal justice agency and the opportunity to apply criminal justice concepts and theory to a field situation. Students already working in an agency will complete an approved learning project while on the job.

Prerequisites: CJUS 1110G, prior arrangement and consent of instructor and a GPA of 2.0 or better in major.

Learning Outcomes

1. Obtain practical experience by observing, researching, and working in a criminal justice agency.
2. Apply the knowledge of principles, theories, and methods that were learned in the classroom to situation in which field experience will be devoted.
3. Instill an understanding for general and specific problems that criminal justice agencies encounter on a daily basis.
4. Develop a professional work ethic and attitudes, including reliability, professional responsibility, and the ability to work cooperatively with others.

CJUS 2220. The American Law Enforcement System**3 Credits (3)**

This course covers the historical and philosophical foundations of law and order, with an in-depth examination of the various local, state, and federal law enforcement agencies and how they interact within the criminal justice system.

Learning Outcomes

1. Discuss, evaluate, and analyze the role of police in the democratic society today, and the historical development of modern day law enforcement
2. Define and explain the different types of community policing and the valid reasons behind their application within a community
3. List and discuss the ways to overcome the barriers to change within a police organization, good recruitment, screening, and retention of employees
4. Analyze and discuss the history of and the different types of police patrol, as well as the use of force and deadly force, and methods used for controlling police behavior
5. Describe and discuss the different types of police behavior, potential oversight, and remedy and their limitations
6. List and discuss the benefits of higher and continued education, along with the minimum educational requirements for police officers
7. Evaluate and discuss the reasons for police stress and the methods of dealing with stressors
8. Interpret current court cases, both state and federal, that affect police procedures

Criminal Justice - Associate in Criminal Justice

A grade of C- or better is required in all Criminal Justice courses, Second Language courses, and any courses filling the Core Requirements.

A maximum of 3-5 credit hours of applied coursework may be counted towards a C J degree. PL S (Paralegal Studies) courses can never replace or substitute for a Criminal Justice (C J) course but may be used as electives within the 3-5 credits applied course limit. Please contact an advisor.

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---|---------|
| General Education | | |
| <i>Area I: Communications</i> | | |
| <i>English Composition - Level 1</i> | | |
| ENGL 1110G | Composition I | 4 |
| <i>English Composition - Level 2</i> | | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| <i>Oral Communication</i> | | |
| Choose one from the following: | | 3 |
| COMM 1130G | Public Speaking | |
| or COMM 1115G | Introduction to Communication | |
| <i>Area II: Mathematics</i> | | |
| MATH 1220G | College Algebra | 3 |
| or MATH 1350G | Introduction to Statistics | |
| <i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i> | | 10 |
| CJUS 1110G | Introduction to Criminal Justice (Core requirement) | |
| SOCI 2310G | Contemporary Social Problems | |
| Area III: Laboratory Sciences Course (4 credits) ² | | |
| <i>Area V: Humanities</i> | | |
| Choose one from the following (course will also count as Core Requirement): | | 3 |
| PHIL 1115G | Introduction to Philosophy | |
| PHIL 1120G | Logic, Reasoning, & Critical Thinking | |
| PHIL 2230G | Philosophical Thought | |
| <i>Area VI: Creative and Fine Arts</i> ² | | 3 |
| <i>General Education Elective</i> | | |
| POLS 1120G | American National Government | 3 |
| Core Requirements | | |
| Both CJUS 1110G and one PHIL course will count towards both Core and General Education Requirements | | |
| CJUS 1120 | Criminal Law | 3 |
| CJUS 2120 | Criminal Courts and Procedure | 3 |

| | | |
|--|--------------------------------------|-----------|
| CJUS 2150 | Corrections System | 3 |
| CJUS 2220 | The American Law Enforcement System | 3 |
| Second Language: (required) | | |
| Choose one of the following option to complete the Second Language Requirement | | 8 |
| Completion of a second language through the 1120 level | | |
| Completion of a second language through the 1130 or 1140 level for Heritage speakers | | |
| Fulfilling one of the alternatives (see an advisor for specifics) | | |
| Electives, to bring total credits to 60³ | | 8 |
| <i>Recommended Electives</i> | | |
| CJUS 2140 | Criminal Investigations | |
| CJUS 2160 | Field Experience in Criminal Justice | |
| PSYC 2221 | Applied Psychology | |
| Total Credits | | 60 |

- ¹ A Mathematics course is required for the degree but students may need to take any prerequisites needed to enter the course first.
- ² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|---|-----------|
| CJUS 1110G | Introduction to Criminal Justice | 3 |
| ENGL 1110G | Composition I | 4 |
| POLS 1120G | American National Government | 3 |
| Area VI: Creative and Fine Arts Course ² | | 3 |
| Credits | | 13 |
| Spring | | |
| Choose one from the following: | | 3 |
| ENGL 2210G or ENGL 2221G | Professional & Technical Communication or Writing in the Humanities and Social Science | |
| CJUS 2220 | The American Law Enforcement System | 3 |
| CJUS 2150 | Corrections System | 3 |
| Area III: Laboratory Science Course ² | | 4 |
| Elective ³ | | 3 |
| Credits | | 16 |

Second Year

| Fall | | |
|--|--|-----------|
| SPAN 1110 | Spanish I (Foreign Language) ⁴ | 4 |
| MATH 1220G or MATH 1350G | College Algebra ¹ or Introduction to Statistics | 3 |
| PHIL 1115G or PHIL 2230G or PHIL 1120G | Introduction to Philosophy or Philosophical Thought or Logic, Reasoning, & Critical Thinking | 3 |
| CJUS 1120 | Criminal Law | 3 |
| Elective Course ^{3,5} | | 3 |
| Credits | | 16 |
| Spring | | |
| SPAN 1120 | Spanish II ⁴ | 4 |
| CJUS 2120 | Criminal Courts and Procedure | 3 |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| SOCI 2310G | Contemporary Social Problems | 3 |

Elective Course ³

2

Credits**15****Total Credits****60**

- 1 A Mathematics course is required for the degree but students may need to take any prerequisites needed to enter the course first.
- 2 See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- 3 Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.
- 4 Students can follow one of the options below to complete the Second Language Requirement (the one displayed in this roadmap is option 1 with SPAN courses)
 1. Completion of a second language through the 1120 level
 2. Completion of a second language through the 1130 or 1140 level for Heritage speakers
 3. Fulfilling one of the alternatives (see an advisor for specifics)
- 5 Or any additional English Composition - Level 2 course

Digital Media Technology

The **Digital Media Technology** program offers instruction and hands-on learning in in graphic design, digital video production, gaming, animation, simulation, and web design. Students may choose from several certificates which also apply towards the Associate of Applied Science degree in Digital Media Technology. Those include:

- **Digital Animation:** three-dimensional computer graphic animation
- **Digital Graphics:** the creation, publication and management of digital graphics for online distribution
- **Digital Video:** video production techniques for digital media
- **Digital Video Game Animation:** video game design and development for entertainment

Graduation Requirements

Digital Media Certificates (all): WorkKeys® scores of level 5 in Reading for Information, level 4 in Locating Information, and level 5 in Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Digital Media Technology: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. **TOTAL CREDITS REQUIRED FOR DEGREE: 60 credit hours**

Digital Animation - Certificate (p. 187)

Digital Graphics - Certificate (p. 187)

Digital Video - Certificate (p. 188)

Digital Video Game Animation - Certificate (p. 189)

Digital Media Technology (Digital Animation) - Associate of Applied Science (p. 189)

Digital Media Technology (Digital Graphics) - Associate of Applied Science (p. 192)

Digital Media Technology (Digital Video) - Associate of Applied Science (p. 194)

FDMA 1110. Film History**3 Credits (3)**

This course surveys the history of cinema -investigating the process by which the original "cinema of attractions" evolved into a globally dominant form of visual storytelling. We will explore the development of cinema both as an art form and as an industry, and consider the technological, economic, cultural factors, and key international movements that shape it.

Learning Outcomes

1. Develop appreciation for the history of cinema.
2. Develop knowledge of the key eras in the history of US cinema.
3. Learn the characteristics of major movements in international cinema.
4. Explain technological innovations that were necessary for, and integral to, the advancement of cinema.
5. Recognize the various elements that go into telling a story in cinema.

FDMA 1120. Desktop Publishing**3 Credits (2+2P)**

This course is designed to teach introductory skills for designing and creating publications and presentations with layout software. The course will focus on graphics and typographic design, fonts, and other skills for print and web publishing.

Learning Outcomes

1. Demonstrate knowledge of fundamental features and navigation of desktop publishing software.
2. Combine text and images for effective communication.
3. Develop a balanced composition through use of color, contrast, and alignment.
4. Place images within a composition and wrap around text.
5. Produce documents with professional layout and typography skills.
6. Create attractive and effective designs.
7. Combine knowledge of typography, images, and design principles to produce professional print and web media.
8. Create or add to a professional design portfolio for future use.

FDMA 1210. Digital Video Production I**3 Credits (2+4P)**

An introduction to digital video production. Students learn camera operation, lights and audio equipment. Hands-on production is completed in the studio and on location.

Learning Outcomes

1. Plan and produce a digital video project
2. Apply post-production workflow
3. Work in team and as individual to complete digital video projects.

FDMA 1220. Introduction to Digital Video Editing**3 Credits (3)**

In this course, students learn the basics of the post-production process for non-linear video editing. Students work with multiple video formats and create short movies for multiple distribution platforms. Skills include media management and professional terminology. Sections on the Main Campus will be restricted to CMI students.

Learning Outcomes

1. Define concepts related to digital video editing.
2. Use non-linear video editing software for editing a short film
3. Enhance storytelling through the use of continuity, timing, cutaways, intercutting, compositing, transitioning, jump cutting, montaging and animating.
4. Use text, titles, transitions, video effects, sound effects, dialogue, and visual assets for digital video editing.

FDMA 1260. Introduction to Digital Media**1-3 Credits (1-3)**

Explores concepts of how text, graphics, sound, images and video come together in a digital media program and researching new trends and current issues related to media applications and design. Students will be involved in teamwork, communication and workplace interaction simulation . May be repeated up to 12 credits. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Describe and identify the principal components and terminology of digital media.
2. Analyze and examine the use of digital media as a communication tool
3. Plan and implement a digital media project
4. Critique professional digital media products.
5. Create projects using a variety of digital media tools
6. Demonstrate a working knowledge of copyright and usage rights
7. Present completed projects in a professional manner for critique.

FDMA 1360. Web Design I**3 Credits (2+2P)**

This course provides an introduction to web development techniques, theory, and design. Students will learn HTML, CSS application, and strategies for effective site navigation and design, along with industry standard web editing software to develop various websites. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): ARTS 1520 OR FDMA 1515.

Learning Outcomes

1. Acquire and utilize web design terminology.
2. Create basic web pages using HTML.
3. Demonstrate how to use industry-standard, web editing software.
4. Design professional pages that are easy to navigate and quick to load.
5. Develop a basic comprehension of CSS
6. Prepare and export a variety of graphics to be used online.
7. Compare and contrast designing for web media vs. print media.
8. Analyze the importance of web presence in today's business/social climate

FDMA 1410. Audio Production I**3 Credits (2+2P)**

Students will learn about and apply essential tools and techniques in analog and digital audio production. Topics include acoustic science, microphones, recording and mixing techniques, analog and digital audio hardware and software, including, multi-track, computer-based recording and editing systems. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 1210 and FDMA 2410.

Learning Outcomes

1. Apply tools and techniques in analog and digital audio production
2. Illustrate the fundamentals of acoustic science.
3. Model professional behavior used in audio recording.

FDMA 1415. Principles of Sound**3 Credits (2+2P)**

The creation of a professional quality original media soundtrack is possible for relatively low production/post production cost. This class is designed to give the student and overview of creating sound for a variety of digital media. Topics include acoustic principles, sound design, audio hardware, recording techniques; and editing, processing, and multi-track mixing, using software applications. Restricted to: Community Colleges only.

Prerequisite(s)/Corequisite(s): FDMA 1220.

Learning Outcomes

1. Record and edit wild sound effects and synced dialogue
2. Discover, upload, and edit on-linemusic, ambience and sound effect loops
3. Implement audio design theories
4. Create an aesthetic soundtrack which incorporates multiple elements and dimensions
5. Design, edit, process, mix and master a synced multi-track soundtrack
6. Demonstrate capable use of digital audio production and post-production workflow
7. Produce short audio projects which meet media industry technical standards

FDMA 1510. Introduction to 3D Animation**3 Credits (3)**

This course provides an overview of 3D animation production processes. Students will be introduced to basic story development and the creation of computer-generated assets and cinematic sequences. The course will survey specialty areas of digital animation and various software and techniques applied in entertainment and information media. Students will review and critique other's animation, as well as plan and produce original animation for review by classmates and as part of a CGI demo reel.

Prerequisite(s): FDMA 2382 or FDMA 2381 or consent of instructor.

Learning Outcomes

1. Demonstrate a fundamental understanding of 3D animation history and principles.
2. Analyze animation work of other artists.
3. Appropriately utilize the various media technologies for digital 3D animation.
4. Demonstrate and apply basic techniques of digital 3D animation.
5. Demonstrate and apply basic processes of creating CGI for a narrative.
6. Apply some basic strategies for developing and creating a story visually, and create original animations.
7. Present original animations to instructor and classmates for critique.
8. Create a CGI demo reel of work completed during the course.

FDMA 1515. Introduction to Digital Image Editing - Photoshop**3 Credits (2+2P)**

In this course, students will learn how to use the tools in Adobe Photoshop to create new images and edit existing images. Tools used will include selections, layers, and adjustments, among other pixel editing tools. Basic composition and output will be emphasized in all projects. May be repeated for a maximum of 6 credits.

Learning Outcomes

1. Make and refine selections
2. Adjust color and tone in an image
3. Eliminate unwanted objects in an image
4. Apply layers to organize and create effects
5. Create brushes, styles and vector shapes
6. Prepare image for print and screen output
7. Apply masking and layers to non-destructively edit an image
8. Effectively utilize blending modes and layer styles
9. 1Apply adjustment layers
10. 1Apply design principles including typography

FDMA 1531. Evolution of Electronic Games**3 Credits (2+2P)**

Focus on the evolution of video games and how they have shaped mainstream entertainment. May be repeated up to 6 credits.

FDMA 1535. Introduction to Illustrator**3 Credits (2+2P)**

Students receive instruction on vector graphics creation using vector illustration software. The students will create professional-quality artwork for print publishing and multimedia graphics. Instruction includes creating and manipulating basic shapes, drawing with the pen tool, using various brushes, working with type and preparing graphics for web, print, and digital publication. May be repeated for a maximum of 6 credits.

Learning Outcomes

1. Apply a variety of shape blending options
2. Create and apply new gradients
3. Apply Gradient Meshes and Envelopes
4. Create symbols, brushes and vector shapes
5. Apply Pathfinder and other effects
6. Effectively utilize the pen tool to draw and edit shapes
7. Effectively utilize Vector tools
8. Prepare image for print and screen output
9. Apply clipping masks
10. 1Prepare image for use in another program
11. 1Apply design principles including typography

FDMA 1536. Advanced Computer Illustration**3 Credits (2+2P)**

Advanced techniques in 2D vector drawing and fundamentals of 3D illustration for use in print, web, and multimedia applications. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1535.

Learning Outcomes

1. Demonstrate proficiency in using advanced features of Illustrator.
2. Identify and create different illustrator/art styles using advanced techniques for shading, perspective, light, reflection.
3. Produce high quality digital imagery incorporating basic principles of composition.
4. Create a series of illustrations demonstrating a design competency in layout foundation and illustrative moods or client/project based solutions.
5. Create high quality portfolio pieces that demonstrate an advanced knowledge of design, composition and Illustrator techniques.
6. The students will produce finished printed portfolio pieces demonstrating a comprehensive knowledge of typographical, design, illustrative and layout skills

FDMA 1545. Introduction to Photography & Digital Imaging**3 Credits (2+2P)**

This course is a study of the principles and techniques of photography using digital equipment, and discusses how digital cameras, imaging editing, and technology have changed the world of photography. Students will learn about studies in resolution, lighting, software, editing, printing, and web applications. They will gain fundamental knowledge in the rapidly expanding technology of photography and imaging, and be able to incorporate the knowledge into all areas of digital graphics.

Learning Outcomes

1. Exhibit proper usage of the principles and techniques of photography using digital equipment.
2. Utilize features and techniques of a digital camera with proper use of lenses, settings, and flashes.
3. Create photo collections that represent proper use of technical skills.
4. Demonstrate proficiency in planning, lighting, capturing, and distributing photographic projects which show ability to create photographs artistically and to tell a story or express an idea.
5. Utilize appropriate software to create original projects.
6. Demonstrate knowledge in post-production of photos as to sizing, sampling, resolution, and exporting.
7. Produce original projects which respect intellectual property of others.
8. Create a digital portfolio of work completed during the course.

FDMA 1555. Introduction to the Creative Media Industry**3 Credits (3)**

This class is an introductory course for students who are beginning their understanding of Media and how it affects them and our society. It offers a broad-stroked view of the entire industry including Marketing, Production, History, Jobs, Design, Architecture, New Media Literacy, and industry standards. Students will listen to experts in the field, get involved in open discussions about the industry and use new information to complete hands-on individual & group assignments.

Learning Outcomes

1. The basic philosophies and methods that guide people working in the Creative Media industry.
2. Knowledge of a wide variety of different jobs, qualifications and paradigms used in the industry.
3. Marketing, Production, Budgets, History, New Media, Inspiration and other aspects of the industry.
4. An accurate view of the Creative Media field.

FDMA 1630. Principles of Design**3 Credits (2+2P)**

This course will explore how we see and use visuals to communicate information. Students will develop critical thinking skills in applying concepts of basic design principles. Students will apply the concepts with hands-on and analysis assignments. These concepts will then be applied to design for advertising, print, digital media, and web design. The business of design will also be covered with emphasis on client relations and networking. Restricted to: Community Colleges only. Prerequisite(s): FDMA 1535

Learning Outcomes

1. Practice Creativity
2. Plan a Design project
3. Demonstrate the effective use of Emphasis Contrast
4. Demonstrate the effective use of Balance and Alignment
5. Demonstrate the effective use of Harmony and Repetition
6. Demonstrate the effective use of Flow, Movement, and Rhythm
7. Demonstrate the effective use of Simplicity and Economy
8. Effectively apply basic color theory
9. Demonstrate the effective use of Typography principles
10. 1Apply design principles to Screen Print Projects
11. 1Develop client relations

FDMA 1710. 2D Animation**3 Credits (2+2P)**

Concepts and techniques in storyboarding and creating interactive 2D animations for web, multimedia and video.

Prerequisite(s): FDMA 1535.

Learning Outcomes

1. Be able to correctly storyboard an animation scene
2. Define and demonstrate basic animation terminology and principles.
3. Produce a complete hand drawn animation using industry standard software and processes.

FDMA 1715. 2-D COMPOSING & FX**3 Credits (3)**

The purpose of this course is to familiarize students with the powerful compositing and special effects tools of Adobe After Effects for 2D, traditional animation. Students will learn how to assemble an existing un-rendered animation into a final piece with advanced 3D lighting, spacing, and digital effects so that it can achieve a dynamic, professionally rendered look. Restricted to Las Cruces campus only.

Learning Outcomes

1. The goal of this class is for students to learn how to use advanced compositing and effects tools in order to achieve a more dynamic and professional visual look for their animations or motion graphics.
2. By the end of the class, you should be proficient animation compositors that can assemble and
3. synthesize a basic animation into a rendered, visually sophisticated piece.
4. Students who pass this class will have a basic to intermediate knowledge of Adobe After Effects

FDMA 1720. 3-D Character Design**3 Credits (2+4P)**

Focus on designing a character and then taking that design and building it in 3D using intermediate modeling techniques. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1510 or FDMA 2530.

Learning Outcomes

1. Translate concept art into a low and high resolution 3D model using proper modeling techniques
2. Use Polygon modeling techniques to create a 3D character
3. Layout UVs and utilize Adobe Photoshop to texture a model.

FDMA 1996. Selected Topics**1-4 Credits (1-4)**

Specific titles to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Varies

FDMA 2111. Environmental Scene Design**3 Credits (2+4P)**

Modeling design techniques used to create environments and scenes for use in animated films and games. Investigation of both natural and architectural environments to be recreated in the virtual world.

Prerequisite(s): FDMA 1510 or FDMA 2530.

FDMA 2120. Film Crew I/ Introduction to Film and Media Workflow**9 Credits (9)**

An introduction to the film industry. This class teaches film production processes, film crew hierarchy, film production set-safety and etiquette and provides hands-on training in industry standard film production equipment. Students complete the semester by participating as a below-the-line crew member on a short film. Restricted to: Community Colleges only.

Learning Outcomes

1. Explain film production processes; Interpret call sheets and deal memos, model basic on-set protocols and professional behavior
2. Assist producers and directors in completing a professional film project
3. Work effectively in production crew positions in a group environment.
4. Recognize and articulate specific film production structure, from original concept to final release

FDMA 2125. Film Crew II**9 Credits (9)**

The second course designed to train students to become working members of film crews. It will be taught by working film professionals. Content will be lecture and hands-on. Students complete the semester by working as part of an actual film crew as below-the-line and above-the-line crew members. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 2120.

Learning Outcomes

1. Understand film production processes used to produce a film
2. Manage craft area job functions
3. Model on-set protocols and professional behaviors
4. Assist producers and directors in completing a professional film project

FDMA 2150. Desktop Publishing II**3 Credits (2+2P)**

This class will enhance and build upon student layout/design skills developed in the Introduction to Desktop Publishing course, incorporating intermediate to advanced concepts in typography and layout design. Upon completion of this course, students will be able to use page layout software to prepare a variety of documents for presentation and critique, including newsletters, instructional flyers, and other complex design/typographic pieces. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1120.

Learning Outcomes

1. Build upon knowledge of design and design terminology.
2. Exhibit intermediate to advanced design principles using type, layout, and color.
3. Demonstrate skill in intermediate to advanced concepts and features of page layout software.
4. Exhibit knowledge of styles, tables, images and clipping paths and interactive documents as well as printing preparations and procedures.
5. Create layouts for print, web, and other media that demonstrate an intermediate to advanced knowledge in typography and layout design.
6. Format and produce newsletters and instructional flyers, as well as larger, complex projects such as packaging mechanicals, multiple master page documents, and books.
7. Assess works of graphic design for quality and effectiveness.
8. Utilize produced material to create or add to a design portfolio for future use.

FDMA 2210. Digital Video Production II**3 Credits (2+2P)**

Advanced techniques of the tools and application of professional film making. May be repeated for a maximum of 6 credits.

Prerequisite: FDMA 1210.

Learning Outcomes

1. Demonstrate the ability to produce and manage a video project: Produce a script, storyboard, and production schedule for a video project designed for a specific audience.
2. Demonstrate proficiency in producing quality digital video footage and audio tracks: Shoot to the script and storyboard using a variety of camera and lighting techniques; Produce a finished complex sound track including narration, music, and sound effect.
3. Demonstrate ability to produce and edit a professional quality video project: Integrate all production aspects of the project including video, audio, graphics, titles, transitions, and effects. Guide the project through the final production stages.
4. Develop competency in digital video distribution using various formats and techniques: Distribute project in various formats which could include DVD and web posting.

FDMA 2241. Advanced Camera Techniques**3 Credits (2+2P)**

Professional camera techniques and training for electronic news gathering and studio filmmaking. Utilizes high-end handheld shooting techniques, cranes, dollies, and steadicam training. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1210.

Learning Outcomes

1. Students knowledge of high-end video camera operation and features.
2. Students must know all the working features of the video production equipment being used during the course in order to achieve the desired footage as required by the instructor.
3. Demonstrate proficiency in producing quality digital video footage.
4. Individuals must acquire the knowledge of different shooting styles in different productions situations and use those acquired skills to produce the appropriate video footage.
5. Using the proper lighting in different on location shooting styles.
6. Skill of each individual utilizing the usage of high-end camera equipment such as dollies, cranes and Steadicam.
7. Each individual must work as a team player to create professional style video footage.

FDMA 2285. Digital Video Production and Editing II**3 Credits (2+2P)**

Advanced features of digital video, audio/music, and titling production software. Included are color correction, vector scopes, motion effects, and advanced editing techniques used by filmmakers. Restricted to Community Colleges campuses only. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1220.

Learning Outcomes

1. Intermediate to advanced video editing create short films and training videos, create TV quality commercials, direct a news broadcast, and work as a mentor to students on digital media equipment

FDMA 2287. Digital Design Studio**1-3 Credits**

A design studio environment in which students obtain real-world experience while providing service to college and non-profit associations with faculty supervision using a variety of media. Can be used with permission to fulfill cooperative requirement. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1630 or ARTS 1712.

Learning Outcomes

1. Demonstrate competency in the use of InDesign software.
2. Create appropriate visual solutions based on target marketing information.
3. Demonstrate competency in the design and production of advertising and promotional materials.
4. Present ideas and concepts effectively and competently.
5. Visually demonstrate design solutions to be used in a portfolio.

FDMA 2310. History of Cinema I**3 Credits (3)**

This course surveys the history of cinema - investigating the process by which the original "cinema of attractions" evolved into a globally dominant form of visual storytelling. We will explore the development of cinema both as an art form and as an industry, and consider the technological, economic, cultural factors, as well as many key international movements that helped shape it. Restricted to: G-CMI, DFM, ANVE majors.

Learning Outcomes

1. Gain a greater appreciation for the history of cinema
2. Develop knowledge of the key eras in the history of U.S. cinema
3. Learn the characteristics of major movements in international cinema
4. Understand the various elements that go into telling a story in cinema: screenplay, narrative devices, director, producer, talent, production design, cinematography, editing, sound design
5. Learn how major genres in U.S. cinema have evolved in the past 100+ years
6. Gain a basic understanding of the operations and organization of the Hollywood film industry, from the studio system until today
7. Gain an awareness of the shifts in the film industry that present new opportunities for independent filmmakers
8. Understand the importance of learning about the history of cinema to the process of becoming a filmmaker
9. Strengthen public speaking skills

FDMA 2311. History of Animation**3 Credits (3)**

Explores the history of Animation as an art form and industry through readings, screenings, lecture and periodic guest speakers. Restricted to: G-CMI, ANVE, DFM majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. To expand your knowledge of the history of animation and its evolution to the modern day.
2. To expand your ability to view animation critically and to understand its early connections to cartooning as well as its ongoing cultural presence and relevance.
3. To expand your comfort with accessing information and completing assignments both online and independently. Canvas will be utilized for many of our readings and for some response assignments.

FDMA 2312. History of Media Design**3 Credits (3)**

An introduction to the principles of design history and theory within a chronological framework of historical and emerging media.

Learning Outcomes

1. Introduction to visual communication: Defines design media; Discuss universal design principles and strengthen student basic design skills.
2. Historical technological development and design: Prehistoric communication; Beginnings of alphabet and written language; Movable type and the printing press; Industrial revolution; Digital Age; Designers and Trends; Personalities and their influence and contributions
3. Identify design styles and discuss the relevance of how design influences: Idea generation; Trend sources; Influences or appropriation; Propaganda and advertising.

FDMA 2325. Advanced Photoshop**3 Credits (2+2P)**

This course expands on the Photoshop skill set to develop proficiency with selections, masking, channels, filters, color correction, painting tools, vector integration, video, special effects, and compositing techniques. The focus is on the core image-editing tools of Photoshop that can be universally applied to photography, print, film or the web. The material is covered in production-oriented projects and students develop work suitable for portfolios. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1515.

Learning Outcomes

1. Create effects using advanced blending techniques
2. Effectively utilize advanced masking techniques
3. Refine Selections with advanced techniques
4. Assess Adjust color in an image
5. Utilize advanced photo enhancement techniques
6. Alter images using Photoshop painting techniques
7. Create brush presets
8. Create vector elements with paths
9. 1Add manipulate type on a path
10. 1Create advanced special effects
11. 1Apply vanishing point warping
12. 1Create a video clip
13. 1Apply color adjustments to video

FDMA 2326. Digital Photography and Imaging II**3 Credits (2+2P)**

Provide understanding and skills needed for advanced digital capture, editing, optimizing and manipulating photographic images for print, web and multimedia applications. The course will prepare students to make more advanced technical and more refined aesthetic decisions relative to specific photographic applications. Restricted to: Alamogordo campus, Carlsbad campus, Dona Ana campus.

Prerequisite(s): FDMA 1545.

Learning Outcomes

1. Apply proper exposure techniques.
2. Practice effective composition techniques.
3. Demonstrate knowledge of working with Camera RAW files.
4. Demonstrate proper image adjustment and correction techniques.
5. Successfully apply the basics of HDR digital photography.
6. Apply techniques for modifying light.

FDMA 2360. Web Design II**3 Credits (2+2P)**

In this course, students will refine their skills in coding and web graphic design as well as be introduced to methods in constructing sites that adhere to the standards of responsive web design. Students will expand their knowledge of HTML and CSS using a code editor, and they will both analyze existing websites and also construct an interactive website. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1360.

Learning Outcomes

1. Plan and produce web design mockups.
2. Demonstrate a proficiency in HTML/CSS coding.
3. Utilize basic web scripts.
4. Integrate animation into web design.
5. Create fully functional websites using one or more web editors.
6. Make a website "live."
7. Evaluate web designs for aesthetics and functionality.
8. Demonstrate the utilization of responsive design.

FDMA 2365. Web Design for Small Business**3 Credits (2+2P)**

Technology and techniques for designing and building a web presence for small business. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1360.

Learning Outcomes

1. Learning advanced tools and techniques for creating and maintaining complex Business web sites. We will be using CSS, PHP, HTML, Photoshop, and Wordpress.
2. design a complete and fully functional online web business.
3. understand and develop a plan to better manage a web store/business.
4. review basic design guidelines in preparing a variety of web applications for business.
5. develop technical skills in using various web based solutions.
6. reinforce your knowledge of web design software.
7. introduce alternate sources of data, communication and financial solutions.

FDMA 2370. Advanced Web Techniques**3 Credits (2+2P)**

Creating and managing complex web sites using advanced techniques and tools. May be repeated for a maximum of 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 1515 and FDMA 2360.

Learning Outcomes

1. Create webpages using Hypertext Markup Language (HTML) elements and tags
2. Format webpages using Cascading Style Sheets (CSS)
3. Validate webpage code
4. Apply industry-standard webpage design and organization principles
5. Publish a website

FDMA 2381. Storyboarding**3 Credits (3)**

Examines effective writing principles to create storyboards that communicate the overall picture of a project, timing, scene complexity, emotion and resource requirements. Further, the purpose of this course is to introduce students to the principles of visual storytelling—in film--through the use of the storyboard. In other words, to show how storyboards are critical "architectural component" of the filmmaking process, used as a blueprint (or guide) to communicate the complex elements of a film story. Crosslisted with: ENGL 2381. Restricted to: DFM, ANVE, G-CMI majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Learn to conceive and draw original images.
2. Learn to use images to tell a story.
3. Design, develop, and order images (shots) into storyboarded scenes.
4. Understand how storyboarded sequences are a tool in the process of filmmaking.
5. Understand how the storyboard image is translated from the written page.
6. Build scenes from the scripted sequences into a storyboard.

FDMA 2382. Principles of Story Across the Media**3 Credits (3)**

The purpose of this course is to help students understand the basic elements of narrative structure (e.g. character, dramatic conflict, theme, etc.) and how these elements may be used effectively in media expression. Crosslisted with: ENGL 2382. Restricted to: G-CMI, DFM, ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Identify the elements of storytelling in scripted text or improvised performance
2. Understand how these elements work together across different media
3. Apply these elements of storytelling in original work
4. Appreciate and master these elements for independent or collaborative work

FDMA 2410. Audio Production II**3 Credits (2+2P)**

Students will use skills developed in the Audio Production I course to produce audio projects utilizing a variety of analog and digital audio hardware and software, including continued use of multi-track, computer-based recording and editing systems, as well as exploring more advanced audio techniques and concepts. Restricted to: Community Colleges only.

Learning Outcomes

1. Apply analog and digital audio hardware and software in audio recording.
2. Apply common professional set-up practices of audio production facilities.
3. Produce audio projects, sync sound recordings, and audio dialogue replacement (ADR) demonstrating technical expertise.
4. Perform an audio mix and master for a final professional product.
5. Analyze and compare existing audio productions for quality.

FDMA 2510. Introduction to Sound Design for Film**3 Credits (3)**

This course is an introduction to the principles, techniques and applications of sound design and film scoring. Students learn how sound affects storytelling in a film, examine the role of sound from the script to screen, and the professional process of creating a soundtrack. Students learn how to use sound equipment in a production environment and execute basic techniques used to develop a soundtrack. Crosslisted with: FDMA 1415.

Prerequisite(s)/Corequisite(s): FDMA 2382. Restricted to: DFM, ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Compare the properties and propagation of sound and importance of sound to the storytelling aspect of
2. filmmaking
3. Learn the process of designing a soundtrack for film and recording live audio dialogue for use in post-production editing.
4. Learn methods of capturing sound including live audio recording, dialogue recording, foley, orchestration and audio dialogue replacement
5. Design a soundtrack for motion media project.

FDMA 2520. Introduction to Cinematography**3 Credits (3)**

The Director of Photography (or Cinematographer), in close collaboration with the Director and Production Designer, helps determine the look of a film. This course is designed to introduce students to the technical and aesthetic fundamentals of creating, developing, and collaborating on the visual elements of storytelling, using camera framing, lensing, and lighting fundamentals such as shadows, light and color. May be repeated up to 6 credits. only. Prerequisite(s)/Corequisite(s): FDMA 2382 (Las Cruces Campus) or FDMA 1210 (Community College Campus(es))

Learning Outcomes

1. Define and explain the fundamental concepts of cinematography, such as exposure, lighting solutions, and color temperature.
2. Understand how cinematography brings the Director's vision to reality.
3. Demonstrate proficiency in plotting and executing interior and exterior lighting solutions.

FDMA 2530. Introduction to 3D Modeling**3 Credits (3)**

This course will introduce 3D modeling methods and current practices. Students will learn preliminary and detailed modeling techniques using industry standard software. Methods will emphasize formal and functional aspects of modeling as they apply to mechanical, organic, and sculpted topology for application in animation, games, and information media. May be repeated for a maximum of 6 credits.

Learning Outcomes

1. Identify the role of a 3D modeler in a production pipeline within various fields of digital animation.
2. Apply techniques in modeling mechanical and organic objects.
3. Utilize tools available in professional 3D modeling software.
4. Create simple animations and renders.
5. Present original animations to instructor and classmates for critique.
6. Create a demo reel of work completed during the course.

FDMA 2535. Digital Illustration**3 Credits (3)**

Introductory course examining traditional artistic expressions and translating visual art experiences into a digital art medium to enhance visual storytelling. Students acquire basic principles of drawing and painting through hands-on experience manipulating tonal value, composition, form development, light and shadow, color theory, rendering realism, and graphic design. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Be familiar with the CMI computer system, facilities, equipment and policies.
2. Appropriately utilize the various media technologies available at CMI for digital illustration.
3. Understand the different roles and areas of digital illustration.
4. Understand and apply some basic techniques of digital illustration.
5. Understand and apply some basic processes of creating pleasing images based on knowledge of traditional art principles.
6. Begin to apply some basic strategies for developing and creating aesthetically pleasing images.

FDMA 2570. Creative Media Studio**3 Credits (2+2P)**

A studio environment where students specialize in creating film-festival quality and portfolio-ready projects under the supervision of faculty. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1210 and FDMA 1220 or FDMA 2530.

Learning Outcomes

1. Students will work together to create portfolio-quality work in a studio environment.
2. Through classroom discussion and reporting the students will collaborate to produce a professional quality "vertical slice" game concept within a defined timeline and financial budget

FDMA 2710. Beginning 2-D Animation**3 Credits (3)**

Students will learn the basics of digital 2D animation by working through a variety of exercises, creating an original storyboard, and animating five or more shots utilizing industry standard software. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. The student will demonstrate an overall knowledge of computers as a tool of the animation artist and be able to produce simple animations using the techniques learned in class.
2. Use major software tools with ease
3. Manage time lines through key frames
4. Build storyboards
5. Demonstrate knowledge of 2-D and animation terminology
6. Produce actions, set environments and constraints for 2-D animation
7. Render full animation.

FDMA 2715. Special Effects**3 Credits (2+4P)**

Creating advanced virtual special effects for both rigid and soft bodies. Using MEL, dynamic principles, mixing nodes, and advanced particle systems. How to drive particles over surfaces, add texture to flow, create surface tensions, and use collision events to drive texture. Study of integrating computer-generated images with real-life video and audio.

Prerequisite(s): FDMA 2530 or FDMA 2765.

FDMA 2720. 3-D Animation**3 Credits (3)**

Overview of the essentials and principles of 3D animation; creative methods for using industry standard tools to produce the illusion of movement for storytelling. Topics include, keyframe and curve animation, kinematics, cycle animation, camera animation, deformers, and constraints.

Prerequisite(s): FDMA 1510, FDMA 2710 or consent of instructor.

Learning Outcomes

1. Clearly describe the role of an animator in cinema, gaming and related fields.
2. Recognize leading animators and their methods.
3. Demonstrate knowledge of advances in contemporary animation.
4. Utilize current industry standard animation tools.
5. Apply fundamental animation processes and techniques

FDMA 2725. Rigging for 3D Animation**3 Credits (3)**

This course will introduce principles and practices of current 3D animation rigging. Students will develop fundamental methods necessary to create character rigs. Students will learn aesthetic, technical, and optimization concepts as they apply to organic and mechanical designs. Topics will include: hierarchies, constraints, deformation rigging, skeleton creation, skinning, forward and inverse kinematics, controls, body and facial rigging. Restricted to: DFM, ANVE majors.

Prerequisite(s): FDMA 1510.

Learning Outcomes

1. Understand what Rigging is and the role it plays in the world of cinema and video games.
2. Be familiar with industry professionals and their techniques and approaches to rigging.
3. Understand and be able to apply the fundamentals of rigging to industry standard applications.
4. Demonstrate ability to rig basic to intermediate machines, bipeds and quadrupeds

FDMA 2730. Advanced Character Animation**3 Credits (2+2P)**

Focus on complex rigging techniques as well as utilizing advanced animation functions to blend multiple animations into complex animations. May be repeated for a maximum of 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 2530.

Learning Outcomes

1. Create skeletal riggings for use with a 3D model
2. Attach riggings to a 3D model using Smooth and rigid binding and refine the bindings so that they are properly weighted
3. Animate a 3D model using skeletal and vertex animation techniques

FDMA 2735. Advanced 3D Animation Workshop A**3 Credits (2+4P)**

Program capstone. Students will utilize the skills learned in the program to produce their final animation. Group integrated projects are strongly recommended to emulate a real-work animation studio environment. May be repeated for a maximum of 9 credits. Consent of instructor required.

Corequisite(s): FDMA 2740.

Learning Outcomes

1. Define the duties and skills sets required for a career in 3D Modeling.
2. Understand the Maya interface, the uses for all of the major modes and menus of the interface and be able to describe how to access the tools, actions and the options of those tools and actions.
3. Complete and compile a multi shot animated short.

FDMA 2740. Advanced 3D Animation Workshop B**3 Credits (2+4P)**

Program capstone. Students will utilize the skills learned in the program to produce their final animation. Group integrated projects are strongly recommended to emulate a real-work animation studio environment. May be repeated for a maximum of 9 credits. Consent of instructor is required.

Corequisite(s): FDMA 2735.

Learning Outcomes

1. Define the duties and skills sets required for a career in 3D Modeling.
2. Understand the Maya interface, the uses for all of the major modes and menus of the interface and be able to describe how to access the tools, actions and the options of those tools and actions.
3. Complete and compile a multi shot animated short.

FDMA 2745. Light, Shade, Render**3 Credits (3)**

This course will explore the theory and practice of 3D lighting and rendering methodologies. Techniques covered will implement cameras, lighting sources, textures, surface-mapping and algorithmic rendering to produce stylized and photo realistic images. Topics covered will include direct and indirect lighting, shaders that simulate physical substances and effects, rendering multiple passes and simulating physical lens effects. Restricted to: DFM, ANVE majors. Restricted to Las Cruces campus only.

Prerequisite(s): FDMA 1510, FDMA 2530, or Consent of Instructor.

Learning Outcomes

1. Understand the role of lighting and surfacing to tell a story.
2. Be familiar with leading lighting artist and their approaches.
3. Utilize the software implemented in the entertainment industry.
4. Understand and apply fundamental lighting and rendering techniques.
5. Demonstrate ability to create successfully rendered scenes from concept through production.

FDMA 2750. Digital Sculpting**3 Credits (3)**

Introduce students to the 3D Sculpting programs which are the industry standard sculpting programs. Students will learn how to create complex high polygon sculpts and normal maps and transfer the models into 3D studio Max and Autodesk Maya. May be repeated up to 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 2530.

Learning Outcomes

1. Demonstrate communication skills through written critiques and explanations
2. Students will demonstrate visual communication skills through critiques, written explanations, and storyboarding
3. Demonstrate a working knowledge of Zbrush's interface
4. Demonstrate a working knowledge of Zpheres and how they are best used to create sculpts
5. Demonstrate a working knowledge of painting a mesh using Spotlight
6. Demonstrate a working knowledge of retopologizing and exporting the mesh
7. Demonstrate a working knowledge of integrating the full Zbrush pipeline into Unity and Unreal

FDMA 2755. Drawing for Animation**3 Credits (3)**

Introductory study of the human and animal form in relation to animation. Students learn fundamentals and exaggeration of the figure, as related to proportion, rhythm, mechanics, and motion. Areas of focus are: basic form, proportion, shape, contour, gesture, anatomy, portraiture, perspective, clothing effects and drawing from observation. Restricted to: CMT, DFM, ANVE majors.

Learning Outcomes

1. Students will have an opportunity to gain hands on experience using industry standard state of the art animation software.
2. Understand what the basics of drawing the human form.
3. Have a general understanding of human anatomy as needed for the artist.
4. Be able to design the human form from imagination.

FDMA 2770. Critical Game Studies**3 Credits (2+2P)**

Focus on creating a complete design document utilizing techniques and standards used in the industry today. May be repeated for up to 6 credits. Restricted to: Community Colleges only.

FDMA 2775. Game Tools and Techniques**3 Credits (2+2P)**

Focus on the different engines and gaming technologies that power the games of today. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 2770.

Learning Outcomes

1. Students will develop rapid prototyping techniques.
2. Through classroom exercises the students will gain competency in industry-standard game creation engines and tools, and learn to work together in groups to create rapid prototypes.
3. This includes creating art, sound and music, and creating basic scripts within an engine.

FDMA 2785. Level Design Concepts**3 Credits (2+2P)**

Focus on the design and creation of video game levels. Dealing with the challenges and pitfalls of different video game genres. May be repeated for a maximum of 6 credits. Prerequisite(s): FDMA 2770

Learning Outcomes

1. Students will develop level design skills.
2. Through classroom exercises the students will gain a comfortable competency with designing levels both on paper and digitally.
3. This includes creating first person shooter levels, third person levels, multiplayer level design, and more.

FDMA 2993. Workshops (Advanced Photography)**1 Credit (1)**

This is a series of 1-credit workshops offering specialized and intense advanced skill training and upgrading applications of photography for commercial purposes and training in photographic skills and styles presented by a variety of professional lecturers. May be repeated up to 7 credits. Restricted to Community Colleges only.

Prerequisite(s): FDMA 1545.

Learning Outcomes

1. Varies

FDMA 2994. Portfolio Design & Development**1-3 Credits**

Personalized design and creation of the student's professional portfolio including hard-copy, demo reel, and online. May be repeated up to 6 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Varies

FDMA 2995. Film Crew Cooperative Experience**3-6 Credits (3-6)**

Industry production experience in specific craft areas for film crew technicians who have successfully completed two semesters of FTTP. Restricted to: Dona Ana campus, Carlsbad campus.

Prerequisite(s): FDMA 2125.

Learning Outcomes

1. Varies

FDMA 2996. Special Topics**1-4 Credits**

Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits.

Learning Outcomes

1. Varies

FDMA 2997. Independent Study**1-3 Credits**

Individual studies directed by consenting faculty with prior approval of department head. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Minimum GPA of 3.0 and sophomore standing.

Learning Outcomes

1. Varies

FDMA 2998. Internship**1-3 Credits**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 9 credits. Consent of Instructor required. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only. Consent of instructor required.

Learning Outcomes

1. Varies

Digital Animation - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---|-----------|
| Core Curriculum Requirements | | |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 1710 | 2D Animation | 3 |
| FDMA 1720 | 3-D Character Design | 3 |
| FDMA 2530 | Introduction to 3D Modeling | 3 |
| FDMA 2730 | Advanced Character Animation | 3 |
| FDMA 2735 | Advanced 3D Animation Workshop A | 3 |
| FDMA 2740 | Advanced 3D Animation Workshop B | 3 |
| Total Credits | | 24 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------------|---|-----------|
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| Credits | | 6 |
| Spring | | |
| FDMA 1710 | 2D Animation | 3 |
| FDMA 2530 | Introduction to 3D Modeling | 3 |
| Credits | | 6 |
| Second Year | | |
| Fall | | |
| FDMA 1720 | 3-D Character Design | 3 |
| FDMA 2730 | Advanced Character Animation | 3 |
| Credits | | 6 |
| Spring | | |
| FDMA 2735 | Advanced 3D Animation Workshop A | 3 |
| FDMA 2740 | Advanced 3D Animation Workshop B | 3 |
| Credits | | 6 |
| Total Credits | | 24 |

Digital Graphics - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---|-----------|
| Core Curriculum Requirements | | |
| FDMA 1120 | Desktop Publishing | 3 |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 1630 | Principles of Design | 3 |
| FDMA 2150 | Desktop Publishing II | 3 |
| FDMA 2360 | Web Design II | 3 |
| Approved FDMA Electives | | 6 |
| Total Credits | | 24 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------|---|----------------|
| FDMA 1120 | Desktop Publishing | 3 |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| Credits | | 6 |
| Spring | | |
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 2150 | Desktop Publishing II | 3 |
| Credits | | 6 |
| Second Year | | |
| Fall | | |
| FDMA 1630 | Principles of Design | 3 |
| FDMA 2360 | Web Design II | 3 |
| Credits | | 6 |
| Spring | | |
| Approved FDMA Elective | | 3 |
| Approved FDMA Elective | | 3 |
| Credits | | 6 |
| Total Credits | | 24 |

Digital Video - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---|-----------|
| Core Curriculum Requirements | | |
| FDMA 1110 | Film History | 3 |
| FDMA 1210 | Digital Video Production I | 3 |
| FDMA 1220 | Introduction to Digital Video Editing | 3 |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 2210 | Digital Video Production II | 3 |
| FDMA 2285 | Digital Video Production and Editing II | 3 |
| FDMA 2520 | Introduction to Cinematography | 3 |
| FDMA 2994 | Portfolio Design & Development | 3 |
| Total Credits | | 24 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--------------------|---|----------------|
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 1110 | Film History | 3 |
| Credits | | 6 |
| Spring | | |
| FDMA 2210 | Digital Video Production II | 3 |
| FDMA 2285 | Digital Video Production and Editing II | 3 |
| Credits | | 6 |
| Second Year | | |
| Fall | | |
| FDMA 1210 | Digital Video Production I | 3 |
| FDMA 1220 | Introduction to Digital Video Editing | 3 |
| Credits | | 6 |
| Spring | | |
| FDMA 2520 | Introduction to Cinematography | 3 |

| | | |
|----------------------|--------------------------------|-----------|
| FDMA 2994 | Portfolio Design & Development | 3 |
| Credits | | 6 |
| Total Credits | | 24 |

Digital Video Game Animation - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---|-----------|
| Core Curriculum Requirements | | |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 1710 | 2D Animation | 3 |
| FDMA 1720 | 3-D Character Design | 3 |
| FDMA 2530 | Introduction to 3D Modeling | 3 |
| FDMA 2730 | Advanced Character Animation | 3 |
| FDMA 2735 | Advanced 3D Animation Workshop A | 3 |
| FDMA 2740 | Advanced 3D Animation Workshop B | 3 |
| Approved FDMA Electives | | 9 |
| Total Credits | | 33 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------|---|----------|
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| Credits | | 6 |
| Spring | | |
| FDMA 1710 | 2D Animation | 3 |
| FDMA 2530 | Introduction to 3D Modeling | 3 |
| Approved FDMA Elective | | 3 |
| Credits | | 9 |

Second Year

| Fall | | |
|------------------------|----------------------------------|-----------|
| FDMA 1720 | 3-D Character Design | 3 |
| FDMA 2730 | Advanced Character Animation | 3 |
| Approved FDMA Elective | | 3 |
| Credits | | 9 |
| Spring | | |
| FDMA 2735 | Advanced 3D Animation Workshop A | 3 |
| FDMA 2740 | Advanced 3D Animation Workshop B | 3 |
| Approved FDMA Elective | | 3 |
| Credits | | 9 |
| Total Credits | | 33 |

Digital Media Technology (Digital Animation) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-62 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|-------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |

This degree requires courses from Areas I, II, III, and V; students do not need to take additional courses to complete the General Education requirements.

| | | |
|--|---|--------------|
| Area I: Communications | | |
| ENGL 1110G | Composition I | |
| Area II: Mathematics | | |
| MATH 1220G | College Algebra ³ | |
| or MATH 1130G | Survey of Mathematics | |
| Area III: Laboratory Science | | |
| Choose one from the following : | | |
| ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | |
| Area V: Humanities | | |
| Choose one from the following: | | |
| ENGL 2520G | Film as Literature | |
| HIST 1150G | Western Civilization I | |
| HIST 1130G | World History I | |
| <i>General Education Elective</i> | | |
| PSYC 1110G | Introduction to Psychology (Core Requirement) | 3 |
| Core Requirements | | |
| PSYC 1110G is going to satisfy both the General Education Elective and Core Requirements for this degree | | |
| ARTH 1115G | Orientation in Art | 3 |
| ARTS 1240 | Design I | 3 |
| COMM 1115G | Introduction to Communication (Core Requirement) | 3 |
| or COMM 1130G | Public Speaking | |
| ENGL 2382 | Narrative: Principles of Story Across the Media | 3 |
| FDMA 1260 | Introduction to Digital Media | 3 |
| OEGR 221 | Cooperative Experience I | 1-3 |
| or FDMA 2287 | Digital Design Studio | |
| <i>Program Concentration Coursework</i> | | |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 1710 | 2D Animation | 3 |
| FDMA 1720 | 3-D Character Design | 3 |
| FDMA 2530 | Introduction to 3D Modeling | 3 |
| FDMA 2730 | Advanced Character Animation | 3 |
| FDMA 2735 | Advanced 3D Animation Workshop A | 3 |
| FDMA 2740 | Advanced 3D Animation Workshop B | 3 |
| Electives, to bring the total credits to 60 ⁴ | | 3 |
| Total Credits | | 60-62 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

³ MATH 1220G College Algebra or MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G or MATH 1130G first.

⁴ For electives, select from ART, CMT, CMI or OEGR courses.
Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|--|----------------|
| FDMA 1260 | Introduction to Digital Media | 3 |
| ENGL 1110G | Composition I | 4 |
| MATH 1220G or MATH 1130G | College Algebra ¹ or Survey of Mathematics | 3 |
| Choose one from the following: | | 3 |
| ENGL 2520G | Film as Literature | |
| HIST 1150G | Western Civilization I | |
| HIST 1130G | World History I | |
| Program Concentration Course ² | | 3 |
| Credits | | 16 |

| Spring | | |
|---|---|-----------|
| ARTS 1240 | Design I | 3 |
| Choose one from the following: | | 4 |
| ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | |
| PSYC 1110G | Introduction to Psychology | 3 |
| ARTH 1115G | Orientation in Art | 3 |
| Program Concentration Course ² | | 3 |
| Credits | | 16 |

Second Year

| Fall | | |
|--|--|--------------|
| COMM 1115G or COMM 1130G | Introduction to Communication or Public Speaking | 3 |
| Program Concentration Courses ² | | 9 |
| Elective Course ³ | | 3 |
| Credits | | 15 |
| Spring | | |
| ENGL 2382 | Narrative: Principles of Story Across the Media | 3 |
| OEGR 221 or FDMA 2287 | Cooperative Experience I or Digital Design Studio | 1-3 |
| Program Concentration Course ² | | 9 |
| Credits | | 13-15 |
| Total Credits | | 60-62 |

¹ MATH 121G College Algebra or MATH 210G Mathematics Appreciation is required for the degree but students may need to take any prerequisites needed to enter MATH 121G or MATH 210G first.

² **Program Concentration Coursework:**

- FDMA 1535 Introduction to Illustrator
- FDMA 1515 Introduction to Digital Image Editing - Photoshop
- FDMA 1710 2D Animation
- FDMA 2530 Introduction to 3D Modeling
- FDMA 1720 3-D Character Design
- FDMA 2730 Advanced Character Animation
- FDMA 2735 Advanced 3D Animation Workshop A
- FDMA 2740 Advanced 3D Animation Workshop B

³ For electives, select from ART, CMT, CMI or OEGR courses.
Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Digital Media Technology (Digital Graphics) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-62 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| This degree requires courses from Areas I, II, III, and V; students do not need to take additional courses to complete the General Education requirements. | | |
| Area I: Communications | | |
| ENGL 1110G | Composition I | |
| Area II: Mathematics | | |
| MATH 1220G | College Algebra ³ | |
| or MATH 1130G | Survey of Mathematics | |
| Area III: Laboratory Science | | |
| Choose one from the following: | | |
| ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | |
| Area V: Humanities | | |
| Choose one from the following: | | |
| ENGL 2520G | Film as Literature | |
| HIST 1150G | Western Civilization I | |
| HIST 1130G | World History I | |
| <i>General Education Elective</i> | | |
| PSYC 1110G | Introduction to Psychology (Core Requirement) | 3 |
| Core Requirements | | |
| PSYC 1110G is going to satisfy both the General Education Elective and Core Requirements for this degree | | |
| ARTH 1115G | Orientation in Art | 3 |
| ARTS 1240 | Design I | 3 |
| COMM 1115G | Introduction to Communication | 3 |
| or COMM 1130G | Public Speaking | |
| ENGL 2382 | Narrative: Principles of Story Across the Media | 3 |
| FDMA 1260 | Introduction to Digital Media | 3 |
| OEGR 221 | Cooperative Experience I | 1-3 |
| or FDMA 2287 | Digital Design Studio | |
| <i>Program Concentration Coursework</i> | | |
| FDMA 1120 | Desktop Publishing | 3 |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 1535 | Introduction to Illustrator | 3 |
| FDMA 1630 | Principles of Design | 3 |
| FDMA 2150 | Desktop Publishing II | 3 |
| FDMA 2360 | Web Design II | 3 |
| Approved FDMA Electives | | 6 |
| Electives, to bring the total credits to 60 ⁴ | | 3 |
| Total Credits | | 60-62 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

³ MATH 1220G College Algebra or MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G or MATH 1130G first.

- ⁴ For electives, select from ART, CMT, CMI or OEGR courses.
 Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|---|-----------|
| ENGL 1110G | Composition I | 4 |
| FDMA 1260 | Introduction to Digital Media | 3 |
| MATH 1220G or MATH 1130G | College Algebra or Survey of Mathematics | 3 |
| Choose one from the following: | | 3 |
| ENGL 2520G | Film as Literature | |
| HIST 1150G | Western Civilization I | |
| HIST 1130G | World History I | |
| Program Concentration Course ² | | 3 |
| Credits | | 16 |

| Spring | | |
|---|---|-----------|
| ARTS 1240 | Design I | 3 |
| Choose one from the following: | | 4 |
| ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | |
| ARTH 1115G | Orientation in Art | 3 |
| PSYC 1110G | Introduction to Psychology | 3 |
| Program Concentration Course ² | | 3 |
| Credits | | 16 |

Second Year

| Fall | | |
|--|--|--------------|
| COMM 1115G or COMM 1130G | Introduction to Communication or Public Speaking | 3 |
| Program Concentration Courses ² | | 9 |
| Elective Course ³ | | 3 |
| Credits | | 15 |
| Spring | | |
| ENGL 2382 | Narrative: Principles of Story Across the Media | 3 |
| OEGR 221 or FDMA 2287 | Cooperative Experience I or Digital Design Studio | 1-3 |
| Program Concentration Course ² | | 9 |
| Credits | | 13-15 |
| Total Credits | | 60-62 |

- ¹ MATH 121G College Algebra or MATH 210G Mathematics Appreciation is required for the degree but students may need to take any prerequisites needed to enter MATH 121G or MATH 210G first.

² **Program Concentration Coursework:**

- FDMA 1120 Desktop Publishing
- FDMA 1535 Introduction to Illustrator
- FDMA 1515 Introduction to Digital Image Editing - Photoshop
- FDMA 1630 Principles of Design
- FDMA 2360 Web Design II
- FDMA 2150 Desktop Publishing II
- Approved FDMA Electives (6 credits)

- ³ For electives, select from ART, CMT, CMI or OEGR courses.
 Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Digital Media Technology (Digital Video) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-62 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| This degree requires courses from Areas I, II, III, and V; students do not need to take additional courses to complete the General Education requirements. | | |
| Area I: Communications | | |
| ENGL 1110G | Composition I | |
| Area II: Mathematics | | |
| MATH 1220G | College Algebra ³ | |
| or MATH 1130G | Survey of Mathematics | |
| Area III: Laboratory Science | | |
| Choose one from the following: | | |
| ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | |
| Area V: Humanities | | |
| Choose one from the following: | | |
| ENGL 2520G | Film as Literature | |
| HIST 1150G | Western Civilization I | |
| HIST 1130G | World History I | |
| <i>General Education Elective</i> | | |
| PSYC 1110G | Introduction to Psychology | 3 |
| Core Requirements | | |
| PSYC 1110G is going to satisfy both the General Education Elective and Core Requirements for this degree | | |
| ARTH 1115G | Orientation in Art | 3 |
| ARTS 1240 | Design I | 3 |
| COMM 1115G | Introduction to Communication | 3 |
| ENGL 2382 | Narrative: Principles of Story Across the Media | 3 |
| FDMA 1260 | Introduction to Digital Media | 3 |
| OEGR 221 | Cooperative Experience I | 1-3 |
| or FDMA 2287 | Digital Design Studio | |
| <i>Program Concentration Coursework</i> | | |
| FDMA 1110 | Film History | 3 |
| FDMA 1210 | Digital Video Production I | 3 |
| FDMA 1220 | Introduction to Digital Video Editing | 3 |
| FDMA 1515 | Introduction to Digital Image Editing - Photoshop | 3 |
| FDMA 2210 | Digital Video Production II | 3 |
| FDMA 2285 | Digital Video Production and Editing II | 3 |
| FDMA 2520 | Introduction to Cinematography | 3 |
| FDMA 2994 | Portfolio Design & Development | 3 |
| Electives, to bring the total credits to 60 ⁴ | | 3 |
| Total Credits | | 60-62 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ MATH 1220G College Algebra or MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G or MATH 1130G first.
- ⁴ For electives, select from ART, CMT, CMI or OEGR courses.
Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|---|-----------|
| FDMA 1260 | Introduction to Digital Media | 3 |
| ENGL 1110G | Composition I | 4 |
| MATH 1220G or MATH 1130G | College Algebra or Survey of Mathematics | 3 |
| Choose one from the following: | | 3 |
| ENGL 2520G | Film as Literature | |
| HIST 1130G | World History I | |
| HIST 1150G | Western Civilization I | |
| Program Concentration Course ² | | 3 |
| Credits | | 16 |

| Spring | | |
|---|---|-----------|
| ARTS 1240 | Design I | 3 |
| Choose one from the following: | | 4 |
| ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | |
| PSYC 1110G | Introduction to Psychology | 3 |
| ARTH 1115G | Orientation in Art | 3 |
| Program Concentration Course ² | | 3 |
| Credits | | 16 |

Second Year

| Fall | | |
|--|--|--------------|
| COMM 1115G or COMM 1130G | Introduction to Communication or Public Speaking | 3 |
| Program Concentration Courses ² | | 9 |
| Elective Course ³ | | 3 |
| Credits | | 15 |
| Spring | | |
| ENGL 2382 | Narrative: Principles of Story Across the Media | 3 |
| OEGR 221 or FDMA 2287 | Cooperative Experience I or Digital Design Studio | 1-3 |
| Program Concentration Course ² | | 9 |
| Credits | | 13-15 |
| Total Credits | | 60-62 |

- ¹ MATH 1220G College Algebra or MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G College Algebra or MATH 1130G Survey of MathematicsMATH 1130G Survey of Mathematics first.

2

Program Concentration Coursework:

- FDMA 1515 Introduction to Digital Image Editing - Photoshop
- FDMA 1110 Film History
- FDMA 1210 Digital Video Production I
- FDMA 1220 Introduction to Digital Video Editing
- FDMA 2520 Introduction to Cinematography
- FDMA 2210 Digital Video Production II
- FDMA 2285 Digital Video Production and Editing II
- FDMA 2994 Portfolio Design & Development

3

For electives, select from ART, CMT, CMI or OEGR courses.

Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Drafting and Graphics Technology

The **Drafting and Graphics Technology** program provides students with the education and experience for entry-level drafting positions with industrial companies, architectural firms, and government agencies. Students will learn how to develop working drawings and electronic simulations for architectural and related construction projects, basic construction and structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, and basic structural wiring diagramming.

Graduation Requirements

Certificate in Drafting and Graphics Technology: WorkKeys® scores of level 4 in Reading for Information, level 4 in Locating Information, and level 4 in Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Drafting and Graphics Technology: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Drafting and Graphics Technology - Certificate (p. 201)

Drafting and Graphics Technology (Architectural Technology) - Associate of Applied Science (p. 202)

Drafting and Graphics Technology (General Drafting) - Associate of Applied Science (p. 203)

DRFT 100. Introduction to Architecture, Engineering, & Construction

3 Credits (3)

Introduction to and exploration of careers in the fields of architecture, engineering, and construction. Specific fields to include: architecture, civil engineering, mechanical engineering, structural engineering, engineering technology, residential construction, commercial construction, geographical information systems (GIS), surveying, sustainable design, and green building. Crosslisted with: ARCH 1310. Restricted to Community Colleges campuses

Learning Outcomes

1. Prepare accurate written technical documents, Produce drawing documents that are technically sound, Develop and practice productive work skills, and Upgrade technical knowledge and skills to keep pace with real-world changes DRFT 100 Course Competencies Describe different career options in architecture, engineering, and construction, Define the roles of different design professionals and support staff, Explain related educational and professional licensing requirements, Articulate employer expectations, Explore related courses and programs of study at DACC and NMSU, and Develop good workplace skills and professional, productive work habits.

DRFT 101. Introduction to Drafting and Design Technologies

1 Credit (1)

Professional and student organizations associated with the Drafting and Design Technologies program, degree requirements, employment skills and work habits, and university and college policies and procedures will be explored. Students will be introduced to the current learning management system and career-readiness certification. Restricted to Community Colleges only.

DRFT 105. Technical Drawing for Industry

3 Credits (2+2P)

Technical sketching, basic CAD, and interpretation of drawings with visualization, speed and accuracy highly emphasized. Areas of focus include various trades such as machine parts, welding, heating and cooling, and general building sketches/plan interpretation.

DRFT 108. Drafting Concepts/Descriptive Geometry**2 Credits (1+2P)**

Basic manual drafting skills, sketching, terminology and visualization. Graphical solutions utilizing applied concepts of space, planar, linear and point analyses. Metric and S.I. units introduced.

DRFT 109. Computer Drafting Fundamentals**3 Credits (2+2P)**

Introduction to principles and fundamentals of drafting using both manual drawing techniques and computer-aided drafting (CAD) applications. May be repeated up to 3 credits. Crosslisted with: E T 109 and C E 109. Restricted to Community Colleges campuses only.

DRFT 112. Drafting Concepts/Computer Drafting Fundamentals I**4 Credits (2+4P)**

Basic drafting skills, terminology, and visualization. Introduction to principles and fundamentals of computer-aided drafting. Same as E T 106.

Prerequisites: OECS 207, OECS 125 or consent of instructor.

DRFT 113. Drafting Concepts/Computer Drafting Fundamentals II**4 Credits (2+4P)**

Drafting for mechanical/industrial applications; machine part detailing, assemblies in orthographic, isometric, auxiliary, oblique, and sectional views. Two-dimensional AutoCAD with introduction to 3-D AutoCAD. Same as E T 216. Restricted to: Community Colleges only.

Prerequisite: DRFT 112.

DRFT 114. Introduction to Solid Modeling**3 Credits (2+2P)**

2D mechanical drafting and 3D mechanical solid modeling utilizing the latest version of AutoCAD software. Industry dimensioning and annotation standards will be emphasized. 2D multi-view working drawings, 3D solid models, and basic 3D model assemblies will be introduced. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 109.

DRFT 115. General Construction Safety**3 Credits (3)**

Overview of general construction safety related to building, highway and road construction, and surveying field work for entry-level individuals. Students will also have the opportunity to earn a 10-hour construction industry OSHA card. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 124. Introduction to Geometric Dimensioning and Tolerancing**3 Credits (2+2P)**

Introduction to geometric dimensioning and tolerancing (GD&T) for the mechanical CAD drafting, solid modeling, mechanical engineering technology, mechanical engineering, and manufacturing industries. Related industry standard finishes and fasteners will also be introduced and explored.

Prerequisite(s)/Corequisite(s): DRFT 114. Restricted to Community Colleges campuses only.

DRFT 130. General Building Codes**3 Credits (2+2P)**

Interpretation of the Building Code, local zoning codes, A.D.A. Standards and the Model Energy Code to study construction and design requirements and perform basic plan checking. Restricted to: Community Colleges only.

DRFT 135. Electronics Drafting I**3 Credits (2+2P)**

Drafting as it relates to device symbols; wiring, cabling, harness diagrams and assembly drawings; integrated circuits and printed circuit boards; schematic, flow and logic diagrams; industrial controls and electric power fields. Drawings produced using various CAD software packages.

Prerequisites: DRFT 108 and DRFT 109.

DRFT 143. Civil Drafting Fundamentals**3 Credits (2+2P)**

Introduction to drafting in the field of Civil Engineering. Drawings, projects, and terminologies related to topographic, contour drawings, plan and profiles, and street/highway layout. Crosslisted with: E T 143. Restricted to Community Colleges only.

Prerequisite(s): DRFT 109.

DRFT 151. Construction Principles and Print Reading**3 Credits (2+2P)**

Introduction to construction materials, methods, and basic cost estimating and print reading applicable in today's residential, commercial, and public works industry. Instruction by print reading and interpretation, field trips, and actual job-site visits and progress evaluation.

DRFT 153. Survey Drafting Applications**3 Credits (2+2P)**

Introduction to drafting in the field of survey engineering. Drawings, projects and terminologies related to Point Data, topography, land/boundary surveys, legal descriptions and plat surveys. Using the current Autodesk software. Crosslisted with: SUR 143. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

DRFT 160. Construction Take-Offs and Estimating**3 Credits (2+2P)**

Computing and compiling materials and labor estimates from working drawings using various techniques common in general building construction and in accordance with standard specifications and estimating formats. Use of spreadsheets and estimating software introduced.

Prerequisite: DRFT 151.

DRFT 163. Civil Infrastructure Detailing**3 Credits (2+2P)**

Infrastructure detailing related to civil engineering projects including: ponding, roadway, sewer, and storm-water structures; concrete foundations; and related utility details. Restricted to Community Colleges campuses

Prerequisite(s): DRFT 109.

Learning Outcomes

1. I. Prepare accurate written technical documents, Produce drawing documents that are technically sound, Develop and practice productive work skills, and Upgrade technical knowledge and skills to keep pace with real-world changes DRFT 163 Course Competencies I. Create applicable details utilizing AutoCAD and other software packages, Interpret local design standards, applicable codes, and industry practices, Apply local design standards, Apply applicable codes, Follow standards industry practices, Design applicable details within given parameters, and Develop good workplace skills and professional, productive work habits.

DRFT 164. Intermediate Mechanical Drafting/Solid Modeling**3 Credits (2+2P)**

Intermediate 3D mechanical parametric solid modeling and assembly creation utilizing the latest version of Autodesk Inventor software. The creation of 2D working drawings from 3D solid models will be emphasized. Geometric Dimensioning and Tolerancing (GD&T), basic material properties, and industry standard fastening and manufacturing methods will be introduced.

Prerequisite(s)/Corequisite(s): DRFT 114. Restricted to Community Colleges campuses only.

DRFT 165. Introduction to Building Information Modeling**3 Credits (2+2P)**

Introduction to Building Information Modeling (BIM) in the development of virtual 3D building models, construction documents, renderings and basic animations related to architectural, structural, and mechanical/electrical/plumbing building components. Utilizes the latest BIM technologies in the integration one, parametric BIM. Restricted to Community Colleges campuses only.

DRFT 180. Residential Drafting**3 Credits (2+2P)**

Basic residential drafting including, floor plans, foundation plans, sections, roof plans, exterior and interior elevations, and site plans. Applicable residential building and zoning codes, construction methods and materials, adaptable residential design, and drawing and sheet layout for architectural drafting will be introduced. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 109.

DRFT 181. Commercial Drafting**3 Credits (2+2P)**

Drafting principles, plan coordination, and code analysis applicable in the development of working drawings for commercial, public, and industrial building projects. Students will utilize National Cad Standards, ADA Standards, and will be introduced to modern office practice. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): DRFT 109.

DRFT 190. Finding and Maintaining Employment**2 Credits (2)**

Techniques in self-evaluations, resume writing, application completion, job interviewing, and job retention. Exposure to work ethics, employee attitudes, and employer expectations.

DRFT 204. Geographic Information Systems Technology**3 Credits (2+2P)**

The use of digital information for which various digitized data creation methods are captured. Users will capture, store, analyze and manage spatially referenced data in a modeled mapping procedure. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 214. Advanced Solid Modeling**3 Credits (2+2P)**

Advanced 3D mechanical parametric solid modeling and assembly creation utilizing the latest version of Solidworks software. The creation of 2D working drawings from 3D solid models and the creation of 3D models for machining/manufacturing will be emphasized. Geometric Dimensioning and Tolerancing (GD&T), material properties, and industry standard fastening and manufacturing methods will be further explored.

Prerequisite(s)/Corequisite(s): DRFT 114. Restricted to Community Colleges campuses only.

DRFT 222. Introduction to Geomatics**3 Credits (2+3P)**

Theory and practice of geomatics as applied to plane surveying in the areas of linear measurements, angle measurements, area determination, differential and trigonometric leveling, and topographic mapping. Crosslisted with: SUR 222.

Prerequisite: MATH 1250G or MATH 1430G.

Learning Outcomes

1. Various

DRFT 230. Building Systems Drafting**3 Credits (2+2P)**

Development of working drawings for electrical, plumbing, and HVAC systems, for residential and commercial building through the applications of both 2D Drafting and 3D Building Information Modeling (BIM) techniques. Basics of project setup, National CAD Standards, ADA Standards, modern office practice, code analysis, as well as Sustainability and LEED for new construction. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 180 or DRFT 181.

DRFT 231. Construction Methods and Equipment**3 Credits (2+2P)**

Introduction to methods and equipment utilized in the construction industry including, common construction equipment, equipment utilization, equipment operating costs, site and earthwork, applicable specifications and testing, and related planning and safety considerations. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 151.

DRFT 240. Structural Systems Drafting**3 Credits (2+2P)**

Study of foundations, wall systems, floor systems and roof systems in residential, commercial and industrial design/construction. Produce structural drawings including foundation plans, wall and building sections, floor and roof framing plans, shop drawings and details; schedules, materials lists and specifications. Use of various software. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): DRFT 180 or DRFT 181. Restricted to Community Colleges campuses only.

DRFT 242. Roadway Development Drafting**3 Credits (2+2P)**

Advanced civil/survey technology and drafting related to roadway development. Emphasis is on relevant terminology, codes/standards, and the production of complex working drawings such as topographical/grading, drainage, master utilities, roadway P P/details/etc., according to agency standards. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 143.

DRFT 243. Land Development Drafting**3 Credits (2+2P)**

Advanced civil/survey technology and drafting related to land development. Emphasis is on relevant terminology codes/standards, and the production of complex working drawings such as subdivision plats, local utility and drainage plans, construction details roadway P P, etc., according to local development/ agency standards.

Prerequisite: DRFT 143 and DRFT 153.

DRFT 250. Principles of Detailing and Design**3 Credits (2+2P)**

Advanced practice in construction documentation in the development and coordination of working drawings & specifications. In particular, will utilize Architectural Graphic Standards, National CAD Standards, and ADA standards to develop detail drawings related to Architectural, Civil, Structural and Building Mechanical systems. Will also be introduced to basic principles, factors, and process of building design such as space planning, site analysis, and basic architectural programming. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): DRFT 180 or DRFT 181. Restricted to Community Colleges campuses only.

DRFT 254. Spatial Data Processing**3 Credits (2+2P)**

Utilizes the tools and technologies of GIS, processing volumes of geodata identifying a numerical, coded or listed map. Involves the analysis of spatial data from various diverse applications and place in a descriptive mapping process. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 204.

DRFT 255. Independent Study**1-3 Credits (1-3)**

Instructor-approved projects in drafting or related topics specific to the student's individual areas of interest and relevant to the drafting and graphics technology curriculum. Consent of instructor required. May be repeated for a maximum of 6 credits.

DRFT 258. Introduction to Infraworks**3 Credits (2+2P)**

Introduction to the utilization of Infraworks software for the conceptualization, optimization, and visualization of infrastructure projects in the context of the built and natural environment. Restricted to Community Colleges campuses

Prerequisite(s): DRFT 143.

Learning Outcomes

1. Prepare accurate written technical documents, Produce drawing documents that are technically sound, Develop and practice productive work skills, and Upgrade technical knowledge and skills to keep pace with real-world changes DRFT 253 Course Competencies I. Navigate within a 3D drawing/ modeling space, Connect drawings to data sources, Stylize data sources, Create models elements, Analyze models, Collaborate on a project with others, Communicate design, and Develop good workplace skills and professional, productive work habits.

DRFT 261. Construction Scheduling and Project Management**3 Credits (2+2P)**

Introduction to construction scheduling and project management. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 161.

DRFT 265. Advanced Building Information Modeling Applications**3 Credits (2+2P)**

Advanced applications of Building Information Modeling (BIM) including the creation of, and practice in collaborative work sets, data and design analyses, energy modeling and analysis, preliminary LEED analysis, construction take-offs & estimation, and construction animation, through use of various BIM and related software. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 165.

DRFT 274. GIS Theory and Analysis**3 Credits (2+2P)**

Analyzes the hypothesis in which location and spatial data sufficiently quantifies the appropriate statistical methodology. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 254.

DRFT 276. Computer Rendering and Animation I**3 Credits (2+2P)**

Introduction to technical applications of computer generated renderings and animations for the architecture and engineering fields. 3D models, photo-realistic renderings, and basic animation movie files will be produced utilizing industry standard modeling and animation software.

DRFT 278. Advanced CAD Applications**3 Credits (2+2P)**

Introduction to advanced CAD commands, applications, usage techniques, and user customization. the latest version of the National CAD Standards will also be explored. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

DRFT 288. Portfolio Development**3 Credits (2+2P)**

Production of a portfolio consisting of previously produced student work related to the student's individualized degree option. Process shall include the compilation and organization of working and presentation drawings, construction documents, BIM Models, and renderings/animations. Students will learn the basics of design layout and online portfolio documentation. Job search and resume preparation activities will also be required. Production of new material and content may also be required. This course is designed as a last semester course in the Drafting & Design curricula. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of Instructor.

DRFT 290. Special Topics**1-4 Credits (1-4)**

Topics subtitled in the Schedule of Classes. May be repeated for a maximum of 12 credits.

DRFT 291. Cooperative Experience**1-6 Credits (1-6)**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student meets with advisor weekly. Graded S/U.

Prerequisite: consent of instructor.

DRFT 295. Professional Development and Leadership DAGA**1 Credit (1)**

Students gain experience in leadership, team building, performing community service, and membership and/or leadership in a student organization. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Drafting and Graphics Technology - Certificate of Completion

Architectural Drafting Option

| Prefix | Title | Credits |
|-------------------------------|---|-----------|
| Technical Requirements | | |
| DRFT 101 | Introduction to Drafting and Design Technologies | 1 |
| DRFT 108 | Drafting Concepts/Descriptive Geometry | 2 |
| DRFT 109 | Computer Drafting Fundamentals | 3 |
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 114 | Introduction to Solid Modeling | 3 |
| DRFT 130 | General Building Codes | 3 |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| DRFT 180 | Residential Drafting | 3 |
| Total Credits | | 26 |

General Drafting Option

| Prefix | Title | Credits |
|-------------------------------|---|-----------|
| Technical Requirements | | |
| DRFT 101 | Introduction to Drafting and Design Technologies | 1 |
| DRFT 108 | Drafting Concepts/Descriptive Geometry | 2 |
| DRFT 109 | Computer Drafting Fundamentals | 3 |
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 114 | Introduction to Solid Modeling | 3 |
| DRFT 130 | General Building Codes | 3 |
| DRFT 151 | Construction Principles and Print Reading | 3 |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| DRFT 180 | Residential Drafting | 3 |
| Total Credits | | 29 |

Architectural Drafting

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------------|---|-----------|
| DRFT 101 | Introduction to Drafting and Design Technologies | 1 |
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 130 | General Building Codes | 3 |
| DRFT 109 | Computer Drafting Fundamentals (DRFT elective) | 3 |
| Credits | | 11 |
| Spring | | |
| DRFT 108 | Drafting Concepts/Descriptive Geometry | 2 |
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| DRFT 180 | Residential Drafting | 3 |
| DRFT 114 | Introduction to Solid Modeling | 3 |
| Credits | | 15 |
| Total Credits | | 26 |

General Drafting

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------------|---|-----------|
| DRFT 101 | Introduction to Drafting and Design Technologies | 1 |
| DRFT 108 | Drafting Concepts/Descriptive Geometry | 2 |
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 130 | General Building Codes | 3 |
| DRFT 114 | Introduction to Solid Modeling | 3 |
| Credits | | 13 |
| Spring | | |
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 151 | Construction Principles and Print Reading | 3 |
| DRFT 109 | Computer Drafting Fundamentals | 3 |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| DRFT 180 | Residential Drafting | 3 |
| Credits | | 16 |
| Total Credits | | 29 |

Drafting and Graphics Technology (Architectural Technology) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Science | | |
| Area IV: Social/Behavioral Science | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Curriculum Requirements | | |
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 114 | Introduction to Solid Modeling | 3 |
| DRFT 130 | General Building Codes | 3 |
| DRFT 143 | Civil Drafting Fundamentals | 3 |
| DRFT 180 | Residential Drafting | 3 |
| DRFT 181 | Commercial Drafting | 3 |
| DRFT 288 | Portfolio Development | 3 |
| Approved DRFT Elective | | 4 |
| Program Concentration Coursework | | |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| DRFT 230 | Building Systems Drafting | 3 |
| DRFT 240 | Structural Systems Drafting | 3 |
| Approved DRFT Electives | | 6 |
| Total Credits | | 60-63 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|--|-----------|
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 130 | General Building Codes | 3 |
| Approved DRFT elective | | 2 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 12 |

Spring

| | | |
|--|---|--------------|
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 160 | Construction Take-Offs and Estimating | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Approved DRFT elective | | 2 |
| Credits | | 15-16 |

Second Year

| Fall | | |
|--|-----------------------------|--------------|
| DRFT 143 | Civil Drafting Fundamentals | 3 |
| DRFT 180 | Residential Drafting | 3 |
| DRFT 230 | Building Systems Drafting | 3 |
| GEN Ed course - One course from Areas I-IV ^{1, 2} | | 3-4 |
| Approved DRFT Elective | | 3 |
| Credits | | 15-16 |

Spring

| | | |
|--|--------------------------------|--------------|
| DRFT 114 | Introduction to Solid Modeling | 3 |
| DRFT 240 | Structural Systems Drafting | 3 |
| DRFT 288 | Portfolio Development | 3 |
| DRFT 181 | Commercial Drafting | 3 |
| General Education Elective - Any "G" course ² | | 3-4 |
| Approve DRFT Elective | | 3 |
| Credits | | 18-19 |

Total Credits **60-63**

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Drafting and Graphics Technology (General Drafting) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|-------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Science | | |

| | | |
|--|---|--------------|
| Area IV: Social/Behavioral Science | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| <i>General Education Elective</i> ² | | 3-4 |
| Core Curriculum Requirements | | |
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 114 | Introduction to Solid Modeling | 3 |
| DRFT 130 | General Building Codes | 3 |
| DRFT 143 | Civil Drafting Fundamentals | 3 |
| DRFT 180 | Residential Drafting | 3 |
| DRFT 181 | Commercial Drafting | 3 |
| DRFT 288 | Portfolio Development | 3 |
| Approved DRFT Elective | | 4 |
| <i>Program Concentration Coursework</i> | | |
| DRFT 151 | Construction Principles and Print Reading | 3 |
| DRFT 276 | Computer Rendering and Animation I | 3 |
| Approved DRFT Electives | | 9 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|---|--------------|
| DRFT 112 | Drafting Concepts/Computer Drafting Fundamentals I | 4 |
| DRFT 130 | General Building Codes | 3 |
| Approved DRFT elective | | 2 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 12 |
| Spring | | |
| DRFT 113 | Drafting Concepts/Computer Drafting Fundamentals II | 4 |
| DRFT 276 | Computer Rendering and Animation I | 3 |
| Approved DRFT elective | | 2 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 15-16 |

Second Year

| Fall | | |
|--|---|--------------|
| Approved DRFT elective | | 6 |
| DRFT 143 | Civil Drafting Fundamentals | 3 |
| DRFT 180 | Residential Drafting | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 15-16 |
| Spring | | |
| DRFT 151 | Construction Principles and Print Reading | 3 |
| DRFT 114 | Introduction to Solid Modeling | 3 |
| DRFT 181 | Commercial Drafting | 3 |
| DRFT 288 | Portfolio Development | 3 |
| General Education Elective - Any "G" course ² | | 3-4 |

| | |
|------------------------|--------------|
| Approved DRFT Elective | 3 |
| Credits | 18-19 |
| Total Credits | 60-63 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Early Childhood Education

The **Early Childhood Education** program prepares students to become highly qualified teachers, assistant teachers, family daycare providers, or administrators of early education programs for children ages birth through age eight. Students will gain a broad understanding of the specific needs of young children and develop strategies for meeting those needs.

The **Early Childhood Education Certificate** is a vocational certificate for students who are interested in the field of education for children birth to eight years of age. This Certificate can be the starting point for individuals who want to complete an Associate Degree in Early Childhood Education. The Certificate is 100% embedded in the Early Childhood Education Associate Degree. The Certificate program can be completed in one year and requires completion of 33 credits. The Associate Degree in Early Childhood Education program can be completed in two years and requires completion of 60 credits.

The course of study provides opportunities for students to gain knowledge in areas such as child development, health and safety, curriculum, professionalism, assessment, and ethics. Students will receive teacher training for work in public and private schools and other settings. Students who complete the **Early Childhood Administrative Certificate** are eligible to apply for an early childhood administrative specialist certificate with the New Mexico Office of Child Development; the permanent certificate is granted upon completion the Associate Degree in Early Childhood Education.

Early care and education professionals are eligible for a vocational certificate in the area of Early Childhood Educator. The certificate indicates completion of the early childhood "vocational" courses (approximately 29 credit hours) within the associate degree program's transfer module. The Office of Child Development awards the certificate when the complete course of study is completed. Contact the State of New Mexico Office of Child Development for more information.

The **Associate Degree in Early Childhood Education** includes lower-division courses required for entry into the Teacher Education Program (TEP) at NMSU Las Cruces. Please note that students are required to pass a security background check to take practicum courses. Past criminal violations may prevent a student from completing the degree and from being hired by school systems or other child care facilities upon graduation.

Graduation Requirements

Early Childhood Administrative Certificate: WorkKeys® scores of level 4 in Reading for Information, level 4 in Locating Information, and level 4 in Applied Mathematics; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU. Students must complete ENGL 1110G Composition I with a "C" or better. Students are required to pass a security background check in order to take certain courses. Criminal violations may prevent a student from completing the certificate. Students must have a cumulative 2.5 GPA to apply for this certificate, and a "C" or better is required in all ECED courses. ECED courses taken more than 7 years prior to graduation must be repeated. A 2.5 GPA is required for acceptance into the Teacher Education Program at NMSU. Completion of all requirements does not guarantee acceptance in the NMSU Teacher Education Program.

Associate Degree in Early Childhood Education: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU.

Early Childhood Education - Certificate (p. 217)

Early Childhood Education - Associate Degree (p. 214)

ECED 1110. Child Growth, Development, and Learning**3 Credits (3)**

This basic course in the growth, development, and learning of young children, prenatal through age eight, provides students with the theoretical foundation for becoming competent early childhood professionals. The course includes knowledge of how young children grow, develop and learn. Major theories of child development are integrated with all domains of development, including biological-physical, social, cultural, emotional, cognitive and language. The adult's role in supporting each child's growth, development and learning is emphasized.

Learning Outcomes

1. Incorporate understanding of developmental stages, processes, and theories of growth, development, and learning into developmentally appropriate practice. A.1
2. Demonstrate knowledge of the interaction between maturation and environmental factors that influence physical, social, emotional, cognitive, and cultural domains in the healthy development of each child. A.2
3. Demonstrate knowledge of the significance of individual differences in development and learning.
4. Demonstrate knowledge of how certain differences may be associated with rate of development and
5. developmental patterns associated with developmental delays and/or specific disabilities. A.3
6. Demonstrate knowledge of the similarities between children who are developing typically and those with diverse abilities. A.4
7. Demonstrate knowledge of the many functions that language serves in the cognitive, social, and emotional aspects of development in the formative years. A.7
8. Demonstrate knowledge of the developmental sequence of language and literacy, including the
9. influence of culture and home factors. A.8
10. 1Demonstrate knowledge of how children acquire and use verbal, non-verbal, and alternative means of communication. A.9
11. 1Demonstrate knowledge of the relationship among emotions, behaviors, and communication skills to assist children in identifying and expressing their feelings in appropriate ways. A.10
12. 1Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11

ECED 1115. Health, Safety, and Nutrition**2 Credits (2)**

This course provides information related to standards and practices that promote children's physical and mental well-being sound nutritional practices, and maintenance of safe learning environments. It includes information for developing sound health and safety management procedures for indoor and outdoor learning environments for young children. The course examines the many scheduling factors that are important for children's total development, healthy nutrition, physical activity, and rest.

Learning Outcomes

1. Recognize and respond to each child's physical health, intellectual and emotional well-being, and nutritional and safety needs. B.1
2. Articulate an understanding of indoor and outdoor learning environments that provide opportunities for children to put into practice healthy behaviors (physically, socially and emotionally). B.2
3. Use appropriate health appraisal and management procedures and makes referrals when necessary. B.3
4. Recognize signs of emotional distress, child abuse, and neglect in young children and use procedures appropriate to the situation, such as initiating discussions with families, referring to appropriate
5. professionals, and, in cases of suspected abuse or neglect, reporting to designated authorities. B.4
6. Establish an environment that provides opportunities and reinforcement for children's practice of healthy behaviors that promote appropriate nutrition and physical and psychological well-being. B.5
7. Provide a consistent daily schedule for rest/sleep, as developmentally appropriate. B.6
8. Implement health care and educational activities for children and families based on health and a nutritional information that is responsive to diverse cultures. B.7
9. Assist young children and their families, as individually appropriate, in developing decision-making and interpersonal skills that enable them to make healthy choices and establish health-promoting behaviors. B.8

ECED 1120. Guiding Young Children**3 Credits (3)**

This course explores various theories of child guidance and the practical applications of each. It provides developmentally appropriate methods for guiding children and effective strategies and suggestions for facilitating positive social interactions. Strategies for preventing challenging behaviors through the use of environment, routines and schedule will be presented. Emphasis is placed on helping children become self-responsible, competent, independent, and cooperative learners and including families as part of the guidance approach.

Learning Outcomes

1. Apply knowledge of cultural and linguistic diversity and the significance of socio-cultural and political contexts for development and learning and recognize that children are best understood in the contexts of family, culture and society. A.6
3. Demonstrate knowledge of the many functions that language serves in the cognitive, social, and emotional aspects of development in the formative years. A.7
4. Demonstrate knowledge of the relationship among emotions, behaviors, and communication skills to assist children in identifying and expressing their feelings in appropriate ways. A.10
5. Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11
6. Recognize and respond to each child's physical health, intellectual and emotional well-being, and nutritional and safety needs. B.1
7. Demonstrate knowledge and skill in building positive, reciprocal relationships with families. C.1
8. Demonstrate knowledge of and respect for variations across cultures, in terms of family strengths, expectations, values, and child-rearing practices. C.4
10. Demonstrate the ability to incorporate the families' desires and goals for their children into classroom or intervention strategies. C.7
11. Demonstrate knowledge and skills in developmentally appropriate guidance techniques and strategies that provide opportunities to assist children in development positive thoughts and feelings about themselves and others through cooperative interaction with peers and adults. E.3
12. 1Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
13. 1Demonstrate knowledge of assessment techniques, interpretation of assessment information in the application of this

ECED 1125. Assessment of Children and Evaluation of Programs**3 Credits (3)**

This basic course familiarizes students with a variety of culturally appropriate assessment methods and instruments, including systematic observation of typically and non-typically developing children. The course addresses the development and use of formative and summative assessment and evaluation instruments to ensure comprehensive quality of the total environment for children, families, and the community. Students will develop skills for evaluating the assessment process and involving other teachers, professionals and families in the process.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Learning Outcomes

1. Demonstrate ability to choose valid tools that are developmentally, culturally, and linguistically appropriate; use the tools correctly; make appropriate referrals; and interpret assessment results, with the goal of obtaining valid, useful information to inform practice and decision making. F.1
2. Demonstrate knowledge of maintaining appropriate records of children's development and behavior that safeguard confidentiality and privacy. F.2
3. Demonstrate knowledge of the educator's role as a participating member of the assessment process as described and mandated by state and federal regulations for Individual family service plans (IFSP) and individual education plans (IEP). F.3
4. Demonstrate understanding of the influences of environmental factors, cultural/linguistic differences, and diverse ways of learning on assessment outcomes. F.4 Involve the family and, as appropriate, other team members in assessing the child's development, strengths, and needs in order to set goals for the child. F.5 Articulate an understanding of the distinctions and definitions of assessment concepts (e.g., screening, diagnostic assessment, standardized, testing, accountability assessment). F.6
5. Apply understanding of assessment concepts toward selection of appropriate formal assessment measures, critiquing the limitations of inappropriate measures, and discussing assessment issues as part of interdisciplinary teams. F.7
6. Articulate an understanding that responsible assessment is legally and ethically grounded and guided by sound professional. It standards is collaborative and open with the goal of supporting diverse children and families. F.8
7. Demonstrate knowledge of assessment techniques, interpretation of assessment information in the Application of this data to curriculum development and/or intervention planning. F.9
8. 1Demonstrate knowledge of a variety of techniques and procedures to evaluate and modify program goals for young children and their families. F.10
9. 1Demonstrate knowledge and use of program evaluation to ensure comprehensive quality of the total Environment for children, families, and the community. F.11
10. 1Use both self and collaborative evaluations as part of ongoing program evaluations. F.12

ECED 1130. Family and Community Collaboration**3 Credits (3)**

This beginning course examines the involvement of families and communities from diverse cultural and linguistic backgrounds in early childhood programs. Ways to establish collaborative relationships with families in early childhood settings is discussed. Families' goals and desires for their children will be supported through culturally responsive strategies.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Learning Outcomes

1. Demonstrate knowledge and skill in building positive, reciprocal relationships with families. C.1
2. Articulate an understanding of a safe and welcoming environment for families and community members. C.2
3. Develop and maintain ongoing contact with families through a variety of communication strategies. C.3
4. Demonstrate knowledge of and respect for variations across cultures, in terms of family strengths, expectations, values, and child-rearing practices. C.4
5. Articulate understanding of the complexity and dynamics of family systems. C.5
6. Demonstrate understanding of the importance of families as the primary educator of their child. C.6
7. Involve families and community members in contributing to the learning environment. C.9
8. Demonstrate ability to communicate to families the program's policies, procedures, and those procedural safeguards that are mandated by state and federal regulations. C.11
9. Apply knowledge of family theory and research to understand family and community characteristics including socioeconomic conditions; family structures, relationships, stressors, and supports (including the impact of having a child with diverse abilities); home language and ethnicity. C.12
10. 1Demonstrate knowledge of and skill to access community resources that assist families and contribute directly or indirectly to children's positive development such as mental health services, health care, adult education, English language instruction, and economic assistance. C.13
11. 1Demonstrate effective written and oral communication skills when working with children, families, and early care, education, and family support professionals. E.14
12. 1Demonstrate a commitment to leadership and advocacy for excellence in programs and services for young children and their families. G.6

ECED 2110. Professionalism**2 Credits (2)**

This course provides a broad-based orientation to the field of early care and education. Early childhood history, philosophy, ethics and advocacy are introduced. Basic principles of early childhood systems are explored. Multiple perspectives on early care and education are introduced. Professional responsibilities such as cultural responsiveness and reflective practice are examined.

Learning Outcomes

1. Recognize signs of emotional distress, child abuse, and neglect in young children and use procedures appropriate to the situation, such as initiating discussions with families, referring to appropriate professionals, and, in cases of suspected abuse or neglect, reporting to designated authorities. B.4
2. Demonstrate ability to communicate to families the program's policies, procedures, and those procedural safeguards that are mandated by state and federal regulations. C.11
3. Use both self and collaborative evaluations as part of ongoing program evaluations. F.12
4. Demonstrate ability to adhere to early childhood professional codes of ethical conduct and issues of confidentiality. G.1
5. Demonstrate awareness of federal, state, and local regulations, and public policies regarding programs and services for children birth through eight years of age. G.2
6. Demonstrate understanding of conditions of children, families, and professionals; the historical and current issues and trends; legal issues; and legislation and other public policies affecting children, families, and programs for young children and the early childhood profession. G.3
7. Demonstrate critical reflection of one's own professional and educational practices from community, state, national, and global perspectives. G.4
8. Demonstrate understanding of the early childhood profession, its multiple historical, philosophical, and social foundations, and how these foundations influence current thought and practice. G.5
9. Demonstrate knowledge in technology resources to engage in ongoing professional development. G.7

ECED 2115. Introduction to Language, Literacy, and Reading**3 Credits (3)**

This course is designed to prepare early childhood professionals for promoting children's emergent literacy and reading development. Through a developmental approach, the course addresses ways in which early childhood professionals can foster young children's oral language development, phonemic awareness, and literacy problem solving skills, fluency, vocabulary, and comprehension. . This course provides the foundation for early childhood professionals to become knowledgeable about literacy development in young children. Instructional approaches and theory-based and research based strategies to support the emergent literacy and reading skills of native speakers and English language learners will be presented.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H, or ENGL 1110M).

Learning Outcomes

1. Demonstrate knowledge of the many functions that language serves in the cognitive, social, and
2. emotional aspects of development in the formative years. A.7
3. Demonstrate knowledge of the developmental sequence of language and literacy, including the
4. influence of culture and home factors. A.8
5. Demonstrate knowledge of how children acquire and use verbal, non-verbal, and alternative means of communication. A.9
6. Develop partnerships with family members to promote early literacy in the home. C.8
7. Establish partnerships with community members in promoting literacy. C.10
8. Demonstrate knowledge of the reading and writing components of emergent literacy at each developmental level. D.4
9. Provide and use anti-bias materials/literature and experiences in all content areas of the curriculum. D.7
10. Create and manage a literacy-rich environment that is responsive to each child's unique path of development. E.9
11. Use a variety of strategies during adult-child and child-child interactions and facilitate communication and dialogue of expressive language and thought. E.10 1
12. Demonstrate a variety of developmentally appropriate instructional strategies that facilitate the development of literacy skills. E.11

ECED 2120. Curriculum Development through Play Birth through Age 4 (PreK)**3 Credits (3)**

The beginning curriculum course places play at the center of curriculum in developmentally appropriate early childhood programs. It addresses content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSPs is included. Curriculum development in all areas, including literacy, numeracy, the arts, health, science, social skills, and adaptive learning for children, birth through age four, is emphasized. Consent of instructor required.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Corequisite(s): ECED 2121.

Learning Outcomes

1. Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11
2. Demonstrate knowledge of relevant content for young children and developmentally appropriate ways of integrating content into teaching and learning experiences for children from birth to four (0-4) years of age. D.1
3. Demonstrate the integration of knowledge of how young children develop and learn with knowledge of the concepts, inquiry tools, and structure of content areas appropriate for different developmental levels. D.2
4. Adapt content to meet the needs of each child, including the development of individualized family
5. service plans (IFSP) or individualized education plans (IEP) for children with diverse abilities through the team process with families and other team members. D.6
6. Demonstrate knowledge of varying program models and learning environments that meet the individual needs of all young children, including those with diverse abilities. E.1
7. Create environments that encourage active involvement, initiative, responsibility, and a growing sense of autonomy through the selection and use of materials and equipment that are suitable to individual learning, developmental levels, diverse abilities, and the language and cultures in New Mexico. E.2
8. Create and manage inclusive learning environments that provide individual and cooperative
9. opportunities for children to construct their own knowledge through various strategies that include
10. decision-making, problem solving, and inquiry experiences. E.4
11. Demonstrate understanding that each child's creative expression is unique and can be encouraged through diverse ways, including creative play. E.5
12. Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
13. 1Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
14. 1Use and explain the rationale for developmentally appropriate methods that include play, small group projects, open-ended questioning, group discussion, problem solving, cooperative learning and inquiry experiences to help young children develop intellectual curiosity, solve problems, and make decisions. E.8
15. 1Demonstrate a variety of developmentally appropriate instructional strategies that facilitate the development of emergent literacy skills. E.11
16. 1Demonstrate knowledge of assessment techniques, interpretation of assessment information in the application of this data to curriculum development of intervention planning. F.

ECED 2121. Curriculum Development through Play Birth through Age 4 (PreK) Practicum**2 Credits (2)**

The beginning practicum course is a co-requisite with the course Curriculum Development through Play – Birth through Age 4. The field based component of this course will provide experiences that address curriculum content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSPs is included. Curriculum development in all areas, including literacy, numeracy, the arts, health, science, social skills, and adaptive learning for children, birth through age four, is emphasized. Consent of instructor required.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Corequisite(s): ECED 2120.

Learning Outcomes

1. Provide a variety of activities that facilitate development of the whole child in the following areas: Physical/motor, social/emotional, language/cognitive and adaptive/living skills. A.5
2. Develop, implement and evaluate an integrated curriculum that focuses on children's development and interests, using their language, home experiences, and cultural values. D.5
3. Provides and uses anti-bias materials and literature, and experiences in all content areas of the curriculum. D.7
4. Create and manage inclusive learning environments that provide individual and cooperative opportunities for children to construct their own knowledge through various strategies that include decision-making, problem solving, and inquiry experiences. E.4
5. Demonstrate understanding that each child's creative expression is unique and can be encouraged through diverse ways, including creative play. E.5
6. Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
7. Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
8. Use and explain the rationale for developmentally appropriate methods that include play, small group projects, open-ended questioning, group discussion, problem solving, cooperative learning and inquiry experiences to help young children develop intellectual curiosity, solve problems, and make decisions. E.8

ECED 2130. Curriculum Development and Implementation Age 3 (PreK) through Grade 3**3 Credits (3)**

The curriculum course focuses on developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills, is emphasized. Information on adapting content areas to meet the needs of children with special needs and the development of IEP's is included. Consent of instructor required.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Corequisite(s): ECED 2131.

Learning Outcomes

1. Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11
2. Demonstrate the integration of knowledge of how young children develop and learn with knowledge of the concepts, inquiry tools, and structure of content areas appropriate for different developmental levels. D.2
3. Demonstrate knowledge of what is important in each content area, why it is of value, and how it links with early and later understandings within and across areas. D.3
4. Demonstrate knowledge of the language, reading and writing components of emergent literacy at each developmental level. D.4
5. Adapt content to meet the needs of each child, including the development of individualized family service plans (IFSP) or individualized education plans (IEP) for children with diverse abilities through the team process with families and other team members. D.6
6. Demonstrate knowledge of varying program models and learning environments that meet the individual needs of all young children, including those with diverse abilities. E.1
7. Create environments that encourage active involvement, initiative, responsibility, and a growing sense of autonomy through the selection and use of materials and equipment that are suitable to individual learning, developmental levels, diverse abilities, and the language and cultures in New Mexico. E.2
8. Create and manage inclusive learning environments that provide individual and cooperative opportunities for children to construct their own knowledge through various strategies that include decision-making, problem solving, and inquiry experiences. E.4
9. Demonstrate understanding that each child's creative expression is unique and can be encouraged through diverse ways, including creative play. E.5
10. 1Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
11. 1Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
12. 1Demonstrate knowledge of developmentally appropriate uses of technology, including assistive technology. E.12
13. 1Demonstrate knowledge of assessment techniques, interpretation of assessment information in the application of this data to curriculum development of intervention planning. F.9

ECED 2131. Curriculum Development and Implementation Age 3 (PreK) through Grade 3 Practicum**2 Credits (2)**

The beginning practicum course is a co-requisite with the course Curriculum Development and Implementation: Age 3 through Grade 3. The field based component of this course will provide experiences that address developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills is emphasized. Information on adapting content areas to meet the needs of children with special needs and the development of IEPs is included. Consent of instructor required. Corequisite(s): ECED 2130

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Learning Outcomes

1. Provide a variety of activities that facilitate development of the whole child in the following areas: Physical/motor, social/emotional, language/cognitive and adaptive/living skills. A.5
2. Develop, implement and evaluate an integrated curriculum that focuses on children's development and interests, using their language, home experiences, and cultural values. D.5
3. Provides and uses anti-bias materials and literature, and experiences in all content areas of the curriculum. D.7
4. Create and manage inclusive learning environments that provide individual and cooperative opportunities
5. for children to construct their own knowledge through various strategies that include decision-making, problem solving, and inquiry experiences. E.4
6. Demonstrate understanding that each child's creative expression is unique and can be encouraged
7. through diverse ways, including creative play. E.5
8. Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
9. Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
10. Use and explain the rationale for developmentally appropriate methods that include play, small group projects, open-ended questioning, group discussion, problem solving, cooperative learning and inquiry experiences to help young children develop intellectual curiosity, solve problems, and make decisions. E.8

ECED 2140. Effective Program Development for Diverse Learners and their Families**3 Credits (3)**

This course addresses the role of a director/administrator in the implementation of family-centered programming that includes individually appropriate and culturally responsive curriculum in a healthy and safe learning environment for all children and their families.

Learning Outcomes

1. Describe important aspects of leadership that an administrator in an early childhood setting must demonstrate.
2. Identify and describe ways in which classrooms can have a multicultural environment.
3. Observe a classroom and identify, using photographs good practice with classroom environment.
4. Describe important aspects of a good early childhood curriculum
5. Describe how culture and socioeconomic factors influence classroom environment.

ECED 2141. Effective Program Development for Diverse Learners and their Families Practicum**2 Credits (2)**

Provides opportunities for students to apply knowledge gained from Curriculum for Diverse Learners and their Families in a practicum setting. Consent of instructor required. Restricted to ECED majors.

Corequisite(s): ECED 2140.

Learning Outcomes

1. Describe the requirements to maintain and enhance the physical and mental health, safety, and nutrition components of a program: Demonstrate knowledge of facility management to include evaluation, maintenance, security, and meeting applicable codes; Demonstrate knowledge of planning for appropriate indoor and outdoor environments; Identify ways to support early childhood educators in the selection of appropriate materials and equipment for the environment; Demonstrate knowledge of the impact of the environment on children's learning and development.
2. Demonstrate knowledge of early care and education curriculum that is individually, culturally, linguistically, and developmentally responsive: Describe a variety of curriculum goals and teaching strategies; Describe the importance of ongoing curriculum assessment and planning, and collaboration with teachers, families and community entities; Identify ways to support early childhood educators in curriculum assessment and planning.
3. Demonstrate knowledge of family/community involvement in effective program development: Describe the importance of supporting families as partners in early care and education program development; Describe both informal and formal communication systems with families that encourage information sharing and joint decision making; Identify strategies for resolving conflicts and supporting families with diverse backgrounds and parenting expectations; Identify the range of family needs including transitional periods; Identify within the community the network to support families with their special needs; Describe a "family friendly" inclusive philosophy
4. Demonstrate knowledge of a director's role as an educational leader in an inclusive setting: Describe what a director does in supporting the instructional component of the program for children, staff, and families; Identify resources that a director might use to keep current with information relating to the instructional component of the program; Describe ways to involve teachers in instructional decision making.

ECED 2215. Program Management**3 Credits (3)**

This course emphasizes the technical knowledge necessary to develop and maintain an effective early care and education program. It focuses on sound financial management and vision, the laws and legal issues that affect programs, and state and national standards such as accreditation. Consent of instructor required.

ECED 2280. Professional Relationships**3 Credits (3)**

This course addresses staff relations that will foster diverse professional relationships with families, communities and boards. Topics of staff recruitment, retention, support and supervision will lay the foundation for positive personnel, family and community relationships. Consent of instructor required.

Corequisite(s): ECED 2281.

Learning Outcomes

1. Interview an administrator and write a paper describing personnel management, staff support,
2. supervision, and professional development.
3. Identify and describe ethical and legal requirements in maintaining a professional relationship with subordinates, the community, clients, and fellow administrators.
4. Identify and describe technologies which may be used in an early childhood setting.
5. Identify and describe legal and ethical considerations in the employment of others.

ECED 2281. Professional Relationships Practicum**2 Credits (2)**

Practical experience in the development of staff relationship that will foster professional relationships with families, communities and boards. Issues of staff recruitment, retention, support and supervision will lay a foundation for positive personnel management. Consent of instructor required. Restricted to ECED majors.

Corequisite(s): ECED 2280.

Learning Outcomes

1. Demonstrate knowledge of personnel management, staff support, supervision, and professional development within a diverse and inclusive organization: Describe methods for recruiting and retaining a diverse staff; Describe job descriptions for each position; Review a sampling of personnel policies and procedures; Review a variety of staff handbooks; Explain why on-going system of supervision should include regular meetings for professional goal setting, self-assessment, and feedback; Review program needs to effectively manage the work of the program including scheduling, covering ratios, initial orientation, in-service, staff meeting, etc.
2. Demonstrate an awareness of appropriate communication and collaboration skills: Improve written and oral communication skills; Describe strategies for resolving conflicts; Explain how to promote consensus building as a decision making process.
3. Demonstrate knowledge that promotes effective professional relationships with families, communities, and board members: Describe methods for demonstrating respect, understanding, and appreciation for all people; Identify the aspects of culture that facilitate relationship building among people; Describe how to build a common vision and develop long range program plans with parents, staff, board, and the community; Communicate program goals to visitors, prospective parents, volunteers, and board members; Describe how public relations and marketing strategies can impact programs; Review assessment tools that identify needs for early care, education and family support; Develop a personal professional development plan; Describe methods to work effectively with a board and advisory group.
4. Demonstrate knowledge of technology uses and skill acquisition: Describe how to use technology resources to engage in ongoing professional development and lifelong learning; Describe how you will use technology to communicate and collaborate in your leadership role

Early Childhood Education - Associate in Early Childhood Education

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---|---------|
| General Education | | |
| <i>Area I: Communications</i> | | |
| <i>English Composition - Level 1</i> | | |
| ENGL 1110G | Composition I | 4 |
| <i>English Composition - Level 2</i> | | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| <i>Oral Communication</i> | | |
| Choose one from the following: | | 3 |
| COMM 1115G | Introduction to Communication | |
| or COMM 1130G | Public Speaking | |
| <i>Area II: Mathematics</i> | | |
| Choose one from the following: | | 3 |
| MATH 2134G | Fundamentals of Elementary Math II ¹ | |
| or MATH 1220G | College Algebra | |
| <i>Area III/IV: Laboratory Science and Social/Behavioral Sciences</i> | | 11 |
| <i>Area III: Laboratory Science</i> | | |
| Choose two courses from two different areas (8 credits) | | |
| ASTR 1120G | The Planets Lecture & Laboratory | |
| or ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| BIOL 1120G & BIOL 1120L | Human Biology and Human Biology Laboratory | |
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | |
| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| ENVS 1110G | Environmental Science I | |

| | | |
|---|--|-----------|
| GEOL 1110G | Physical Geology | |
| PHYS 1115G | Survey of Physics with Lab | |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | |
| Area IV: Social/Behavioral Sciences | | |
| Choose one from the following (3 credits): | | |
| ANTH 1140G | Introduction to Cultural Anthropology | |
| GEOG 1120G | World Regional Geography | |
| GEOG 1130G | Human Geography | |
| POLS 1120G or POLS 1110G | American National Government Introduction to Political Science | |
| PSYC 1110G or SOCI 1110G | Introduction to Psychology Introduction to Sociology | |
| Area V: Humanities | | |
| Choose one of the following: | | 3 |
| HIST 1120G | United States History II | |
| HIST 1130G | World History I | |
| HIST 1140G | World History II | |
| Area VI: Creative and Fine Arts | | |
| Choose one from the following: | | 3 |
| ARTH 1115G | Orientation in Art | |
| MUSC 1130G | Music Appreciation: Western Music | |
| THEA 1110G | Introduction to Theatre | |
| General Education Elective | | |
| CEPY 1120G | Human Growth and Behavior (Recommended) | 3 |
| Core Requirements | | |
| <i>Professional Education Courses</i> ² | | |
| ECED 1110 | Child Growth, Development, and Learning | 3 |
| ECED 1115 | Health, Safety, and Nutrition | 2 |
| ECED 1130 | Family and Community Collaboration | 3 |
| ECED 2120 | Curriculum Development through Play Birth through Age 4 (PreK) | 3 |
| ECED 2121 | Curriculum Development through Play Birth through Age 4 (PreK) Practicum | 2 |
| ECED 2130 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 | 3 |
| ECED 2131 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 Practicum | 2 |
| ECED 2115 | Introduction to Language, Literacy, and Reading | 3 |
| ECED 2110 | Professionalism | 2 |
| ECED 1120 | Guiding Young Children | 3 |
| Electives, to bring the total credits to 60 ³ | | 1 |
| Total Credits | | 60 |

- ¹ MATH 2134G Fundamentals of Elementary Math II requires a prerequisite of a grade of C or better in MATH 1134 Fundamentals of Elementary Mathematics I. MATH 1220G College Algebra requires a prerequisite of a grade of C or better in MATH 1215 Intermediate Algebra.
- ² Cumulative GPA of 2.5 and a "C" or better required in these courses. CEPY, ECED, and ELAD courses taken more than 7 years prior to graduation must be repeated.
- ³ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------|---|---------|
| CEPY 1120G | Human Growth and Behavior | 3 |
| ECED 1110 | Child Growth, Development, and Learning | 3 |
| ECED 1115 | Health, Safety, and Nutrition | 2 |

| | | |
|--|---|-----------|
| ECED 1120 | Guiding Young Children | 3 |
| ENGL 1110G | Composition I | 4 |
| Credits | | 15 |
| Spring | | |
| ECED 1130 | Family and Community Collaboration | 3 |
| ECED 2110 | Professionalism | 2 |
| ECED 2115 | Introduction to Language, Literacy, and Reading | 3 |
| Choose one from the following: | | 3 |
| HIST 1110G or HIST 1120G | United States History I or United States History II | |
| HIST 1130G | World History I | |
| HIST 1140G | World History II | |
| Choose one from the following: | | 3 |
| ARTH 1115G | Orientation in Art | |
| MUSC 1130G | Music Appreciation: Western Music | |
| THEA 1110G | Introduction to Theatre | |
| Elective Course ¹ | | 1 |
| Credits | | 15 |
| Second Year | | |
| Fall | | |
| ECED 2120 | Curriculum Development through Play Birth through Age 4 (PreK) ² | 3 |
| ECED 2121 | Curriculum Development through Play Birth through Age 4 (PreK) Practicum ² | 2 |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| Area III: Laboratory Sciences (choose two from two different areas. Must include lab) ³ | | 8 |
| Credits | | 16 |
| Spring | | |
| Area IV: Social/Behavioral Sciences ⁴ | | 3 |
| ENGL 2210G or ENGL 2221G | Professional & Technical Communication or Writing in the Humanities and Social Science | 3 |
| ECED 2130 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 | 3 |
| ECED 2131 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 Practicum | 2 |
| MATH 2134G or MATH 1220G | Fundamentals of Elementary Math II ⁵ or College Algebra | 3 |
| Credits | | 14 |
| Total Credits | | 60 |

¹ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

² ECED 2120 Curriculum Development through Play Birth through Age 4 (PreK) and ECED 2121 Curriculum Development through Play Birth through Age 4 (PreK) Practicum must be taken before ECED 2130 Curriculum Development and Implementation Age 3 (PreK) through Grade 3 and ECED 2131 Curriculum Development and Implementation Age 3 (PreK) through Grade 3 Practicum.

³ Area III: Science. Please choose two from:
 ASTR 1120G The Planets Lecture & Laboratory, ASTR 1115G Introduction to Astronomy Lecture & Laboratory, BIOL 1120G Human Biology, BIOL 1120L Human Biology Laboratory, BIOL 2610G Principles of Biology: Biodiversity, Ecology, and Evolution, BIOL 2610L Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory, BIOL 2110G Principles of Biology: Cellular and Molecular Biology, BIOL 2110L Principles of Biology: Cellular and Molecular Biology Laboratory, CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors), CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors, ENVS 1110G Environmental Science I, GEOL 1110G Physical Geology, PHYS 1115G Survey of Physics with Lab, PHYS 1230G Algebra-Based Physics I, PHYS 1230L Algebra-Based Physics I Lab.

⁴ Area IV: Social/Behavioral Science. Choose one from:
 ANTH 1140G Introduction to Cultural Anthropology, GEOG 1120G World Regional Geography, GEOG 1130G Human Geography, POLS 1120G American National Government, POLS 1110G Introduction to Political Science, PSYC 1110G Introduction to Psychology, SOCI 1110G Introduction to Sociology.

⁵ MATH 112G Fundamentals of Elementary Math II requires a prerequisite of a grade of C or better in MATH 111 Fundamentals of Elementary Mathematics I.
 MATH 121G College Algebra requires a prerequisite of a grade of C or better in MATH 120 Intermediate Algebra.

Early Childhood Education - Certificate of Completion

| Prefix | Title | Credits |
|---|--|-----------|
| Related Requirements | | |
| ENGL 1110G | Composition I | 4 |
| Professional Education Courses ² | | 29 |
| ECED 1110 | Child Growth, Development, and Learning | |
| ECED 1115 | Health, Safety, and Nutrition | |
| ECED 1130 | Family and Community Collaboration | |
| ECED 2120 | Curriculum Development through Play Birth through Age 4 (PreK) | |
| ECED 2121 | Curriculum Development through Play Birth through Age 4 (PreK) Practicum | |
| ECED 2130 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 | |
| ECED 2131 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 Practicum | |
| ECED 2115 | Introduction to Language, Literacy, and Reading | |
| ECED 2110 | Professionalism | |
| ECED 1125 | Assessment of Children and Evaluation of Programs | |
| ECED 1120 | Guiding Young Children | |
| Total Credits | | 33 |

¹ Students must complete ENGL 1110G Composition I with a "C" or better.

² Students must have a cumulative 2.5 GPA to apply for this certificate, and a "C" or better is required in all ECED courses. ECED courses taken more than 7 years prior to graduation must be repeated.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | |
|----------------------|--|----------------|
| Fall | | Credits |
| ENGL 1110G | Composition I | 4 |
| ECED 1110 | Child Growth, Development, and Learning | 3 |
| ECED 1115 | Health, Safety, and Nutrition | 2 |
| ECED 1120 | Guiding Young Children | 3 |
| ECED 2110 | Professionalism | 2 |
| Credits | | 14 |
| Spring | | |
| ECED 1130 | Family and Community Collaboration | 3 |
| ECED 2120 | Curriculum Development through Play Birth through Age 4 (PreK) | 3 |
| ECED 2121 | Curriculum Development through Play Birth through Age 4 (PreK) Practicum | 2 |
| ECED 2130 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 | 3 |
| Credits | | 11 |
| Summer | | |
| ECED 1125 | Assessment of Children and Evaluation of Programs | 3 |
| ECED 2115 | Introduction to Language, Literacy, and Reading | 3 |
| ECED 2131 | Curriculum Development and Implementation Age 3 (PreK) through Grade 3 Practicum | 2 |
| Credits | | 8 |
| Total Credits | | 33 |

It is highly recommended that students follow the roadmap because of required prerequisites and corequisites on some courses.

Education

The **Associate Degree in Education** prepares students for work as a teacher's aide, substitute teacher or other paraprofessional in elementary or secondary schools. The curriculum is designed for maximum transfer of credits to the Teacher Education Program (TEP) at NMSU for those students planning to complete the Bachelor's Degree in Education. Note: Completion of the Associate degree in Education does not guarantee admission into the TEP.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Education - Associate Degree (p. 220)

EDUC 1110. Freshman Orientation

1 Credit (1)

Introduction to the university and to the College of Education. Discussion of planning for individualized education program and field experience. Restricted to Las Cruces campus only.

Learning Outcomes

1. Demonstrates knowledge of and uses theories, approaches, methods, and techniques for teaching, reading, writing, and other academic skills in English and the native language.
2. Demonstrates knowledge of and applies management techniques appropriate to classrooms containing students who have varying levels of proficiency and academic experience in both languages.
3. Community/Family Involvement
4. The bilingual teacher:
5. Recognizes the importance of parental and community involvement for facilitating the learner's successful integration to his/her school environment.
6. Demonstrates knowledge of the teaching and learning patterns of the students' home environment and incorporates these into the instructional areas of program.
7. Assessment
8. The bilingual teacher:
9. Assesses oral and written language proficiency in academic areas in both languages utilizing the results for instructional placement, prescription, and evaluation.
10. Evaluates the growth of the learner's native and second language in the context of the curriculum.
11. Continuously assesses and adjusts her or his own language use in the classroom in order to maximize learner comprehension and verbal participation

EDUC 1120. Introduction to Education

2 Credits (2)

Introduction to the historical, philosophical, sociological foundations of education, current trends, and issues in education; especially as it relates to a multicultural environment. Students will use those foundations to develop effective strategies related to problems, issues and responsibilities in the field of education. Restricted to Las Cruces campus only.

Learning Outcomes

1. Describe the teaching and learning of various American education settings including early childhood, elementary, middle school, high school, and special education.
2. Describe how teachers use educational theory and the results of research of students' learning.
3. Explain the techniques for establishing a positive and supportive environment in the classroom
4. Identify and describe instructional strategies supported by current research to promote thinking skills of all learners.
5. Recognize the teachers' role and responsibilities in an increasingly diverse, multicultural society.

EDUC 1140. Math for Paraprofessionals

3 Credits (3)

Applied math skills for paraprofessionals working with children.

Prerequisite: CCDM 103 N.

Learning Outcomes

1. Students will plan developmentally appropriate math activities for young children.
2. Students will plan adaptations to math activities for children with diverse abilities.
3. Students will demonstrate understanding of recent research in methods of teaching mathematics.
4. Students will demonstrate understanding of early childhood theories as they relate to the teaching of mathematics.
5. Students will demonstrate understanding of unique needs of children from diverse economic or cultural backgrounds.

EDUC 1150. Math for Paraprofessionals II**3 Credits (3)**

Applied math skills for paraprofessionals working under the direction of a teacher.

Prerequisite(s): EDUC 1140.

Learning Outcomes

1. Students will plan developmentally appropriate math activities for young children.
2. Students will plan adaptations to math activities for children with diverse abilities.
3. Students will demonstrate understanding of recent research in methods of teaching mathematics.
4. Students will demonstrate understanding of early childhood theories as they relate to the teaching of mathematics.
5. Students will demonstrate understanding of unique needs of children from diverse economic or cultural backgrounds.

EDUC 1185. Introduction to Secondary Education and Youth**3 Credits (3)**

Introductory course for students considering a career in secondary education. Includes historical, philosophical, and sociological foundations, program organization, critical dispositions, and understanding the context of schools and youth. Practicum required. Restricted to: Secondary Ed majors. Traditional Grading with RR.

Learning Outcomes

1. Articulate the attributes of an education professional entering the field.
2. Differentiate and summarize the major educational philosophies and historical events that have influenced the progression of educational practice.
3. Describe the role of law in education with emphasis on the rights and responsibilities of teachers and learners.
4. Develop a preliminary personal philosophy of teaching and learning.
5. Discuss the characteristics and roles of the teacher, the student, and the school in today's education.
6. Identify effective teaching methods, instructional strategies and learning styles.
7. Evaluate the Lesson Planning Process using various lesson planning templates, formats, and rubrics.
8. Explain classroom management techniques.
9. Identify different types of diversity in the classroom environment.
10. 1Describe how learning differences are manifested in schools.
11. 1Describe how teachers use multiple methods of assessment to engage learners in their own growth, to monitor learner progress
12. 1Describe how teachers use multiple methods of assessment to modify instruction and inform decision making.
13. 1Identify the role of Standards and High Stakes Testing in the life of an educational professional
14. 1Complete 24 hours internship in a classroom, preferably a bilingual classroom.
15. 1Document and reflect on your observations throughout your internship.
16. 1Construct an individualized map to teacher licensure in the State of New Mexico.

EDUC 1995. Field Experience I**1 Credit (1)**

Introduction to public school teaching, school visits, classroom observations and discussion seminar.

Learning Outcomes

1. Demonstrate an understanding of personal attitudes and motivations for entering the field of education.
2. Identify effective teaching strategies that enhance student learning outcomes.
3. Identify classroom management techniques and learning styles.
4. Develop observational skills and reflective thinking skills.
5. Evaluate instructional methods that enhance upper level thinking skills in children.

EDUC 1996. Special Topics in Education**1 Credit (1)**

Supervised study in a specific area of interest. Each course shall be designated by a qualifying subtitle. May be repeated for a maximum of 9 credits.

Learning Outcomes

1. Varies

EDUC 1998. Internship I**3 Credits (3)**

Supervised experience in elementary education settings.

Learning Outcomes

1. Varies

EDUC 2710. Pre-Teacher Preparation**3 Credits (3)**

Assists students in developing the necessary competencies needed for acceptance to the Teacher Education Program. Course content includes basic skill development, test taking skills, and completion of teacher preparation packet. Maybe repeated for a maximum of 6 credits. Graded S/U. Community Colleges only.

Learning Outcomes

1. Investigate the process and requirements of the Teacher Education Program
2. Read critically about teacher's experiences and write brief reactions
3. Discuss philosophies of education and draft a written personal philosophy of education
4. Discuss the nature of education for students with diverse languages, cultures and abilities
5. Draft personal position statements concerning education for students with disabilities and diverse cultures

EDUC 2998. Internship II**3 Credits (3)**

Supervised experience in junior high settings.

Prerequisite: must be a co-op student.

Learning Outcomes

1. Varies

Education - Associate in Education

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|---------|
| General Education | | |
| <i>Area I: Communication</i> | | |
| <i>English Composition - Level 1</i> | | |
| ENGL 1110G | Composition I | 4 |
| <i>English Composition - Level 2</i> | | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| <i>Oral Communication</i> | | |
| Choose one from the following: | | 3 |
| COMM 1130G | Public Speaking | |
| or COMM 1115G | Introduction to Communication | |
| <i>Area II: Mathematics</i> | | |
| Choose one class based on your major: | | 3 |
| MATH 1220G | College Algebra (Secondary Education Majors) ¹ | |
| MATH 2134G | Fundamentals of Elementary Math II (Elementary Education Majors) ¹ | |
| <i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i> | | 11 |
| <i>Area III: Laboratory Sciences</i> | | |
| Choose two from two different areas for 8 credits (Must include lab): | | |
| ASTR 1115G | Introduction to Astronomy Lecture & Laboratory | |
| ASTR 1120G | The Planets Lecture & Laboratory | |
| BIOL 1120G & BIOL 1120L | Human Biology and Human Biology Laboratory | |
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | |
| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) | |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | |
| ENVS 1110G | Environmental Science I | |
| GEOL 1110G | Physical Geology | |
| PHYS 1115G | Survey of Physics with Lab | |

| | | |
|---|---|--------------|
| PHYS 1230G | Algebra-Based Physics I | |
| Area IV: Social & Behavioral Sciences | | |
| Choose one from the following: | | |
| ANTH 1140G | Introduction to Cultural Anthropology | |
| GEOG 1120G | World Regional Geography | |
| GEOG 1130G | Human Geography | |
| POLS 1110G | Introduction to Political Science | |
| POLS 1120G | American National Government | |
| PSYC 1110G | Introduction to Psychology | |
| SOCI 1110G | Introduction to Sociology | |
| Area V: Humanities | | |
| Choose one from the following: | | 3 |
| HIST 1110G | United States History I | |
| HIST 1120G | United States History II | |
| HIST 1130G | World History I | |
| HIST 1140G | World History II | |
| Area VI: Creative and Fine Arts | | |
| Choose one from the following: | | 3 |
| ARTH 1115G | Orientation in Art | |
| MUSC 1130G | Music Appreciation: Western Music | |
| THEA 1110G | Introduction to Theatre | |
| General Education Elective | | |
| CEPY 1120G | Human Growth and Behavior | 3 |
| Major Requirements | | |
| <i>Professional Education Courses</i> ² | | |
| Choose one additional Mathematics class based on your major | | 3 |
| MATH 1220G | College Algebra (Elementary Education Majors) | |
| MATH 1130G | Survey of Mathematics (Secondary Education Majors) | |
| CEPY 2110 | Learning in the Classroom | 3 |
| EDLT 2110 | Integrating Technology with Teaching | 3 |
| BLED 1110 | Introduction n Bilingual Education/ESL | 3 |
| BLED 2110 | Bilingual Methods | 3 |
| EDUC 2710 | Pre-Teacher Preparation (Pre-Teacher Preparation I) | 3 |
| EDUC 2710 | Pre-Teacher Preparation (Pre-Teacher Preparation II) | 3 |
| Electives, to bring the total credits to 60 ³ | | 6-7 |
| One elective must be from the following: | | |
| BCIS 1110 | Introduction to Information Systems | |
| ECED 2215 | Program Management | |
| ECED 2140 | Effective Program Development for Diverse Learners and their Families | |
| SPAN 1110 | Spanish I ⁴ | |
| SPAN 2120 | Spanish IV | |
| Total Credits | | 60-61 |

- ¹ Note: MATH 2134G Fundamentals of Elementary Math II & MATH 1220G College Algebra or MATH 1220G College Algebra& MATH 1130G Survey of Mathematics must be completed together.
- ² Cumulative GPA of 2.5 and a "C" or better required in these courses. CEPY, EDLT, & EDUC courses taken more than 7 years prior to graduation must be repeated.
- ³ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.
- ⁴ SPAN 1110 Spanish I is recommended as an elective.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | Credits |
|---|--|-----------|
| Fall | | |
| ENGL 1110G | Composition I | 4 |
| CEPY 1120G | Human Growth and Behavior | 3 |
| BLED 1110 | Introduction n Bilingual Education/ESL | 3 |
| Choose one class based on your major: | | 3 |
| MATH 1220G | College Algebra (Secondary Education Majors) | |
| MATH 2134G | Fundamentals of Elementary Math II (Elementary Education Majors) | |
| Area IV: Social/Behavioral Sciences Course ¹ | | 3 |
| Credits | | 16 |

Spring

| | | |
|--|--|-----------|
| Choose one additional Mathematics class based on your major: | | 3 |
| MATH 1220G | College Algebra (Elementary Education Majors) | |
| MATH 1130G | Survey of Mathematics (Secondary Education Majors) | |
| BLED 2110 | Bilingual Methods | 3 |
| Two Area III: Laboratory Science Courses ² | | 8 |
| Credits | | 14 |

Second Year

| | | |
|---|---|--------------|
| Fall | | |
| CEPY 2110 | Learning in the Classroom | 3 |
| EDUC 2710 | Pre-Teacher Preparation (Pre-Teacher Preparation I) | 3 |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| Elective Course ³ | | 3 |
| Area V: Humanities Course ⁴ | | 3 |
| Credits | | 15 |
| Spring | | |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| EDLT 2110 | Integrating Technology with Teaching | 3 |
| EDUC 2710 | Pre-Teacher Preparation (Pre-Teacher Preparation II) | 3 |
| Area VI: Creative and Fine Arts Course ⁵ | | 3 |
| Elective Course | | |
| Choose one from the following: | | 3-4 |
| BCIS 1110 | Introduction to Information Systems | |
| ECED 2215 | Program Management | |
| ECED 2140 | Effective Program Development for Diverse Learners and their Families | |
| SPAN 1110 | Spanish I | |
| SPAN 2120 | Spanish IV | |
| Credits | | 15-16 |
| Total Credits | | 60-61 |

¹**Area IV: Social/Behavioral Sciences Courses:**

- ANTH 1140G Introduction to Cultural Anthropology
- GEOG 1120G World Regional Geography
- GEOG 1130G Human Geography
- POLS 1120G American National Government
- POLS 1110G Introduction to Political Science
- PSYC 1110G Introduction to Psychology
- SOCI 1110G Introduction to Sociology

2

Area III: Laboratory Science Courses:

- ASTR 1115G Introduction to Astronomy Lecture & Laboratory
- ASTR 1120G The Planets Lecture & Laboratory
- BIOL 1120G Human Biology/BIOL 1120L Human Biology Laboratory
- CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors)
- CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors
- ENVS 1110G Environmental Science I
- GEOL 1110G Physical Geology
- Approved GEOL course
- PHYS 1115G Survey of Physics with Lab
- PHYS 1230G Algebra-Based Physics I/PHYS 1230L Algebra-Based Physics I Lab

3

Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

4

Area V: Humanities Courses:

- HIST 1130G World History I
- HIST 1140G World History II
- HIST 1110G United States History I
- HIST 1120G United States History II

5

Area VI: Creative and Fine Arts Courses:

- ARTH 1115G Orientation in Art
- MUSC 1130G Music Appreciation: Western Music
- THEA 1110G Introduction to Theatre

Emergency Medical Technician

The **Emergency Medical Technician** program prepares students for employment as Emergency Medical Technicians (EMT) in fire departments, private ambulance services, and hospital-based systems. The curriculum focuses on the study of anatomy and physiology, the pathophysiology of diseases, traumatic injuries, pharmacology, and cardiac care. Students will develop their knowledge and skill through both laboratory and clinical field experiences.

Graduation Requirements

Certificate in Emergency Medical Technician – Basic, Intermediate, and Paramedic: WorkKeys® scores of level 5 in Reading for Information, level 5 in Locating Information, and level 4 in Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

AAS in Emergency Medical Services: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Program Entrance Requirements

For all EMT programs, students must be able to lift at least 120 pounds and work in adverse weather conditions.

- EMT Basic: No pre-requisites
- EMT Intermediate
 - Successful completion of EMT Basic coursework
 - TB skin test done within the last year
 - EMT-Basic license in hand by the end of the sixth week of EMT-Intermediate classes
- EMT Paramedic
 - EMT Basic or EMT Intermediate license
 - Written, oral, and practical assessment at the EMT Basic or EMT Intermediate level depending on current licensure
 - HOBET exam
 - Copy of current health care provider CPR card
 - Completed departmental application including resume, letter of intent, and recommendation letters
 - TB skin test done within the last year

Emergency Medical Technician Intermediate - Certificate (p. 227)

Emergency Medical Technician Paramedic - Certificate (p. 230)

Emergency Medical Technician Paramedic - Associate of Applied Science (p. 228)

OEEM 101. CPR for the Health Care Professional

1 Credit (1)

Students learn identification and response to airway and circulation emergencies, including use of a SAED and accessing the EMS system. This course is taught using the American Heart Association guidelines for course completion. Required: grade of C or better.

OEEM 103. Heartsaver First Aid/CPR

1 Credit (1)

Students learn how to identify and respond to airway, circulation and basic first aid emergencies, to include using a SAED and accessing the EMS system. This course is intended for students who are not Allied Health Majors and utilizes the American Heart Association guidelines for course completion. Restricted to: Community Colleges only.

OEEM 115. First Responder Prehospital Professional

3 Credits (2+3P)

Provides training in prehospital medical and traumatic emergencies. Consent of instructor required. Requires a C or better to pass. Restricted to majors. **Corequisite(s):** OEEM 101.

OEEM 120. Emergency Medical Technician Basic

6 Credits (6)

EMT-Basic skills to include care of soft tissue and muscular/skeletal injuries, circulatory, nervous, general medical and respiratory emergencies. Requires a "C" or better to pass. May be repeated up to 6 credits. Consent of Instructor required.

Corequisite(s): OEEM 101, OEEM 120L, OEEM 121.

Prerequisite(s)/Corequisite(s): OEEM 153. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 120 L. Emergency Medical Technician Basic Lab

2 Credits (6P)

EMT-Basic skills development with emphasis on assessment, skills competency and team-work in patient care in the prehospital setting. May be repeated up to 2 credits.

Corequisite(s): OEEM 101, OEEM 120, OEEM 121.

Prerequisite(s)/Corequisite(s): OEEM 153. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 121. Emergency Medical Technician Basic Field/Clinical

1 Credit (3P)

Covers the patient care experience provided through assigned shifts in the hospital and/or ambulance setting. Requires a "C" or better to pass. May be repeated up to 1 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): OEEM 101, OEEM 120, OEEM 120L OEEM 153. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 122. Emergency Medical Technician Basic Advanced Field/Internship

2 Credits (6P)

Expanded patient care experience provided through assigned shifts in the hospital and/or ambulance setting. May be repeated up to 2 credits. Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Current EMT-basic license and consent of instructor.

OEEM 150. Emergency Medical Technician Intermediate

5 Credits (5)

Theory of the roles, responsibilities and scope of practice of the EMT-Intermediate. Assessment and management of respiratory, cardiac, trauma, environmental, behavior, reproduction, and childhood emergencies. May be repeated up to 5 credits. Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Current EMT-basic license, pretest and consent of instructor.

OEEM 150 L. Emergency Medical Technician Intermediate Lab

2 Credits (6P)

EMT-Intermediate skills development with an emphasis on assessment, skills competency, and team work in patient care in the prehospital setting. Requires a C or better to pass.

Prerequisite(s)/Corequisite(s): OEEM 150, OEEM 151. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 151. Emergency Medical Technician Intermediate Field/Clinical

2 Credits (6P)

Patient care experience provided through assigned shifts in the hospital and/or ambulance setting.

Prerequisite(s)/Corequisite(s): OEEM 150, OEEM 150 L. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 153. Introduction to Anatomy and Physiology for the EMS Provider**3 Credits (3)**

To properly assess and manage a patient, a prehospital provider must have a solid foundation in human anatomy and physiology. This course provides a systematic approach to building this foundation. Grade of "C" or better is required to pass the course. Consent of Instructor required. Restricted to Community Colleges campuses only.

OEEM 155. Special Topics**1-6 Credits**

Specific topics to be listed in Schedule of Classes. May be repeated for a maximum of 10 credits.

OEEM 177. Emergency Medical Services Instructor**4 Credits (4)**

Theory of student learning, methodology, instructional components, evaluation, and course coordination for the EMS profession. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): Minimum of an EMT-Basic License required.

OEEM 201. Human Pathophysiology**3 Credits (2+3P)**

Overview of anatomy and physiology. Emphasis on human body pathophysiology including a medical illness component. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 120, OEEM 120 L.

OEEM 202. EMT-Paramedic Respiratory Emergencies**3 Credits (2+3P)**

Review anatomy, physiology and pathophysiology of the respiratory system. Assessment and management of respiratory emergencies and acute respiratory failure in the prehospital setting. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 212.

OEEM 203. EMT-Paramedic Trauma Emergencies**3 Credits (2+3P)**

Study of the effects of trauma on the human body. Assessment and management of trauma patients and scenes, including vehicular extrication. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 216.

OEEM 206. Introduction to Advanced Prehospital Care**3 Credits (2+3P)**

Overview of prehospital care including roles and responsibilities of EMT-P, EMS systems, medical, legal, ethical issues, stress management, medical terminology, medical report writing and communication. Includes ride-along with ambulance and dispatch observation. Requires a C or better to pass. Restricted to majors. Consent of instructor required. Restricted to: Community Colleges only. Restricted to OEEM majors.

Prerequisite(s): OEEM 120.

OEEM 207. Introduction to Pharmacology**3 Credits (2+3P)**

Drug actions, factors modifying drugs and dosages: characteristics of drug effects, and drug history and dosages. Prehospital protocol, transport, and common patient prescription medications. Restricted to majors. Requires a C or better to pass. Restricted to: Community Colleges only. Restricted to OEEM majors.

Prerequisite(s): OEEM 120.

OEEM 210. Cardiac Rhythm Interpretation**3 Credits (2+3P)**

Cardiac conduction system: electrophysiology, electrocardiogram, monitor, atrial, sinus, ventricular and junctional dysrhythmias, multiple lead EKG and 12 lead EKG interpretation. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEEM, OEMS majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 201, OEEM 206, OEEM 207.

OEEM 212. EMT-Paramedic Cardiovascular Emergencies**3 Credits (2+3P)**

Review anatomy, physiology, and pathophysiology of cardiovascular system. Assessment and management of cardiovascular emergencies in the prehospital setting. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 210.

OEEM 213. EMT-Paramedic: Medical Emergencies I**3 Credits (2+3P)**

Study of the disease process; assessment and management of neurological, endocrine, gastrointestinal, renal emergencies and infectious disease. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEEM, OEMS majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 212.

OEEM 214. EMT--Paramedic: Medical Environmental Emergencies II**3 Credits (2+3P)**

Study of disease process, assessment, and management of poisoning, drug and alcohol abuse, environmental, behavioral and geriatric emergencies. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 213.

OEEM 216. EMT-Paramedic: Reproductive and Childhood Emergencies**3 Credits (2+3P)**

Covers anatomy, physiology, disease processes, assessment and management of male and female reproductive system emergencies, childhood emergencies and growth and development. Restricted to majors. Requires a C or better to pass. Restricted to: Community Colleges only.

Prerequisite(s): OEEM 214 and consent of instructor.

OEEM 218. Pediatric Advance Life Support for the Healthcare Professional**1 Credit (1)**

Identify and respond to life threatening pediatric emergencies. Taught using the American Heart Association guidelines for course completion. Graded S/U.

Prerequisite: OEEM 101.

OEEM 219. Advance Cardiac Life Support for the Healthcare Provider**1 Credit (1)**

Identify and respond to life threatening cardiac emergencies. Taught using the American Heart Association guidelines for course completion. Graded S/U.

Prerequisite: OEEM 101.

OEEM 230. EMT-Paramedic Clinical Experience I**3 Credits (9P)**

Assigned clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Restricted to majors. Requires a C or better to pass.

Prerequisite: consent of instructor.

OEEM 231. EMT-Paramedic Clinical Experience II**3 Credits (9P)**

Assigned clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): OEEM 230. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

OEEM 240. EMT-Paramedic Field Experience I**3 Credits (9P)**

Advanced prehospital skills and knowledge. Successful completion of at least the minimum required hours and course objectives. Restricted to majors. Requires a C or better to pass.

Prerequisite: consent of instructor.

OEEM 241. EMT-Paramedic Field Experience II**3 Credits (9P)**

Continued focus on advanced prehospital skills and knowledge, with increasing responsibility for patient care. Successful completion includes meeting at least the minimum required hours and course objectives.

Prerequisite(s)/Corequisite(s): OEEM 240. Requires a C- or better to pass.

OEEM 242. EMT-Paramedic Field Internship**3 Credits (9P)**

Emphasis on total patient care responsibility and team leadership skills. Successful completion includes meeting the minimum hours required and course objectives. Pre/ Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 231, OEEM 241.

OEEM 243. EMT-Paramedic Preparation for Practice**2 Credits (2)**

Comprehensive final program testing to prepare for licensing examination. Requires a "C" or better to pass. May be repeated up to 2 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 242.

OEEM 253. Critical Care Emergency Medical Transport Program**6 Credits (5+6P)**

This course will provide further education to Paramedics, Registered Nurses and Registered Respiratory Therapists who wish to function as part of a critical care transport team. Consent of instructor required. Restricted to: Community Colleges only.

Prerequisite(s): Licensed Paramedic, Registered Nurse or Registered Respiratory Therapist with one or more years experience.

Emergency Medical Technician Basic - Certificate of Completion

| Prefix | Title | Credits |
|---|--|-----------|
| General Education and Common Core Requirements | | |
| ENGL 1110G | Composition I | 4 |
| OATS/NURS 150 | Medical Terminology | 3 |
| COMM 1130G or COMM 1115G | Public Speaking Introduction to Communication | 3 |
| Program Requirements ¹ | | |
| OEEM 101 | CPR for the Health Care Professional | 1 |
| OEEM 120 | Emergency Medical Technician Basic ² | 6 |
| OEEM 120 L | Emergency Medical Technician Basic Lab ² | 2 |
| OEEM 121 | Emergency Medical Technician Basic Field/Clinical ² | 1 |
| Total Credits | | 20 |

¹ Courses must be taken concurrently.

² OEEM 120 Emergency Medical Technician Basic, OEEM 120 L Emergency Medical Technician Basic Lab and OEEM 121 Emergency Medical Technician Basic Field/Clinical must be completed with a C or higher.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | |
|-----------------------------|---|----------------|
| Fall | | Credits |
| ENGL 1110G | Composition I | 4 |
| OATS 150 or NURS 150 | Medical Terminology or Medical Terminology | 3 |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| Credits | | 10 |
| Spring | | |
| OEEM 101 | CPR for the Health Care Professional | 1 |
| OEEM 120 | Emergency Medical Technician Basic | 6 |
| OEEM 120 L | Emergency Medical Technician Basic Lab | 2 |
| OEEM 121 | Emergency Medical Technician Basic Field/Clinical | 1 |
| Credits | | 10 |
| Total Credits | | 20 |

Emergency Medical Technician Intermediate - Certificate

All courses must be completed with a C or higher.

| Prefix | Title | Credits |
|---|--|---------|
| General Education and Common Core Requirements | | |
| ENGL 1110G | Composition I | 4 |
| OATS/NURS 150 | Medical Terminology | 3 |
| COMM 1130G or COMM 1115G | Public Speaking Introduction to Communication | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |

| Program Requirements ¹ | | |
|-----------------------------------|--|-----------|
| OEEEM 150 | Emergency Medical Technician Intermediate | 5 |
| OEEEM 150 L | Emergency Medical Technician Intermediate Lab | 2 |
| OEEEM 151 | Emergency Medical Technician Intermediate Field/Clinical | 2 |
| Total Credits | | 30 |

¹ Students must enroll in these courses concurrently and score at least 80% on all departmental exams.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|-----------------------------|--|-----------|
| ENGL 1110G | Composition I | 4 |
| OATS 150 or NURS 150 | Medical Terminology or Medical Terminology | 3 |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| Credits | | 11 |
| Spring | | |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| Credits | | 10 |

Second Year

| Fall | | |
|----------------------|--|-----------|
| OEEEM 150 | Emergency Medical Technician Intermediate | 5 |
| OEEEM 150 L | Emergency Medical Technician Intermediate Lab | 2 |
| OEEEM 151 | Emergency Medical Technician Intermediate Field/Clinical | 2 |
| Credits | | 9 |
| Total Credits | | 30 |

Emergency Medical Technician Paramedic - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 87-94 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

All courses must be completed with a C or higher.

| Prefix | Title | Credits |
|--|---|------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| This degree requires courses from Areas I and IV students must select two course from the remaining areas to complete General Education requirements | | |
| Area I: Communications | | |
| ENGL 1110G | Composition I (Recommended) | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Science | | |
| PSYC 1110G | Introduction to Psychology (Recommended (either)) | |
| or SOCI 1110G | Introduction to Sociology | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| ENGL 2210G | Professional & Technical Communication (Recommended (either)) | |

| | | |
|---|--|--------------|
| or | | |
| COMM 1130G | Public Speaking (Recommended (either)) | |
| or COMM 1115G | Introduction to Communication | |
| Core Requirements | | |
| <i>Common Core</i> | | |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| MATH 1215 | Intermediate Algebra | 3 |
| OATS/NURS 150 | Medical Terminology | 3 |
| <i>Supplemental Requirements</i> ³ | | |
| OEEM 150 | Emergency Medical Technician Intermediate | 5 |
| OEEM 150 L | Emergency Medical Technician Intermediate Lab | 2 |
| OEEM 151 | Emergency Medical Technician Intermediate Field/Clinical | 2 |
| Approved OEEM Elective | | 1-3 |
| Approved OEEM Elective | | 1-3 |
| Major Requirements | | |
| OEEM 201 | Human Pathophysiology | 3 |
| OEEM 202 | EMT-Paramedic Respiratory Emergencies | 3 |
| OEEM 203 | EMT-Paramedic Trauma Emergencies | 3 |
| OEEM 206 | Introduction to Advanced Prehospital Care | 3 |
| OEEM 207 | Introduction to Pharmacology | 3 |
| OEEM 210 | Cardiac Rhythm Interpretation | 3 |
| OEEM 212 | EMT-Paramedic Cardiovascular Emergencies | 3 |
| OEEM 213 | EMT-Paramedic: Medical Emergencies I | 3 |
| OEEM 214 | EMT--Paramedic: Medical Environmental Emergencies II | 3 |
| OEEM 216 | EMT-Paramedic: Reproductive and Childhood Emergencies | 3 |
| OEEM 230 | EMT-Paramedic Clinical Experience I | 3 |
| OEEM 231 | EMT-Paramedic Clinical Experience II | 3 |
| OEEM 240 | EMT-Paramedic Field Experience I | 3 |
| OEEM 242 | EMT-Paramedic Field Internship | 3 |
| OEEM 243 | EMT-Paramedic Preparation for Practice | 2 |
| Approved OEEM Elective | | 3 |
| Total Credits | | 87-94 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

³ Complete as needed according to program director.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|--|--------------|
| OATS 150 | Medical Terminology | 3 |
| or NURS 150 | or Medical Terminology | |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 10 |
| Spring | | |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 13-14 |

Second Year**Fall**

| | | |
|----------------|--|-----------|
| OEEM 206 | Introduction to Advanced Prehospital Care | 3 |
| OEEM 150 | Emergency Medical Technician Intermediate | 5 |
| OEEM 150 L | Emergency Medical Technician Intermediate Lab | 2 |
| OEEM 151 | Emergency Medical Technician Intermediate Field/Clinical | 2 |
| Credits | | 12 |

Spring

| | | |
|--|---------------------------------------|--------------|
| OEEM 201 | Human Pathophysiology | 3 |
| OEEM 202 | EMT-Paramedic Respiratory Emergencies | 3 |
| GEN Ed Course – One course from Areas I-VI ^{1, 2} | | 3-4 |
| OEEM 207 | Introduction to Pharmacology | 3 |
| Credits | | 12-13 |

Third Year**Fall**

| | | |
|----------------|---|----------|
| OEEM 203 | EMT-Paramedic Trauma Emergencies | 3 |
| OEEM 210 | Cardiac Rhythm Interpretation | 3 |
| OEEM 216 | EMT-Paramedic: Reproductive and Childhood Emergencies | 3 |
| Credits | | 9 |

Spring

| | | |
|------------------------|-------------------------------------|-------------|
| Approved OEEM Elective | | 1-3 |
| Approved OEEM Elective | | 1-3 |
| OEEM 230 | EMT-Paramedic Clinical Experience I | 3 |
| OEEM 240 | EMT-Paramedic Field Experience I | 3 |
| Credits | | 8-12 |

Fourth Year**Fall**

| | | |
|------------------------|--|----------|
| OEEM 212 | EMT-Paramedic Cardiovascular Emergencies | 3 |
| OEEM 231 | EMT-Paramedic Clinical Experience II | 3 |
| Approved OEEM Elective | | 3 |
| Credits | | 9 |

Spring

| | | |
|--|--------------------------------------|-------------|
| OEEM 213 | EMT-Paramedic: Medical Emergencies I | 3 |
| OEEM 242 | EMT-Paramedic Field Internship | 3 |
| General Education Elective Course ² | | 3-4 |
| Credits | | 9-10 |

Fifth Year**Fall**

| | | |
|----------------------|--|--------------|
| OEEM 214 | EMT--Paramedic: Medical Environmental Emergencies II | 3 |
| OEEM 243 | EMT-Paramedic Preparation for Practice | 2 |
| Credits | | 5 |
| Total Credits | | 87-94 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

³ Complete as needed according to program director.

Emergency Medical Technician Paramedic - Certificate of Completion

All courses must be completed with a C or higher.

| Prefix | Title | Credits |
|----------------------------------|--|---------|
| Supplemental Requirements | | |
| OEEM 150 | Emergency Medical Technician Intermediate | 5 |
| OEEM 150 L | Emergency Medical Technician Intermediate Lab | 2 |
| OEEM 151 | Emergency Medical Technician Intermediate Field/Clinical | 2 |

| | | |
|-----------------------------|---|--------------|
| Approved OEEM Elective | | 1-3 |
| Approved OEEM Elective | | 1-3 |
| Program Requirements | | |
| OEEM 201 | Human Pathophysiology | 3 |
| OEEM 202 | EMT-Paramedic Respiratory Emergencies | 3 |
| OEEM 203 | EMT-Paramedic Trauma Emergencies | 3 |
| OEEM 206 | Introduction to Advanced Prehospital Care | 3 |
| OEEM 207 | Introduction to Pharmacology | 3 |
| OEEM 210 | Cardiac Rhythm Interpretation | 3 |
| OEEM 212 | EMT-Paramedic Cardiovascular Emergencies | 3 |
| OEEM 213 | EMT-Paramedic: Medical Emergencies I | 3 |
| OEEM 214 | EMT--Paramedic: Medical Environmental Emergencies II | 3 |
| OEEM 216 | EMT-Paramedic: Reproductive and Childhood Emergencies | 3 |
| OEEM 230 | EMT-Paramedic Clinical Experience I | 3 |
| OEEM 231 | EMT-Paramedic Clinical Experience II | 3 |
| OEEM 240 | EMT-Paramedic Field Experience I | 3 |
| OEEM 242 | EMT-Paramedic Field Internship | 3 |
| OEEM 243 | EMT-Paramedic Preparation for Practice | 2 |
| Approved OEEM Elective | | 3 |
| Total Credits | | 58-62 |

¹ Complete as needed according to program director.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------|---|----------|
| OEEM 150 | Emergency Medical Technician Intermediate | 5 |
| OEEM 150 L | Emergency Medical Technician Intermediate Lab | 2 |
| OEEM 151 | Emergency Medical Technician Intermediate Field/Clinical ¹ | 2 |
| Credits | | 9 |

| Spring | | |
|----------------|---------------------------------------|----------|
| OEEM 201 | Human Pathophysiology | 3 |
| OEEM 202 | EMT-Paramedic Respiratory Emergencies | 3 |
| OEEM 207 | Introduction to Pharmacology | 3 |
| Credits | | 9 |

Second Year

| Fall | | |
|----------------|---|----------|
| OEEM 203 | EMT-Paramedic Trauma Emergencies | 3 |
| OEEM 210 | Cardiac Rhythm Interpretation | 3 |
| OEEM 216 | EMT-Paramedic: Reproductive and Childhood Emergencies | 3 |
| Credits | | 9 |

| Spring | | |
|------------------------|-------------------------------------|-------------|
| Approved OEEM Elective | | 1-3 |
| Approved OEEM Elective | | 1-3 |
| OEEM 230 | EMT-Paramedic Clinical Experience I | 3 |
| OEEM 240 | EMT-Paramedic Field Experience I | 3 |
| Credits | | 8-12 |

Third Year

| Fall | | |
|----------------|---|----------|
| OEEM 212 | EMT-Paramedic Cardiovascular Emergencies | 3 |
| OEEM 231 | EMT-Paramedic Clinical Experience II | 3 |
| OEEM 206 | Introduction to Advanced Prehospital Care | 3 |
| Credits | | 9 |

| | | |
|------------------------|--|--------------|
| Spring | | |
| OEEM 213 | EMT-Paramedic: Medical Emergencies I | 3 |
| Approved OEEM Elective | | 3 |
| OEEM 242 | EMT-Paramedic Field Internship | 3 |
| Credits | | 9 |
| Fourth Year | | |
| Fall | | |
| OEEM 214 | EMT--Paramedic: Medical Environmental Emergencies II | 3 |
| OEEM 243 | EMT-Paramedic Preparation for Practice | 2 |
| Credits | | 5 |
| Total Credits | | 58-62 |

¹ Complete as needed according to program director.

Engineering

The Associate of Science in Engineering degree prepares the graduate for an entry-level position in the engineering industry. Students may apply the associates degree coursework to a Bachelor of Science Degree in Engineering in one of several fields including Chemical Engineering, Civil Engineering, Electrical & Computer Engineering, Engineering Physics, Engineering Technology & Surveying Engineering, Industrial Engineering, or Mechanical & Aerospace Engineering offered at one of the New Mexico four-year institutions.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. TOTAL CREDITS REQUIRED FOR DEGREE: (60)

Engineering - Associate of Science (p. 234)

ENGR 100G. Introduction to Engineering

3 Credits (2+3P)

An introduction to the various engineering disciplines, the engineering approach to problem solving, and the design process. Projects emphasize the importance of teamwork, written & oral communication skills, as well as ethical responsibilities. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 1220G or above.

Learning Outcomes

1. Analyze the engineering road maps and have a solid curriculum plan for each semester including summers.
2. Discuss the importance of information on engineering student organizations.
3. Demonstrate an understanding of the design process from initial conception to final solution through the application of critical thinking while learning important team building skills approaches to problem solving.
4. Identify the different engineering fields, the engineering profession, career paths open to engineers, and the process to professional licensure.
5. Apply clear communication and critical thinking skills by collecting, organizing, and analyzing data in a complete, clearly written, and oral presentation of their work.
6. Make use of basic knowledge and skills in Microsoft Excel to complete engineering assignments.
7. Identify, compute, and apply how dimensions, length, time, mass, force, temperature, electric current, energy and power, and related parameters are related to the different fields of engineering.
8. recognize ethical and professional responsibilities in engineering situations and make informed judgements.

ENGR 100GH. Introduction to Engineering Honors**3 Credits (2+3P)**

An introduction to the various engineering disciplines, the engineering approach to problem solving, and the design process. Projects emphasize the importance of teamwork, written & oral communication skills, as well as ethical responsibilities. May be repeated up to 3 credits. Crosslisted with: ENGR 100.

Prerequisite(s)/Corequisite(s): MATH 1220G or above.

Learning Outcomes

1. Analyze the engineering road maps and have a solid curriculum plan for each semester including summers.
2. Discuss the importance of information on engineering student organizations.
3. Demonstrate an understanding of the design process from initial conception to final solution through the application of critical thinking while learning important team building skills approaches to problem solving.
4. Identify the different engineering fields, the engineering profession, career paths open to engineers, and the process to professional licensure.
5. Apply clear communication and critical thinking skills by collecting, organizing, and analyzing data in a complete, clearly written, and oral presentation of their work.
6. Make use of basic knowledge and skills in Microsoft Excel to complete engineering assignments.
7. Identify, compute, and apply how dimensions, length, time, mass, force, temperature, electric current, energy and power, and related parameters are related to the different fields of engineering.
8. recognize ethical and professional responsibilities in engineering situations and make informed judgements.

ENGR 110. Introduction to Engineering Design**3 Credits (2+3P)**

Sketching and orthographic projection. Covers detail and assembly working drawings, dimensioning, tolerance specification, and design project

Learning Outcomes

1. Students will learn the fundamentals of part modeling and assemblies using modeling techniques in the SolidWorks solid modeling software.
2. They will learn how to put these parts and assemblies into production drawings using proper Geometric Dimensioning.

ENGR 111. Mathematics for Engineering Applications**3 Credits (3)**

An introduction to engineering mathematics and basic programming skills needed to perform elementary data manipulation and analysis. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): MATH 1250G. Prerequisite(s): MATH 1220G.

ENGR 120. DC Circuit Analysis**4 Credits (3+3P)**

This course provides an introduction DC circuit analysis using Ohm's law, Kirchoff laws, Thevenin's and Norton's theorems.

Prerequisite: MATH 1250G or MATH 1430G.

Learning Outcomes

1. Analyze and design DC circuits, including ideal op-amps, using concepts of voltage, current, power, Kirchhoff's laws, and network theorems. Design simple systems involving dc circuits Work and learn in teams.

ENGR 130. Digital Logic**4 Credits (3+3P)**

This course introduces logic design and the basic building blocks used in digital systems, as well as introducing applications of digital integrated circuits. Topics include Numbering systems (binary & hexadecimal), Boolean algebra and digital logic theory, simple logic circuits, combinational logic, and sequential logic, and applications such as ALU (Arithmetic Logic Units), multiplexers, encoders, counters, and registers. These basic logic units are the main parts of microprocessors. Includes hands-on labs and software designs.

Prerequisite/Corequisite: ENGR 120.

Learning Outcomes

1. Demonstrate ability to convert numerical values to the commonly used digital representations and their use for arithmetic and logical functions. Formulate and solve problems related to Boolean logic functions and truth tables and using them to simplify logic expressions. Formulate and solve problems related to sequential logic functions, and the ability to integrate with combinational logic to produce a simple state machine. Formulate and solve problems related to common integrated circuit issues, such as logic voltage levels, propagation delay, and fan-out.

ENGR 140. Arduino Programming**4 Credits (3+3P)**

An introduction to computer programming concepts as applied to engineering technology. Includes basic logic design, algorithm development, debugging and documentation. History and use of computers and their impact on society.

Prerequisite: MATH 1250G or MATH 1430G.

Prerequisite/Corequisite: E T 182 or ENGR 130.

Learning Outcomes

1. Set up and use a rich programming environment for programming with Arduino hardware
Analyze existing code
Employ effective use of basic programming and basic troubleshooting
Write, debug and test code given software requirements
Apply testing and documentation best practices
Transfer programming knowledge and apply coding knowledge

ENGR 190. Introduction to Engineering Mathematics**4 Credits (4)**

Engineering applications involving involved Math topics most heavily used in first and second-year engineering courses. Topics include engineering applications of algebra, trigonometry, vectors, complex numbers, sinusoids and signals, systems of equations and matrices, derivatives, integrals and differential equations.

Prerequisite: MATH 1250G or higher.

Learning Outcomes

1. Ability to solve systems of linear equations by use of matrices
Ability to use complex numbers and periodic function to solve engineering problems
Ability to solve problems using various coordinate system
Write and Solve problems with 2-D 3D vectors
Write and Solve problems with derivatives
Write and solve problems with integrals

ENGR 198. Special Topics in Engineering**1-3 Credits**

Directed individual study of topics in engineering. Written reports covering work required. May be repeated for a maximum of 6 credits. Restricted to engineering majors. Graded S/U.

Prerequisite: consent of academic dean.

ENGR 230. AC Circuit Analysis**4 Credits (3+3P)**

This course provides an introduction to Circuit analysis techniques, RLC transients, phasors, filter response, and an introduction to discrete electronic devices.

Prerequisite: ENGR 120 and (MATH 1521G or MATH 1521H or MATH 1440 or ENGR 190).

Learning Outcomes

1. Analyze and design AC circuits, including ideal op-amps, using concepts of voltage, current, power, Kirchhoff's laws, and network theorems. Design simple systems involving ac circuits
2. Work and learn in teams.

ENGR 233. Engineering Mechanics I**3 Credits (3)**

Engineering mechanics using vector methods. Force systems, resultants, equilibrium, distributed forces, area moments, and friction.

Prerequisite(s)/Corequisite(s): PHYS 1310G. Prerequisite: MATH 1521G or MATH 1521H or ENGR 190.

Learning Outcomes

1. Have an understanding of the force systems, resultants, equilibrium, distributed forces, area moments, and friction; Be able to apply the acquired knowledge to formulate, solve and interpret solutions of engineering mechanics problems

ENGR 234. Engineering Mechanics II**3 Credits (3)**

Kinetics of particles, kinematics and kinetics rigid bodies, systems of particles, energy and momentum principles, and kinetics of rigid bodies in three dimensions.

Prerequisite(s): M E 236, C E 233, or ENGR 233.

Learning Outcomes

1. Have a good understanding of the kinetics of particles, kinematics and kinetics rigid bodies, energy and momentum principles, and kinetics of rigid bodies. Be able to apply the acquired knowledge to formulate, solve and interpret solutions of engineering mechanics problems

Engineering - Associate of Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 61-65 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

All courses must be completed with a C or higher.

| Prefix | Title | Credits |
|--|--|--------------|
| General Education | | |
| <i>Area I: Communication</i> | | |
| <i>English Composition - Level 1</i> | | |
| ENGL 1110G | Composition I | 4 |
| <i>English Composition - Level 2</i> | | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| <i>Oral Communication</i> | | |
| COMM 1130G | Public Speaking | 3 |
| or COMM 1115G | Introduction to Communication | |
| <i>Area II: Mathematics</i> | | |
| MATH 1511G | Calculus and Analytic Geometry I ¹ | 4 |
| <i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i> | | 11 |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | |
| PHYS 1310G | Calculus -Based Physics I | |
| & PHYS 1310L | and Calculus -Based Physics I Lab | |
| <i>Area IV: Social/Behavioral Sciences Course (3 credits) ²</i> | | |
| <i>Area V: Humanities ²</i> | | 3 |
| <i>Area VI: Creative and Fine Arts ²</i> | | 3 |
| <i>General Education Elective ²</i> | | 3-4 |
| Core Requirements | | |
| ENGR 100G | Introduction to Engineering | 3 |
| ENGR 111 | Mathematics for Engineering Applications | 3 |
| E E 100 | | 4 |
| E E 112 | | 4 |
| E E 230 | | 4 |
| Major Requirements | | |
| <i>Engineering Degree Electives (9-12 credits)</i> | | 9-12 |
| Select any three from the following: | | |
| MATH 1521G | Calculus and Analytic Geometry II | |
| PHYS 1320G | Calculus -Based Physics II | |
| & PHYS 1320L | and Calculus -Based Physics II Lab | |
| C E 151 | Introduction to Civil Engineering | |
| C E 233 | Mechanics-Statics | |
| I E 151 | Computational Methods in Industrial Engineering | |
| I E 217 | Manufacturing Processes | |
| I E 217 L | Manufacturing Processes Laboratory | |
| M E 159 | Graphical Communication and Design | |
| M E 210 | Electronics and System Engineering | |
| E E 212 | Introduction to Computer Organization | |
| Total Credits | | 61-65 |

¹ MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1511G first.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

³ If Either MATH 1521G or PHYS 1320G/PHYS 1320L are selected as an elective, the course will also count for the General Education Elective requirement.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------|--|----------------|
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | 4 |
| ENGL 1110G | Composition I | 4 |
| ENGR 100G | Introduction to Engineering | 3 |
| E E 100 | | 4 |
| Credits | | 15 |

| Spring | | |
|---|---|-----------|
| MATH 1511G | Calculus and Analytic Geometry I ¹ | 4 |
| ENGR 111 | Mathematics for Engineering Applications | 3 |
| E E 230 | | 4 |
| Area IV: Social/Behavioral Sciences Course ² | | 3 |
| Credits | | 14 |

Second Year

| Fall | | |
|--|---|--------------|
| E E 112 | | 4 |
| PHYS 1310G & PHYS 1310L | Calculus -Based Physics I and Calculus -Based Physics I Lab | 4 |
| Choose one from the following: | | 3 |
| ENGL 2210G or ENGL 2221G | Professional & Technical Communication or Writing in the Humanities and Social Science | |
| ENGR Elective ³ | | 3-4 |
| Area VI: Creative and Fine Arts ² | | 3 |
| Credits | | 17-18 |

| Spring | | |
|---|---|--------------|
| COMM 1115G or COMM 1130G | Introduction to Communication or Public Speaking | 3 |
| ENGR Elective ³ | | 3-4 |
| ENGR Elective ³ | | 3-4 |
| Area V: Humanities ^{2,4} | | 3 |
| General Education Elective ^{2,4} | | 3-4 |
| Credits | | 15-18 |
| Total Credits | | 61-65 |

¹ MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1511G first.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

³ **Engineering Electives:**

- MATH 1521G Calculus and Analytic Geometry II
- PHYS 1320G Calculus -Based Physics II/PHYS 1320L Calculus -Based Physics II Lab
- C E 151 Introduction to Civil Engineering
- C E 233 Mechanics-Statics
- I E 151 Computational Methods in Industrial Engineering
- I E 217 Manufacturing Processes
- I E 217 L Manufacturing Processes Laboratory
- M E 159 Graphical Communication and Design
- M E 210 Electronics and System Engineering
- E E 212 Introduction to Computer Organization

⁴ If either MATH 1521G Calculus and Analytic Geometry II or PHYS 1320G Calculus -Based Physics II/PHYS 1320L Calculus -Based Physics II Lab are selected as an elective, the course will also count for the General Education Elective requirement.

Geographical Information Systems - Certificate of Completion

This certificate focuses on the systematic study of map-making and the application of mathematical, computer, and other techniques to the analysis of large amounts of geographic data and the science of mapping geographic information. Includes instruction in cartographic theory and map projections,

computer-assisted cartography, geographic information systems, map design and layout, photogrammetry, air photointerpretation, remote sensing, spatial analysis, geodesy, cartographic editing, and applications to specific industrial, commercial, research, and governmental mapping problems.

Examples: Geographic Information Systems (GIS), Spatial Analysis, Geomatics, Remote Sensing

| Prefix | Title | Credits |
|--|---|-----------|
| Technical Requirements | | |
| DRFT 109 | Computer Drafting Fundamentals ¹ | 3 |
| DRFT 153 | Survey Drafting Applications | 3 |
| DRFT 204 | Geographic Information Systems Technology | 3 |
| DRFT 254 | Spatial Data Processing | 3 |
| DRFT 274 | GIS Theory and Analysis | 3 |
| GEOG 1110G | Physical Geography (or Advisor Approved Elective (DRFT, GEOG, or SUR)) ² | 4 |
| A final grade of C- or better is required in all DRFT courses. | | |
| Total Credits | | 19 |

¹ This course can be completed through an articulated high school course.

² Courses are identical to those offered at New Mexico State University Las Cruces (main) Campus.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

| | | |
|----------------------|---|----------------|
| First Year | | |
| Fall | | Credits |
| DRFT 109 | Computer Drafting Fundamentals | 3 |
| DRFT 204 | Geographic Information Systems Technology | 3 |
| GEOG 1110G | Physical Geography | 4 |
| Credits | | 10 |
| Spring | | |
| DRFT 153 | Survey Drafting Applications | 3 |
| DRFT 254 | Spatial Data Processing | 3 |
| DRFT 274 | GIS Theory and Analysis | 3 |
| Credits | | 9 |
| Total Credits | | 19 |

Health Information Technology

Health Information Technology is the comprehensive management of health information across computerized systems and its secure exchange between health care consumers and providers. The curriculum emphasizes medical billing and coding, anatomy and physiology, medical billing, records management, and pharmacology.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Health Information Technology - Certificate (p. 240)

Health Information Technology - Associate of Applied Science (p. 239)

HIT 110. Electronic Health Records

3 Credits (3)

Current electronic health record principles, methods and procedures, and computerized medical record concepts and software applications will be introduced. Restricted to: Community Colleges only.

HIT 120. Health Information Introduction to Pharmacology**3 Credits (3)**

Introduction to the principles of pharmacology, including drug terminology; drug origins, forms, and actions; routes of administration; as well as the use of generic name drugs, trade name drugs and categories of drugs to treat multiple and specific body systems. May be repeated up to 3 credits. Crosslisted with: NURS 120. Restricted to Community Colleges campuses only.

HIT 130. Health Information Technology Anatomy & Physiology**3 Credits (3)**

An introductory course in the basics of human structure and function. Body systems are examined as to how they relate to proper code selection and as part of the functioning of the body as a whole. Restricted to Community Colleges campuses only.

HIT 140. Health Information Introduction to Pathophysiology**3 Credits (3)**

Introduction to the nature of disease and its effect on body systems. Disease processes affecting the human body via an integrated approach to specific disease entities will be presented including a review of normal functions of the appropriate body systems. Diseases will be studied in relation to their etiology, pathology, physical signs and symptoms, diagnostic procedures, complications, treatment modalities and prognosis.

HIT 150. Introduction to Medical Terminology**3 Credits (3)**

The study and understanding of medical terminology as it relates to diseases, their causes and effects, and the terminology used in various medical specialties. Emphasis will be placed on learning the basic elements of medical words, appropriate spelling and use of medical terms, and use of medical abbreviations. May be repeated up to 3 credits. Crosslisted with: NURS 150, AHS 120 and BOT 150. Restricted to Community Colleges campuses only.

HIT 158. Advanced Medical Terminology**3 Credits (3)**

Builds upon the concepts covered in HIT 150 or AHS 120 providing greater understanding of how to properly use and apply medical terminology used in the various health fields. Medical terminology associated with the body system's anatomy and physiology, pathology, diagnostic and therapeutic procedures, pharmacology, and abbreviations will be emphasized. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 150 or AHS 120.

HIT 221. Internship I**3 Credits (3)**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. C- or better is required for this course. Consent of Instructor required. Restricted to: BOT, HIT majors. Restricted to Community Colleges campuses

HIT 228. Medical Insurance Billing**3 Credits (3)**

Comprehensive overview of the insurance specialist's roll and responsibilities. Concepts and applications that will assist the student in understanding the steps necessary for successfully completing the insurance claim filing and reimbursement processes for various insurance carriers, both private and government, will be emphasized. Restricted to Carlsbad campus only.

Prerequisite(s): HIT/NURS 150; BOT 208.

HIT 240. Health Information Quality Management**3 Credits (3)**

Introduction to basic concepts of quality improvement and performance improvement as they apply to health record systems and the health care industry. Quality assessment and improvement standards and requirements of licensing, accrediting fiscal and other regulatory agencies will be presented.

HIT 248. Medical Coding I**3 Credits (2+2P)**

Comprehensive overview of the fundamentals, coding conventions, and principles of selecting the most appropriate ICD-10-CM/PCS diagnostic and procedure codes. The most recent version of ICD-10-CM/PCS and an in depth study of current Official Coding Guidelines for coding and reporting will be emphasized. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 228.

HIT 255. Special Topics**3 Credits (3)**

Specific topics to be announced in the Schedule of Classes. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

HIT 258. Medical Coding II**3 Credits (2+2P)**

Continuation of Medical Coding I. Comprehensive overview of the coding and reporting guidelines, fundamentals, coding conventions, and principles of selecting the most appropriate CPT and HCPCS procedural codes for all medical specialties. The most recent version of CPT and a continued study of the ICD-10-CM/PCS coding conventions and principles will be emphasized. Designed as a medical coding capstone course. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 248.

HIT 268. Health Information Systems**3 Credits (3)**

Overview of health data management, work planning, and organization principles; an introduction to health care information systems; and review of the fundamentals of information systems for managerial, clinical support, and information systems.

Health Information Technology - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 61-64 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

All courses must be completed with a C or higher.

| Prefix | Title | Credits |
|--|--|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| BCIS 1110 | Introduction to Information Systems | 3 |
| Choose one for the following: | | 3 |
| HIT/NURS 150 | Introduction to Medical Terminology | |
| NURS 150 | Medical Terminology | |
| OATS 150 | Medical Terminology | |
| HIT 158 | Advanced Medical Terminology | 3 |
| MGMT 2110 | Principles of Management | 3 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| AHS 140 | Essentials of Anatomy and Physiology | 4 |
| AHS 202 | Legal and Ethical Issues in Health Care | 3 |
| OATS 208 | Medical Office Procedures | 3 |
| OATS/HIT 228 | Medical Insurance Billing | 3 |
| HIT 120 | Health Information Introduction to Pharmacology | 3 |
| HIT 140 | Health Information Introduction to Pathophysiology | 3 |
| HIT 221 | Internship I | 3 |
| HIT 240 | Health Information Quality Management | 3 |
| HIT 248 | Medical Coding I | 3 |
| HIT 258 | Medical Coding II | 3 |
| HIT 268 | Health Information Systems | 3 |
| Total Credits | | 61-64 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | |
|--|--|----------------|
| Fall | | Credits |
| GEN Ed Course - One course from Areas I-VI ^{1, 2} | | 3 |
| Choose one from the following: | | 3 |

| | | |
|---|---|--------------|
| HIT 150 | Introduction to Medical Terminology | |
| NURS 150 | Medical Terminology | |
| OATS 150 | Medical Terminology | |
| OATS 208 | Medical Office Procedures | 3 |
| AHS 140 | Essentials of Anatomy and Physiology | 4 |
| Credits | | 13 |
| Spring | | |
| MGMT 2110 | Principles of Management | 3 |
| HIT 158 | Advanced Medical Terminology | 3 |
| AHS 202 | Legal and Ethical Issues in Health Care | 3 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| HIT 228 or OATS 228 | Medical Insurance Billing or Medical Insurance Billing | 3 |
| Credits | | 15 |
| Summer | | |
| GEN Ed Course - One course from Areas I-V ^{1, 2} | | 3 |
| General Education Elective - Any "G" Course ² | | 3-4 |
| Credits | | 6-7 |
| Second Year | | |
| Fall | | |
| HIT 140 | Health Information Introduction to Pathophysiology | 3 |
| HIT 248 | Medical Coding I | 3 |
| HIT 120 | Health Information Introduction to Pharmacology | 3 |
| HIT 240 | Health Information Quality Management | 3 |
| GEN Ed Course - One course from Areas I-V ^{1, 2} | | 3-4 |
| Credits | | 15-16 |
| Spring | | |
| HIT 221 | Internship I | 3 |
| HIT 258 | Medical Coding II | 3 |
| GEN Ed Course - One course from Areas I-V ^{1, 2} | | 3-4 |
| HIT 268 | Health Information Systems | 3 |
| Credits | | 12-13 |
| Total Credits | | 61-64 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Health Information Technology - Certificate of Completion

All courses must be completed with a C or higher.

| Prefix | Title | Credits |
|-------------------------------------|---|---------|
| Core Curriculum Requirements | | |
| ENGL 1110G | Composition I | 4 |
| COMM 1115G | Introduction to Communication | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| Related Requirements | | |
| BCIS 1110 | Introduction to Information Systems | 3 |
| HIT/NURS 150 | Introduction to Medical Terminology | 3 |
| HIT 158 | Advanced Medical Terminology | 3 |
| Program Requirements | | |
| AHS 140 | Essentials of Anatomy and Physiology | 4 |
| AHS 202 | Legal and Ethical Issues in Health Care | 3 |
| OATS 208 | Medical Office Procedures | 3 |

| | | |
|----------------------|---------------------------|-----------|
| OATS/HIT 228 | Medical Insurance Billing | 3 |
| Total Credits | | 32 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------|---|-----------|
| ENGL 1110G | Composition I | 4 |
| HIT 150 or NURS 150 | Introduction to Medical Terminology or Medical Terminology | 3 |
| OATS 208 | Medical Office Procedures | 3 |
| AHS 140 | Essentials of Anatomy and Physiology | 4 |
| COMM 1115G | Introduction to Communication | 3 |
| Credits | | 17 |
| Spring | | |
| AHS 202 | Legal and Ethical Issues in Health Care | 3 |
| HIT 158 | Advanced Medical Terminology | 3 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| HIT 228 or OATS 228 | Medical Insurance Billing or Medical Insurance Billing | 3 |
| MATH 1215 | Intermediate Algebra | 3 |
| Credits | | 15 |
| Total Credits | | 32 |

Heritage Interpretation

The **Heritage Interpretation** program at NMSU Carlsbad emphasizes New Mexico's rich history, natural setting, and unique cultural blend. Students will study a variety of subjects that will broaden their knowledge of the Southwest's heritage and improve their ability to communicate with a diverse public. Two program options are available –

- the Certificate in Heritage Interpretation and
- the Associate of Arts Degree in Heritage Interpretation.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. TOTAL CREDITS REQUIRED FOR DEGREE: (60)

Heritage Interpretation - Certificate (p. 243)

Heritage Interpretation - Associate of Arts (p. 241)

Heritage Interpretation - Associate of Arts

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 63-64 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--------------------------------------|--|---------|
| General Education | | |
| <i>Area I: Communications</i> | | |
| <i>English Composition - Level 1</i> | | |
| ENGL 1110G | Composition I | 4 |
| <i>English Composition - Level 2</i> | | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |

Oral Communication

| | | |
|---------------|-------------------------------|---|
| COMM 1130G | Public Speaking | 3 |
| or COMM 1115G | Introduction to Communication | |

Area II: Mathematics

| | | |
|------------|---------------------------------|---|
| MATH 1220G | College Algebra ^{1, 2} | 3 |
|------------|---------------------------------|---|

Area III/IV: Laboratory Science and Social/Behavioral Sciences

10-11

| | | |
|---------------|------------------------------|--|
| ENVS 1110G | Environmental Science I | |
| POLS 1120G | American National Government | |
| GEOG 1130G | Human Geography | |
| or GEOL 1110G | Physical Geology | |

Area V: Humanities

| | | |
|------------|--|---|
| HIST 1150G | Western Civilization I (Major Requirement) | 3 |
|------------|--|---|

| | | |
|---|--|---|
| <i>Area VI: Creative and Fine Arts</i> ³ | | 3 |
|---|--|---|

General Education Elective

| | | |
|------------|---|---|
| LING 2110G | Introduction to the Study of Language and Linguistics | 3 |
|------------|---|---|

Major Requirements*Department of History Requirements*

HIST 1150G is required for this degree and will count towards both the General Education and Major Requirements

| | | |
|--------------------------------|---|---|
| ANTH 1136 | Introduction to Historic Preservation | 3 |
| or ANTH 2140G | Indigenous Peoples of North America | |
| ANTH 1115G | Introduction to Anthropology | 3 |
| HIST 1110G | United States History I (Major Requirement) | 3 |
| HIST 1120G | United States History II | 3 |
| HIST 1160G | Western Civilization II | 3 |
| HIST 2110 | Survey of New Mexico History | 3 |
| HIST 2996 | Special Topics ⁴ | 3 |
| HIST 2996 | Special Topics ⁴ | 3 |
| Choose one from the following: | | 3 |

| | | |
|--------------|---|---|
| SOCI 1110G | Introduction to Sociology | |
| SOCI 2261 | Issues in Death and Dying | |
| SOCI 2310G | Contemporary Social Problems | |
| PHED 2996 | Special Topics (Camping and Survival for Archaeologists and Preservationists) | 1 |
| PSYC 1110G | Introduction to Psychology | 3 |
| or PSYC 2221 | Applied Psychology | |

Total Credits **63-64**

- ¹ MATH 1220G College Algebra is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G first.
- ² MATH 1215 Intermediate Algebra is another allowable course, however it will not count towards the General Education Requirements.
- ³ See the General Education (p. 17) section of the catalog for a full list of courses
- ⁴ May be repeated for up to 12 hours.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

| Course | Title | Credits |
|-------------------|------------------------------|--------------|
| First Year | | |
| Fall | | |
| HIST 1150G | Western Civilization I | 3 |
| ANTH 1115G | Introduction to Anthropology | 3 |
| ENGL 1110G | Composition I | 4 |
| GEOG 1130G | Human Geography | 3-4 |
| or GEOG 1110G | or Physical Geography | |
| Credits | | 13-14 |
| Spring | | |
| HIST 1160G | Western Civilization II | 3 |

| | | |
|---|---|--------------|
| ANTH 1136 or ANTH 2140G | Introduction to Historic Preservation or Indigenous Peoples of North America | 3 |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| MATH 1220G | College Algebra ^{1, 2} | 3 |
| POLS 1120G | American National Government | 3 |
| Credits | | 15 |
| Summer | | |
| HIST 2996 | Special Topics (Internship in Heritage Interpretation) ³ | 3 |
| Credits | | 3 |
| Second Year | | |
| Fall | | |
| HIST 1110G | United States History I | 3 |
| HIST 2110 | Survey of New Mexico History | 3 |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| ENVS 1110G | Environmental Science I | 4 |
| PHED 2996 | Special Topics (Camping and Survival for Archaeologists and Preservationists) | 1 |
| Credits | | 14 |
| Spring | | |
| HIST 1120G | United States History II | 3 |
| LING 2110G | Introduction to the Study of Language and Linguistics | 3 |
| Choose one from the following: | | 3 |
| SOCI 1110G | Introduction to Sociology | |
| SOCI 2261 | Issues in Death and Dying | |
| SOCI 2310G | Contemporary Social Problems | |
| PSYC 1110G or PSYC 1110G | Introduction to Psychology or Introduction to Psychology | 3 |
| Area IV: Creative and Fine Arts Course ⁴ | | 3 |
| Credits | | 15 |
| Summer | | |
| HIST 2996 | Special Topics (Internship in Heritage Interpretation) ³ | 3 |
| Credits | | 3 |
| Total Credits | | 63-64 |

¹ MATH 1220G College Algebra is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G first.

² MATH 1215 Intermediate Algebra is another allowable course, however it will not count towards the General Education Requirements.

³ May be repeated for up to 12 hours.

⁴ See the General Education (p. 17) section of the catalog for a full list of courses

Heritage Interpretation - Certificate of Completion

| Prefix | Title | Credits |
|---|---|---------|
| Core Curriculum Requirements | | |
| ENGL 1110G | Composition I | 4 |
| COMM 1130G or COMM 1115G | Public Speaking Introduction to Communication | 3 |
| Select one MATH "G" course ¹ | | 3 |
| Select one Science "G" course with a lab from ASTR, BIOL, CHEM, ENVS, GEOG (must be GEOG 1110G if selected), GEOL, or PHYS ¹ | | 4 |
| Department of History Requirements | | |
| ANTH 1115G | Introduction to Anthropology | 3 |
| ANTH 1136 | Introduction to Historic Preservation | 3 |
| HIST 1150G or HIST 1160G | Western Civilization I Western Civilization II | 3 |
| HIST 1110G or HIST 1120G | United States History I United States History II | 3 |

| | | |
|--|------------------------------|-----------|
| HIST 2110 | Survey of New Mexico History | 3 |
| Electives | | |
| Select 4 credits from ANTH, POLS, HIST, MATH or SPAN | | 4 |
| Total Credits | | 33 |

¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | Credits |
|---|--|-----------|
| Fall | | |
| ANTH 1115G | Introduction to Anthropology | 3 |
| ENGL 1110G | Composition I | 4 |
| HIST 1150G or HIST 1160G | Western Civilization I or Western Civilization II | 3 |
| HIST 2110 | Survey of New Mexico History | 3 |
| Elective ¹ | | 4 |
| Credits | | 17 |
| Spring | | |
| ANTH 1136 | Introduction to Historic Preservation | 3 |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| HIST 1110G or HIST 1120G | United States History I or United States History II | 3 |
| Select one MATH "G" Course ² | | 3 |
| Select one Science "G" course with a lab from ASTR, BIOL, CHEM, ENVS, GEOG (must be GEOG 1110G is selected), GEOL. or PHYS ² | | 4 |
| Credits | | 16 |
| Total Credits | | 33 |

¹ Elective course(s) should be from either the ANTH, POLS, HIST, MATH or SPAN prefix

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Hospitality and Tourism

The **Associate of Applied Science in Hospitality and Tourism** prepares the graduate for an entry-level position in tourism. There are two options available – Food and Beverage/Culinary Arts and Lodging and Tourism. Training is offered in supervision, communication, marketing, finance, and operations. This program is designed for those entering the field as well as individuals already employed in the industry who want to upgrade their skills.

The majority of credits earned in this degree may be applied towards a Bachelor's degree in Hospitality, Restaurant and Tourism Management at NMSU Las Cruces.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Hospitality and Tourism (Food & Beverage) - Associate of Applied Science (p. 248)

Hospitality and Tourism (Lodging & Tourism) - Associate of Applied Science (p. 246)

HOST 155. Special Topics

1-3 Credits (1-3)

Specific subjects to be announced in the Schedule of Classes. Restricted to: Community Colleges only.

HOST 201. Introduction to Hospitality Industry**3 Credits (3)**

Overview of hospitality industry; organization and operation of lodging, food and beverage, and travel and tourism segments; focus on career opportunities and future trends of hospitality industry. Restricted to: Community College campuses only.

HOST 202. Front Office Operations**3 Credits (3)**

Hotel/motel front office procedures detailing flow of business, beginning with reservations and extending to the night audit process. Restricted to: Community College campuses only.

HOST 203. Hospitality Operations Cost Control**3 Credits (3)**

Management of Food & Beverage facilities using cost control techniques. Functional training in menu analysis and development with all phases of product flow through a Food & Beverage organization explored. Restricted to: Community Colleges only.

HOST 204. Promotion of Hospitality Services**3 Credits (3)**

Organization of hotel marketing functions; developing a marketing plan to sell the varied services of the hotel/motel property. Restricted to: Community College campuses only.

HOST 205. Housekeeping, Maintenance, and Security**3 Credits (3)**

Function of housekeeping departments, including personnel, sanitation, maintenance, and materials. A survey of security procedures to include guest protection and internal security of hotel/motel assets. Restricted to: Community College campuses only.

HOST 206. Travel and Tourism Operations**3 Credits (3)**

Transportation, wholesale and retail operations, attractions, the traveler, tourism development, and operational characteristics of tourism business. Restricted to: Community College campuses only.

HOST 207. Customer Service for the Hospitality Industry**3 Credits (3)**

Concepts of service and the customer, integrating the need for service quality, and the continuing efforts to maximize returns for the operation. Classic service styles as well as more modern service techniques are covered. Students gain in-depth managerial knowledge, planning skills, and hands-on techniques for consistently delivering quality and service in a variety of operations. Restricted to: Community College campuses only.

HOST 208. Hospitality Supervision**3 Credits (3)**

Strategies for directing, leading, managing change and resolving conflict. Prepares students to meet expectations of management, guests, employees, and governmental agencies. Restricted to: Community College campuses only.

HOST 209. Managerial Accounting for Hospitality**3 Credits (3)**

Prepares students to make effective business decisions based on financial report information; forecasting, budgeting, cost analysis. Restricted to: Community College campuses only.

Prerequisite(s): BOT 120 or ACCT 2110.

HOST 210. Catering and Banquet Operations**3 Credits (3)**

Teaches the basics of catering and banquet operations, including computer coordination, planning, set up, service, and completion. Restricted to Community Colleges campuses only.

HOST 214. Purchasing and Kitchen Management**3 Credits (3)**

Technical purchasing concepts, product selection, and specifications. Safety and sanitation as they relate to food service establishments. Prepares student for work with HACCP programs. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HOST 203.

HOST 216. Event, Conference and Convention Operations**3 Credits (3)**

The ability to successfully plan, organize, arrange, and execute special events is critical to the success of many hospitality organizations. This course gives the student a grounding in the skills necessary to achieve success in this area. A variety of events are discussed and the similarities and differences with conferences and conventions are explored. Students are taught to organize and plan events of varying type and durations. Sales, logistics, and organizing skills are emphasized. Restricted to: Community College campuses only.

HOST 219. Safety, Security and Sanitation in Hospitality Operations**3 Credits (3)**

It is the responsibility of the manager to provide appropriate security, sanitation, and safety precautions in hospitality operations. Preparation for internal and external disasters is an important task for the Hospitality Manager. This course uses the National Restaurant Association ServSafe® training material. Restricted to: Community College campuses only.

HOST 221. Internship I**1-3 Credits (1-3)**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEHS, HOST majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

HOST 222. Cooperative Experience II**3 Credits (3)**

Continuation of HOST 221. Restricted to majors. Graded: S/U. Restricted to: Community College campuses only. Restricted to HOST majors.

Prerequisite(s): HOST 221.

HOST 239. Introduction to Hotel Management**3 Credits (3)**

This course covers basic management functions in hotels, resorts, Boutique Hotels, Bed & Breakfast establishments, and other lodging operations. All aspects of the operation are covered including guest management, operations, and sales and marketing. Restricted to: Branch campuses only.

HOST 255. Special Topics**3 Credits (3)**

Specific subjects to be announced in the Schedule of Classes. May be repeated up to 9 credits. Restricted to Community Colleges campuses only.

HOST 298. Independent Study**1-3 Credits (1-3)**

Individual studies directed by consenting faculty with prior approval of department chair. May be repeated for a maximum of 3 credits. Restricted to: Community College campuses only.

Prerequisite(s): Minimum 3.0 GPA and sophomore standing.

Hospitality and Tourism (Lodging & Tourism) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Science | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective ² | | 3-4 |
| Core Requirements | | |
| BLAW 2110 | Business Law I | 3 |
| OECS 105 or BCIS 1110 | Introduction to Information Technology Introduction to Information Systems | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| HOST 201 | Introduction to Hospitality Industry | 3 |
| HOST 203 | Hospitality Operations Cost Control | 3 |
| HOST 207 | Customer Service for the Hospitality Industry | 3 |
| HOST 208 | Hospitality Supervision | 3 |
| HOST 209 | Managerial Accounting for Hospitality | 3 |

| | | |
|---------------------------------------|---|----|
| HOST 219 | Safety, Security and Sanitation in Hospitality Operations | 3 |
| HOST 221 | Internship I | 3 |
| <i>Concentration Coursework</i> | | |
| Select 15 credits from the following: | | 15 |
| HOST 202 | Front Office Operations | |
| HOST 204 | Promotion of Hospitality Services | |
| HOST 205 | Housekeeping, Maintenance, and Security | |
| HOST 206 | Travel and Tourism Operations | |
| HOST 210 | Catering and Banquet Operations | |
| HOST 216 | Event, Conference and Convention Operations | |

Total Credits 60-63

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of this catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

| Course | Title | Credits |
|--|--|--------------|
| First Year | | |
| Fall | | |
| HOST 201 | Introduction to Hospitality Industry | 3 |
| OECS 105 or BCIS 1110 | Introduction to Information Technology or Introduction to Information Systems | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 12 |
| Spring | | |
| HOST 203 | Hospitality Operations Cost Control | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| BLAW 2110 | Business Law I | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 15 |
| Summer | | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| GEN Ed Course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 6-8 |
| Second Year | | |
| Fall | | |
| HOST 207 | Customer Service for the Hospitality Industry | 3 |
| HOST 208 | Hospitality Supervision | 3 |
| HOST 219 | Safety, Security and Sanitation in Hospitality Operations | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 12 |
| Spring | | |
| HOST 209 | Managerial Accounting for Hospitality | 3 |
| HOST 221 | Internship I | 3 |
| General Education Elective - Any "G" course ² | | 3-4 |
| Concentration Coursework (Elective) ³ | | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 15-16 |
| Total Credits | | 60-63 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of this catalog for a full list of courses.
- ³ See the Requirements (p. 246) tab for specific courses.

Hospitality and Tourism (Food & Beverage) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---|--------------|
| General Education | | |
| <i>Choose one course from four of the following six content areas for a total of 12-14 credits.</i> ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Science | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| <i>General Education Elective</i> ² | | 3-4 |
| Core Requirements | | |
| BLAW 2110 | Business Law I | 3 |
| OECS 105 | Introduction to Information Technology | 3 |
| or BCIS 1110 | Introduction to Information Systems | |
| OECS 215 | Spreadsheet Applications | 3 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| HOST 201 | Introduction to Hospitality Industry | 3 |
| HOST 203 | Hospitality Operations Cost Control | 3 |
| HOST 207 | Customer Service for the Hospitality Industry | 3 |
| HOST 208 | Hospitality Supervision | 3 |
| HOST 209 | Managerial Accounting for Hospitality | 3 |
| HOST 219 | Safety, Security and Sanitation in Hospitality Operations | 3 |
| HOST 221 | Internship I | 3 |
| Electives, to bring the total credits to 60 | | |
| Select 15 credits from the following: | | 15 |
| CHEF 211 | Food Production Management I | |
| CHEF 212 | Food Production Management II | |
| CHEF 213 | Bakery Management I | |
| CHEF 214 | Bakery Management II | |
| HOST 210 | Catering and Banquet Operations | |
| Approved CHEF Elective | | |
| Total Credits | | 60-63 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of this catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

| Course | Title | Credits |
|--|--|--------------|
| First Year | | |
| Fall | | |
| HOST 201 | Introduction to Hospitality Industry | 3 |
| OECS 105 or BCIS 1110 | Introduction to Information Technology or Introduction to Information Systems | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 12 |
| Spring | | |
| HOST 203 | Hospitality Operations Cost Control | 3 |
| OECS 215 | Spreadsheet Applications | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| BLAW 2110 | Business Law I | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 15 |
| Summer | | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| GEN Ed Course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 6-8 |
| Second Year | | |
| Fall | | |
| HOST 207 | Customer Service for the Hospitality Industry | 3 |
| HOST 208 | Hospitality Supervision | 3 |
| HOST 219 | Safety, Security and Sanitation in Hospitality Operations | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 12 |
| Spring | | |
| HOST 209 | Managerial Accounting for Hospitality | 3 |
| HOST 221 | Internship I | 3 |
| General Education Elective - Any "G" course ² | | 3-4 |
| Concentration Coursework (Elective) ³ | | 3 |
| Concentration Coursework (Elective) ³ | | 3 |
| Credits | | 15-16 |
| Total Credits | | 60-63 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of this catalog for a full list of courses.

³ See the Requirements (p. 248) tab for specific courses.

Industrial Maintenance Technology

The **Industrial Maintenance Technician** program prepares students with the education and experience necessary to begin employment within the Potash mining industry. Students receive training on state-of-the-art equipment which simulates the actual work performed both above and below ground in the potash mines. Additional exposure to the industry is provided through field experiences. Specializations offered within the curriculum include electrical and mechanical options.

Graduation Requirements

Certificate in Industrial Maintenance Technician: WorkKeys® scores of level 3 in Reading for Information, level 4 in Locating Information, and level 3 in Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Industrial Maintenance Technician: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree

must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. TOTAL CREDITS REQUIRED FOR ELECTRICAL DEGREE: (60) TOTAL CREDITS REQUIRED FOR MECHANICAL DEGREE: (60)

Industrial Maintenance Technology (Electrical) - Certificate (p. 251)

Industrial Maintenance Technology (Mechanical) - Certificate (p. 252)

Industrial Maintenance Technician, Electrical - Associate of Applied Science (p. 252)

Industrial Maintenance Technician, Mechanical - Associate of Applied Science (p. 254)

INMT 133. Process Technology and Systems

4 Credits (4)

Provides instruction in the use of common process equipment. Students will use appropriate terminology and identify process equipment components such as piping and tubing, valves, pumps, compressors, turbines, motors, engines, heat exchangers, heaters, furnaces, boilers, filters dryers and other miscellaneous vessels. Included are the basic functions, scientific principles and symbols. Students will identify components on typical Process Flow Diagrams and Process and Instrument Diagrams. Restricted to Carlsbad campus only.

INMT 134. Maintenance Principles

4 Credits (4)

The course is an introduction to the maintenance of equipment utilizing mechanical, electrical and instrumentation concepts. Topics include: hand tools, bearing fundamentals, equipment lubrication, material handling, electrical safety, battery systems, diagrams, electrical production and distribution, transformers, breakers, switches, AC and DC motors, motor controllers and operations, and introduction to automation and instrumentation control. Restricted to Carlsbad campus only.

INMT 165. Equipment Processes

4 Credits (4)

This course introduces power transmission equipment and machinery components, including belt/chain driven equipment, speed reducers, variable speed drives, couplings, clutches, and conveying equipment. Students will learn the operation, maintenance, and troubleshooting for these types of equipment. The course also includes Overhead Crane Certification and Safety. Restricted to Carlsbad campus only.

INMT 205. Programmable Logic Controllers and Applications

4 Credits (4)

Students learn about programmable logic controllers; architecture; programming, interfacing, and applications. Hands-on experience on modern commercial PLC units is the main component. Restricted to Carlsbad campus only.

Prerequisite(s): BCIS 1110.

INMT 223. Electrical Repairs

4 Credits (4)

This course outlines for students the types of problems that occur in electrical machinery and systems. The course covers trouble-shooting and diagnosis, preventative maintenance, and how to make necessary repairs. Restricted to Carlsbad campus only.

INMT 235. Mechanical Drives I

4 Credits (4)

This course teaches the fundamentals of mechanical transmission systems used in industrial, agricultural, and mobile applications. Students will learn industrial relevant skills including how to: operate, install and analyze performance, and design basic transmission systems using chains, feed-belts, spur gears, bearings, and couplings. Vibration analysis will be used to determine when to perform maintenance of power transmission components. The course also covers power transmission safety, and introduction to belt and chain drives (applications, installations, and tensioning), and introduction to gear drives, coupling, and bearing, basic troubleshooting, blueprint and print reading, learning the basics of electrical drives and PDM and PM. Restricted to Carlsbad campus only.

INMT 237. Hydraulics I

2 Credits (2)

This course teaches fundamentals of hydraulic systems used in industry mobile application. Students learn the basic theory of application of hydraulic and electricity as it applies to hydraulics. Covered in the course are basic systems, principles of flow, pressure, viscosity, filtration, and colling. Also covered are basic components such as motor, pumps, cylinders, piping and control and relief valves. Troubleshooting strategies are discussed, along with blueprint and print reading, and PDM and PM. Industry, relevant skills including how to operate, install, analyze performance, and design basic hydraulic systems, reviewing intermediate hydraulic components and system applications. Restricted to Carlsbad campus only.

INMT 261. Pump Operations I

4 Credits (4)

This course teaches how to select, operate, install, maintain and repair the many types of pumps used by industry. Students learn the theory and practical application of all types of processed pumps and pipe systems. It covers types, components, and systems operation. It also covers troubleshooting for flow loss and cavitation. Students learn how to select, operate, install, maintain and repair the many types of pumps used by industry. Other topics covered include: Net Positive Suction Head, pump flow/head measurement, pressure head conversion, pressure flow characteristics, cavitation, series/parallel pump operation, mechanical seal/stuffing box maintenance, multi stage operation and construction, positive displacement pumps, turbine, diaphragm, peristaltic, piston, gear, and magnetic pump systems. Restricted to Carlsbad campus only.

INMT 262. Piping Systems**2 Credits (2)**

This course teaches students how to install, maintain and troubleshoot fluid systems such as how to select, size, identify, install a variety of types of piping, fittings, and valves. Measurement techniques from basic to precision measurement, gauging, including the fundamentals of demonsioning and tolerancing will taught. Restricted to Carlsbad campus only.

INMT 263. Mechanical Drives II**4 Credits (4)**

This course teaches the bearings and gears used in heavy duty mechanical transmission systems. This course will emphasize linear access drives, clutches, and brakes. In addition, this course teaches how to set up, operate and apply laser shaft alignment to a variety of industrial applications. This course is a study of the basic concepts and procedures for the maintenance and operations of pumps, turbines, seals, bearings, and compressors. The course will provide the student with the knowledge and skills necessary to perform proper maintenance, repair, replacement and selection of pumps, turbines, seals, bearings and compressors. Also covered are advanced gearbox, coupling and bearings, precision alignment (shaft, flange, and sheave), as well as basic vibration analysis and thermography as troubleshooting and RCA aids. Restricted to Carlsbad campus only.

INMT 264. Rigging**2 Credits (2)**

This course teaches how to safely move loads of different shapes and sizes using a variety of different methods. Students will lift loads and demonstrate how to move it. Students will use hoists, slings, ropes and fittings to learn how to safely lift a wide variety of loads. Included are weight estimation, lifting rules, load ratings (sling, wire, ropes and hoists). Restricted to Carlsbad campus only.

INMT 265. Hydraulics II**2 Credits (2)**

This course teaches advanced hydraulics systems. The student will learn operation of advanced hydraulic systems applications, equipment installation, performance analysis of motors and pumps, accumulators, control, relief and check valve, equipment maintenance, and system design. The course covers accumulators, sequence valves, pilot circuits and unloader valves. Students learn more troubleshooting, hydraulic drives and other applications. Restricted to Carlsbad campus only.

INMT 267. Pump Operations II**2 Credits (2)**

This course teaches the student the disassembly, inspection and reassembly of centrifugal and positive displacement pumps. This course allows the student to identify and replace worn or broken components of pumps, and learn predictive and preventive maintenance principles. Lockout of the pump will be performed in addition to measurements and alignment. Restricted to Carlsbad campus only.

Industrial Maintenance Technology (Electrical) - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|---|-----------|
| Core Curriculum Requirements | | |
| INMT 133 | Process Technology and Systems | 4 |
| INMT 134 | Maintenance Principles | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| MAT 130 | Applied Industrial Electricity I | 4 |
| OEET 120 | Basic Motor Controls | 5 |
| ENGL 1110G | Composition I | 4 |
| Total Credits | | 30 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------|----------------------------------|-----------|
| INMT 133 | Process Technology and Systems | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| MAT 130 | Applied Industrial Electricity I | 4 |
| Credits | | 13 |

Spring

| | | |
|----------------------|---|-----------|
| OEET 120 | Basic Motor Controls | 5 |
| INMT 134 | Maintenance Principles | 4 |
| ENGL 1110G | Composition I | 4 |
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| Credits | | 17 |
| Total Credits | | 30 |

Industrial Maintenance Technology (Mechanical) - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|--------------------------------|-----------|
| Core Curriculum Requirements | | |
| INMT 133 | Process Technology and Systems | 4 |
| INMT 134 | Maintenance Principles | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 235 | Mechanical Drives I | 4 |
| INMT 237 | Hydraulics I | 2 |
| INMT 263 | Mechanical Drives II | 4 |
| WELD 105 | Introduction to Welding | 3 |
| ENGL 1110G | Composition I | 4 |
| Total Credits | | 30 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------------|--------------------------------|----------------|
| INMT 133 | Process Technology and Systems | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 235 | Mechanical Drives I | 4 |
| INMT 237 | Hydraulics I | 2 |
| Credits | | 15 |
| Spring | | |
| INMT 134 | Maintenance Principles | 4 |
| ENGL 1110G | Composition I | 4 |
| INMT 263 | Mechanical Drives II | 4 |
| WELD 105 | Introduction to Welding | 3 |
| Credits | | 15 |
| Total Credits | | 30 |

Industrial Maintenance Technician (Electrical) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|-------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |

This degree requires courses from Areas I, II, IV and V; students will not have to take any additional courses to complete General Education requirements.

| | | |
|--|---|---|
| Area I: Communications | | |
| ENGL 1110G | Composition I | |
| Area II: Mathematics | | |
| MATH 1130G | Survey of Mathematics ³ | |
| Area IV: Social/Behavioral Sciences | | |
| Choose one from the following (3 credits): | | |
| ANTH 1115G | Introduction to Anthropology | |
| ECON 1110G | Survey of Economics | |
| ECON 2110G | Macroeconomic Principles | |
| ECON 2120G | Principles of Microeconomics | |
| GEOG 1120G | World Regional Geography | |
| or GEOG 1130G | Human Geography | |
| POLS 1120G | American National Government | |
| or POLS 1110G | Introduction to Political Science | |
| SOCI 1110G | Introduction to Sociology | |
| Area V: Humanities | | |
| Choose one from the following: | | |
| HIST 1110G | United States History I | |
| or HIST 1120G | United States History II | |
| HIST 1150G | Western Civilization I | |
| or HIST 1160G | Western Civilization II | |
| <i>General Education Elective</i> | | |
| ENGL 2210G | Professional & Technical Communication | 3 |
| Core Requirements | | |
| INMT 133 | Process Technology and Systems | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 134 | Maintenance Principles | 4 |
| INMT 165 | Equipment Processes | 4 |
| OEET 120 | Basic Motor Controls | 5 |
| OEET 110 | Basic Electricity and Electronics | 4 |
| MAT 130 | Applied Industrial Electricity I | 4 |
| INMT 223 | Electrical Repairs | 4 |
| MAT 135 | Applied Industrial Electricity II | 4 |
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| OEET 295 | Special Topics | 2 |

Total Credits**60**

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1130G first.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|--------------------------------|-----------|
| INMT 133 | Process Technology and Systems | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| ENGL 1110G | Composition I | 4 |
| Area IV: Social/Behavioral Sciences Course ¹ | | 3 |
| Credits | | 16 |

Spring

| | | |
|----------------|--|-----------|
| INMT 134 | Maintenance Principles | 4 |
| INMT 165 | Equipment Processes | 4 |
| ENGL 2210G | Professional & Technical Communication | 3 |
| OEET 120 | Basic Motor Controls | 5 |
| Credits | | 16 |

Second Year**Fall**

| | | |
|--|-----------------------------------|-----------|
| OEET 110 | Basic Electricity and Electronics | 4 |
| MAT 130 | Applied Industrial Electricity I | 4 |
| INMT 223 | Electrical Repairs | 4 |
| Area V: Humanities Course ² | | 3 |
| Credits | | 15 |

Spring

| | | |
|----------------------|---|-----------|
| MAT 135 | Applied Industrial Electricity II | 4 |
| MATH 1130G | Survey of Mathematics ³ | 3 |
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| OEET 295 | Special Topics | 2 |
| Credits | | 13 |
| Total Credits | | 60 |

¹ **Area IV: Social/Behavioral Sciences Courses:**

- ANTH 1115G Introduction to Anthropology
- ECON 1110G Survey of Economics, ECON 2110G Macroeconomic Principles, or ECON 2120G Principles of Microeconomics
- GEOG 1120G World Regional Geography or GEOG 1130G Human Geography
- POLS 1110G Introduction to Political Science or POLS 1120G American National Government
- SOCI 1110G Introduction to Sociology

² **Area V: Humanities Courses**

- HIST 1110G United States History I or HIST 1120G United States History II
- HIST 1150G Western Civilization I or HIST 1160G Western Civilization II

³ MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1130G first.

Industrial Maintenance Technician (Mechanical) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|------------------------------------|---------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1,2} | | 12-14 |
| This degree requires courses from Areas I, II, IV and V; students will not have to take any additional courses to complete General Education requirements. | | |
| Area I: Communications | | |
| ENGL 1110G | Composition I | |
| Area II: Mathematics | | |
| MATH 1130G | Survey of Mathematics ³ | |
| Area VI: Social/Behavioral Sciences | | |
| Choose one from the following (3 credits): | | |
| ANTH 1115G | Introduction to Anthropology | |
| ECON 1110G | Survey of Economics | |
| ECON 2110G | Macroeconomic Principles | |
| ECON 2120G | Principles of Microeconomics | |

| | | |
|-----------------------------------|--|-----------|
| GEOG 1120G | World Regional Geography | |
| or GEOG 1130G | Human Geography | |
| POLS 1120G | American National Government | |
| or POLS 1110G | Introduction to Political Science | |
| SOCI 1110G | Introduction to Sociology | |
| Area V: Humanities | | |
| HIST 1110G | United States History I | |
| or HIST 1120G | United States History II | |
| HIST 1150G | Western Civilization I | |
| or HIST 1160G | Western Civilization II | |
| Area VI: Creative and Fine Arts | | |
| <i>General Education Elective</i> | | |
| ENGL 2210G | Professional & Technical Communication | 3 |
| Major Requirements | | |
| INMT 133 | Process Technology and Systems | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 134 | Maintenance Principles | 4 |
| INMT 165 | Equipment Processes | 4 |
| INMT 235 | Mechanical Drives I | 4 |
| INMT 237 | Hydraulics I | 2 |
| INMT 261 | Pump Operations I | 4 |
| INMT 262 | Piping Systems | 2 |
| INMT 263 | Mechanical Drives II | 4 |
| INMT 264 | Rigging | 2 |
| INMT 265 | Hydraulics II | 2 |
| INMT 267 | Pump Operations II | 2 |
| MAT 265 | Special Topics | 2 |
| WELD 105 | Introduction to Welding | 3 |
| Total Credits | | 60 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1130G first.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|--|-----------|
| INMT 133 | Process Technology and Systems | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| ENGL 1110G | Composition I | 4 |
| Area IV: Social/Behavioral Sciences Course ¹ | | 3 |
| Credits | | 16 |
| Spring | | |
| INMT 134 | Maintenance Principles | 4 |
| INMT 165 | Equipment Processes | 4 |
| ENGL 2210G | Professional & Technical Communication | 3 |
| MATH 1130G | Survey of Mathematics ² | 3 |
| Credits | | 14 |

Second Year**Fall**

| | | |
|--|---------------------|---|
| INMT 235 | Mechanical Drives I | 4 |
| INMT 237 | Hydraulics I | 2 |
| INMT 261 | Pump Operations I | 4 |
| INMT 262 | Piping Systems | 2 |
| Area V: Humanities Course ³ | | 3 |

Credits **15**

Spring

| | | |
|----------|-------------------------|---|
| INMT 263 | Mechanical Drives II | 4 |
| INMT 264 | Rigging | 2 |
| INMT 265 | Hydraulics II | 2 |
| INMT 267 | Pump Operations II | 2 |
| MAT 265 | Special Topics | 2 |
| WELD 105 | Introduction to Welding | 3 |

Credits **15**

Total Credits **60**

¹ **Area IV: Social/Behavioral Sciences Courses:**

- ANTH 1115G Introduction to Anthropology
- ECON 1110G Survey of Economics, ECON 2110G Macroeconomic Principles, or ECON 2120G Principles of Microeconomics
- GEOG 1120G World Regional Geography or GEOG 1130G Human Geography
- POLS 1120G American National Government or POLS 1110G Introduction to Political Science
- SOCI 1110G Introduction to Sociology

² MATH 1130G Survey of Mathematics is required for the degree but students may need to take any prerequisites needed to enter MATH 1130G first.³ **Area V: Humanities Courses**

- HIST 1110G United States History I or HIST 1120G United States History II
- HIST 1150G Western Civilization I or HIST 1160G Western Civilization II

Instrumentation and Control Technology - Certificate

The Instrumentation and Control technology program combines the theory and the hands-on training of state-of-the-art analog and digital instrumentation and measurements used in modern control technologies. Students learn to install, test, calibrate and maintain instrumentation that measure, indicate and control variables such as pressure, flow, level, density, temperature, force, vibration and chemical composition. Students apply mathematics and physics disciplines aligned with industrial standards in realistic situations encountered during their career. In addition to employ their outcomes in updating, building, and modifying as required different control technologies to overcome any obstacle in the system functionality.

| Prefix | Title | Credits |
|----------------------------|---|-----------|
| Course Requirements | | |
| ENGL 1110G | Composition I | 4 |
| INST 133 | Process Technology and Systems | 4 |
| INST 165 | Equipment Processes | 4 |
| INST 205 | Programmable Logic Controllers and Applications | 4 |
| INST 251 | Instrumentation and Measurement | 5 |
| OEET 110 | Basic Electricity and Electronics | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| Total Credits | | 30 |

First Year**Fall**

| | | |
|----------|---------------------------------|---|
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INST 133 | Process Technology and Systems | 4 |
| INST 251 | Instrumentation and Measurement | 5 |

Credits **14**

Spring

| | | |
|----------------------|---|-----------|
| OEET 110 | Basic Electricity and Electronics | 4 |
| INST 165 | Equipment Processes | 4 |
| INST 205 | Programmable Logic Controllers and Applications | 4 |
| ENGL 1110G | Composition I | 4 |
| Credits | | 16 |
| Total Credits | | 30 |

Manufacturing Technology

The **Manufacturing Technology** program prepares students for entry-level technician positions in the construction, mining, and manufacturing industries.

The program contains two options sharing a common core curriculum. The Electronic Assembly option stresses computer, drafting, electrical, and mechanical skills, while the Manufacturing Processes option stresses application of those skills to computer-aided drafting (CAD), computer-aided manufacturing (CAM), and computer numerically controlled (CNC) machining systems. Training is conducted in a conventional machining laboratory, a state-of-the-art CAM and robotics laboratory, and modern CAD labs. Experienced manufacturing professionals provide the highest quality instruction in a "hands on" environment.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Manufacturing Technology (Electronics Assembly) - Associate of Applied Science (p. 262)

Manufacturing Technology (Manufacturing Processes) - Associate of Applied Science (p. 264)

E T 101. Introduction to Engineering Technology and Geomatics

1 Credit (1)

An introduction to geomatics and the various engineering technology disciplines, the engineering approach to problem solving, and the design process. Projects emphasize the importance of teamwork, written & oral communication skills, as well as ethical responsibilities.

Learning Outcomes

1. Various

E T 104. Soldering Techniques

1 Credit (3P)

Fundamentals of soldering, desoldering, and quality inspection of printed circuit boards.

E T 109. Computer Drafting Fundamentals

3 Credits (3+2P)

Crosslisted with: DRFT 109, C E 109 and SUR 109

E T 110. Introduction to 3-D Modeling (Solid Works)

3 Credits (2+3P)

Introduction to SolidWorks, a 3-D modeling software. The foundation for designing mechanical parts and assemblies.

E T 120. Computation Software

2-3 Credits (2-3)

The use of spreadsheet software in the field of engineering technology.

E T 125. Introduction to Renewable Energy

3 Credits (3)

Renewable energy systems, including topics in thermal-solar photovoltaic, wind, geothermal systems, and other current topics. Theory, practical applications, safety considerations and the economics of alternative renewable energy systems compared to conventional systems.

E T 143. Civil/Survey Drafting I**3 Credits (2+2P)**

Introduction to drafting in the field of Civil Engineering. Drawings, projects, and terminologies related to topographic mapping, contour drawings, plan, and profiles as street/highway layout.

Prerequisite(s): DRFT 109.

Learning Outcomes

1. Students will develop a basic knowledge of AutoCad Civil 3D software as they relate to the civil drafting process. Students will become familiar with a basic understanding of computers, drafting and trigonometry is required. Use of long-term projects will be utilized to simulate real-world work environments to aid the understanding and applying vocabulary on surveying drafting plans. An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology

E T 153. Fundamentals of Networking Communications**3 Credits (3)**

Introduction to networking basics, including computer hardware and software, electricity, networking terminology, protocols, LANs, WANs, OSI model, IP addressing, and design and documentation of basic network and structure cabling.

Learning Outcomes

1. Students will identify network types/protocols utilizing the OSI reference model and compute numbering system network problems. Students will explain issues related to managing and documenting network environments. Students will list, compare, and discuss industry standards for addressing computers on a network. Students will list and distinguish between computer networking historical milestones. Students will identify, compare, and evaluate networking data transport techniques. Students will identify and compare network transmission media and build/evaluate network cabling. Students will discuss IT industry certifications and summarize current technology trends.

E T 154. Construction Methods and Communications**3 Credits (3)**

Blueprint reading, specifications, and introduction to materials used in construction.

E T 155. Network Operating Systems I**3 Credits (3+1P)**

Introduction to a computer network operating system. May not be used as part of an E T degree program on main campus. Restricted to: Community Colleges only.

Prerequisite(s): E T 120 or E T 122.

E T 156. Introduction to Information Security**2 Credits (2)**

This course introduces information security terminology, historical evolution of digital security, types of PC and network system vulnerabilities and types of information loss. In addition, methods of information protection and integrity, intrusion detection, and recovery of data are introduced.

Prerequisite(s)/Corequisite(s): E T 120. Restricted to Community Colleges campuses only.

E T 160. Windows Fundamentals for IET**3 Credits (3)**

Fundamental review of the Windows operating system including installation and upgrades as well as managing applications, files, folders, devices and maintenance.

E T 182. Digital Logic**2 Credits (1+2P)**

The use of truth tables, Boolean equations, and diagrams to define, simplify, and implement logic-valued functions.

Learning Outcomes

1. Demonstrate ability to convert numerical values to commonly-used digital representations and their use for arithmetic and logical functions. Demonstrate understanding of Boolean logic functions and truth tables. Demonstrate ability to simplify logic expressions. Demonstrate understanding of sequential logic functions, and the ability to integrate with combinational logic to produce a simple state machine. Familiarity with common integrated circuit issues, such as logic voltage levels, propagation delay, and fan-out.

E T 183. Applied DC Circuits**3 Credits (2+2P)**

Application of Ohm's law, Kirchhoff's laws, Thevenin's, and Norton's theorems to the analysis of DC passive circuits. Embedded Lab.

Prerequisite(s)/Corequisite(s): MATH 1220G.

E T 183 L. Applied DC Circuits Lab**1 Credit (2P)**

DC applied circuits lab.

Corequisite(s): E T 183.

E T 184. Applied AC Circuits**3 Credits (2+2P)**

Application of circuit laws and theorems to analysis of AC passive circuits. Resonant circuit, polyphase circuit and magnetic circuit topics are introduced. Embedded Lab.

Prerequisite(s)/Corequisite(s): MATH 1250G. Prerequisite(s): E T 183.

E T 190. Applied Circuits**4 Credits (3+2P)**

Application of Ohm's law, Kirchhoff's laws, and Thevenin's theorems to the analysis of AC and DC passive circuits. Electronic circuit topics are introduced. Embedded lab.

Prerequisite/Corequisite: MATH 1250G or MATH 1430G.

Learning Outcomes

1. Analyze and design DC circuits, including ideal op-amps, using concepts of voltage, current, power, Kirchhoff's laws, and network theorems. Design simple systems involving dc circuits. Work and learn in teams.

E T 191. Applied Circuits Laboratory**1 Credit (2P)**

Applied Circuits Lab

E T 200. Special Topics**1-3 Credits**

Directed study or project. May be repeated for a maximum of 6 credits.

Prerequisite: consent of department head.

E T 203. Computational Foundations**3 Credits (3)**

Fundamental concepts of various proof techniques. These concepts will be applied to the use of computer algorithms, programming languages and other engineering and technology applications.

Prerequisite(s): MATH 1250G and E T 262.

E T 210. Intermediate 3-D Modeling (Solid Works)**3 Credits (3)**

Intermediate 3-D modeling. Applied modeling of techniques to prepare for SolidWorks certification (CSWA).

Prerequisite(s): E T 110.

E T 217. Manufacturing Processes**3 Credits (3)**

Introduction to manufacturing and processing, including: casting, forming, and machining. Emphasis on creating products with the appropriate techniques. Crosslisted with: I E 217.

Prerequisite: E T 110 and MATH 1220G.

Learning Outcomes

1. Various

E T 217 L. Manufacturing Processes Lab**1 Credit (3P)**

Hands-on laboratory in machine shop to apply topics from E T 217, including: casting, forming, and machining.

Corequisite: E T 217.

Learning Outcomes

1. Various

E T 220. Internship**1-6 Credits**

Internship requiring an approved number of hours of varied and progressive experience in the field of study. The scope and other requirements of the internship are stated in an individualized syllabus and through a memorandum of understanding between the faculty mentor and the industry partner. May be repeated up to 6 credits. Consent of Instructor required.

Prerequisite(s): E T 283.

E T 230. Introduction to Servo Systems**1 Credit (2P)**

Introduction to Servo Systems. Topics include uses of servos in the industry, servo types, loop gains and frequency response, software control systems, damping, feedback, encoders, synchros and resolvers. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 246.

E T 240. Applied Statics**3 Credits (3)**

Fundamental topics of applied statics, including force system analysis, equilibrium, free body diagrams, methods of joints and sections, distributed loads, friction, centroids, area moments, and shear and moment diagrams.

Prerequisite(s)/Corequisite(s): MATH 1430G or MATH 1511G. Prerequisite(s): PHYS 1230G or PHYS 1310G.

E T 241. Applied Dynamics**3 Credits (3)**

The foundation for understanding particles and bodies in motion and the forces involved, including: projectile motion, Newton's Laws of Motion, conservation of energy, and impulse and momentum.

Prerequisite: E T 240.

Prerequisite/Corequisite: (MATH 1440 or MATH 1521G or MATH 1521H).

Learning Outcomes

1. Various

E T 246. Electronic Devices I**4 Credits (3+3P)**

Solid-state devices including diodes, bipolar-transistors, and field effect transistors. Use of these devices in rectifier circuits, small signal and power amplifiers.

Prerequisite: E T 190 or E T 184 or ENGR 120.

Learning Outcomes

1. Various

E T 253. Networking Operating Systems II**3 Credits (3+1P)**

Introduction to a computer network operating system. May not be used as part of an E T degree program on main campus. Restricted to Community Colleges campuses only.

Prerequisite: E T 120 and E T 153.

Learning Outcomes

1. Identify Linux utilities and terminology. Use the Linux filesystem. Install, administer, and manage a Linux system. Utilize Linux user/group management. Install software packages. Apply data management skills.

E T 254. Concrete Technology**3 Credits (2+2P)**

Fundamentals of aggregates, Portland cement, and asphalt used in design and construction.

E T 255. Linux System Administration**3 Credits (3)**

Operating systems applications and interfacing with an introduction to systems administration. Topics include Shell Programming, Programming Tools, Database Management, System Backups, Security, Setup and Maintenance of Linux Servers.

Learning Outcomes

1. Describe the key features of the Linux operating system. Plan the Linux Filesystem to match system requirements. Design BASH scripts to optimize common Linux operations. Interpret Linux performance data to solve hardware and software issues. Students will demonstrate the Core Linux System Administration. Students will be able to link the use of shell commands to managing Linux server daemons and software. Students will apply these concepts to build application servers running Linux, Apache, MySQL, and PHP (LAMP); Tomcat, CUPS print servers; and create backup solutions. Students will apply problem analysis, object-oriented structured logic, and development concepts. Students will demonstrate an understanding of theory and hands-on experience administrating a Linux Based server.

E T 256. Networking Operating Systems III**3 Credits (3+1P)**

Introduction to a computer network operating system. May not be used as part of an E T degree program on main campus. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 253.

E T 262. Software Technology I**3 Credits (2+2P)**

An introduction to computer programming concepts as applied to engineering technology. Includes basic logic design, algorithm development, debugging and documentation. History and use of computers and their impact on society.

Prerequisite/Corequisite: (E T 182 or ENGR 130) or (MATH 1250G or MATH 1430G).

Learning Outcomes

1. Set up and use a rich programming environment for programming with C Analyze existing code Employ effective use of basic programming and basic troubleshooting Write, debug and test code given software requirements Apply testing and documentation best practices Transfer programming knowledge and apply coding knowledge

E T 272. Electronic Devices II**4 Credits (3+3P)**

Operational amplifiers, positive and negative feedback, computer aided circuit analysis. In addition circuits include integrator, differentiators and phase shift networks.

Prerequisite: E T 246.

Prerequisite/Corequisite: MATH 1430G or MATH 1435 or MATH 1511G.

Learning Outcomes

1. Various

E T 273. Advanced Networking Communications**4 Credits (2+4P)**

Explores advanced networking communications to include Wireless Networking, Virtualization and Cloud Computing, Subnets and VLANs, Network Risk Management, Network Security Design, Network Performance, and WANS. The course covers the examination objectives and detailed preparation for students to take the CompTIA Network+ exam.

Prerequisite: E T 153.

Learning Outcomes

1. Identify, describe, and apply wireless transmission characteristics and standards. Explain the benefits of cloud virtualization and cloud computing. Explain the purpose of network segmentation and describe how VLANs work and how they are used. Identify basic concepts of network risk management and configure devices for increased security. Identify network design security features and discuss options in network access control. Use tools to evaluate network performance and discuss best practices for incident response and disaster recovery. Explain characteristics of WAN technology and troubleshoot connection methods.

E T 276. Electronic Communications**3 Credits (2+2P)**

Antennas, transmission devices, A-M and F-M transmission and detection, pulse systems, microwave systems.

Prerequisite(s): E T 246.

E T 277. Computer Networking I for IET**3 Credits (2+2P)**

Computer network design and applications for LAN, TCP/IP networks, routing and switching technologies, VLANs, and the OSI layers from physical to transport.

Prerequisite(s): E T 182.

E T 280. Web Design and Multimedia**3 Credits (3)**

Introduction to front-end web development including webpage design, structure, layout, positioning, responsiveness, and foundational layers of how the web works. Video, audio, and other digital presentation tools are covered.

Learning Outcomes

1. Create multiple frontend development micro-components. Create single and multi-page websites. Use flexbox, grid, and media queries and different design patterns. Employ effective use of web development and basic troubleshooting. Build small web site projects.

E T 282. Digital Electronics**4 Credits (3+3P)**

Applications of digital integrated circuits, multiplexers, counters, arithmetic circuits, and microprocessors.

Prerequisite(s)/Corequisite(s): (E T 190 or E T 184). Prerequisite(s): E T 182.

E T 283. Hardware PC Maintenance**3 Credits (3+1P)**

Installing, configuring, troubleshooting, and maintaining personal computer hardware components.

Prerequisite(s): E T 120 or E T 122.

E T 284. Software PC Maintenance**3 Credits (3+1P)**

Installing, configuring, troubleshooting, and maintaining personal computer operating systems.

Prerequisite(s): E T 120 or E T 122.

E T 285. Advanced Information Security**3 Credits (3)**

The course covers detailed analysis of network security, including security operations and policy adherence; internal and external vulnerabilities; methods of identifying, controlling and managing system access, and the protection of system information.

Prerequisite(s)/Corequisite(s): E T 283. **Prerequisite(s):** E T 156.

E T 286. Information Security Certification Preparation**4 Credits (4)**

The course covers the examination objectives and detailed preparation for a certification in information security.

Prerequisite(s): E T 285.

E T 290. Networking Wireless Communication**3 Credits (3+1P)**

This course provides an introduction to wireless networking and communications. Some of the topics covered are protocols, transmission methods, and IEEE 802.11 standards. Wireless LAN (WLAN) fundamentals, devices, and security, cellular telephony, broadband, and satellite communications.

Prerequisite: E T 273.

E T 291. PC Forensics and Investigation**3 Credits (3)**

Introduction to computer forensics and investigative fundamentals. Topics include understanding computer forensic and investigation law and requirements, processing crime and incident scenes, and the extraction, preservation, analysis and presentation of computer-related evidence.

Prerequisite(s): E T 120 or E T 122.

Manufacturing Technology (Electronics Assembly) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60-63 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|--|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| <i>General Education Elective ²</i> | | <i>3-4</i> |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| BUSA 1110 or ACCT 2120 | Intro to Business Principles of Accounting II | 3 |
| E T 106 | | 4 |
| E T 120 | Computation Software | 2 |
| E T 183 | Applied DC Circuits | 3 |
| E T 183 L | Applied DC Circuits Lab | 1 |
| E T 184 | Applied AC Circuits | 3 |
| E T 184 L | | 1 |
| Approved E T Elective | | 4 |
| <i>Program Concentration Coursework</i> | | |
| E T 182 | Digital Logic | 3 |
| E T 200 | Special Topics | 3 |
| E T 246 | Electronic Devices I | 4 |
| E T 272 | Electronic Devices II | 4 |

| | | |
|-----------------------|---------------------|--------------|
| E T 282 | Digital Electronics | 4 |
| Approved E T Elective | | 6 |
| Total Credits | | 60-63 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | Credits |
|--|--|------------|
| Fall | | |
| E T 106 | | 4 |
| E T 120 | Computation Software | 2 |
| E T 183 & 183 L | Applied DC Circuits and Applied DC Circuits Lab | 4 |
| Gen Ed Course - One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 13 |
| Spring | | |
| Approved E T Elective | | 4 |
| E T 184 & 184 L | Applied AC Circuits and | 4 |
| GEN Ed Course - One course from Areas I-VI ^{1, 2} | | 3 |
| Approved E T Elective | | 3 |
| Credits | | 14 |
| Summer | | |
| General Education Elective - Any "G" course ² | | 3-4 |
| Credits | | 3-4 |

Second Year

| | | |
|--|---|--------------|
| Fall | | |
| E T 246 | Electronic Devices I | 4 |
| GEN Ed Course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| E T 200 | Special Topics | 3 |
| E T 182 | Digital Logic | 3 |
| Credits | | 13-14 |
| Spring | | |
| Approved E T Elective | | 3 |
| E T 272 | Electronic Devices II | 4 |
| E T 282 | Digital Electronics | 4 |
| BUSA 1110 or ACCT 2120 | Intro to Business or Principles of Accounting II | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 17-18 |
| Total Credits | | 60-63 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Manufacturing Technology (Manufacturing Processes) - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 61-64 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|-----------------------------|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| <i>General Education Elective ²</i> | | 3-4 |
| Major Requirements | | |
| <i>Technical Requirements</i> | | |
| BUSA 1110 | Intro to Business | 3 |
| or ACCT 2120 | Principles of Accounting II | |
| E T 106 | | 4 |
| E T 120 | Computation Software | 2 |
| E T 183 | Applied DC Circuits | 3 |
| E T 183 L | Applied DC Circuits Lab | 1 |
| E T 184 | Applied AC Circuits | 3 |
| E T 184 L | | 1 |
| Approved E T Elective | | 4 |
| <i>Program Concentration Coursework</i> | | |
| E T 217 | Manufacturing Processes | 3 |
| E T 217 L | Manufacturing Processes Lab | 1 |
| E T 200 | Special Topics | 3 |
| Approved E T Elective | | 15 |
| Approved Elective | | 3 |
| Total Credits | | 61-64 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | Credits |
|--|-----------|
| E T 106 | 4 |
| E T 120 | 2 |
| E T 183 | 4 |
| & 183 L | |
| and Applied DC Circuits Lab | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | 3 |
| Credits | 13 |
| Spring | |
| Approved E T Elective | 4 |
| E T 184 | 4 |
| & 184 L | |
| and | |
| Applied AC Circuits | |
| GEN Ed course - One course from Areas I-IV ^{1, 2} | 3-4 |

| | | |
|--|---|--------------|
| General Education Elective - Any "G" course ² | | 3-4 |
| Credits | | 14-16 |
| Summer | | |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3 |
| Credits | | 3 |
| Second Year | | |
| Fall | | |
| Approved E T Elective | | 3 |
| Approved E T Elective | | 2 |
| E T 200 | Special Topics | 3 |
| E T 217 & 217 L | Manufacturing Processes and Manufacturing Processes Lab | 4 |
| Approved Elective | | 3 |
| Credits | | 15 |
| Spring | | |
| Approved E T Elective | | 2 |
| Approved E T Elective | | 4 |
| Approved E T Elective | | 4 |
| BUSA 1110 or ACCT 2120 | Intro to Business or Principles of Accounting II | 3 |
| GEN Ed course - One course from Areas I-VI ^{1, 2} | | 3-4 |
| Credits | | 16-17 |
| Total Credits | | 61-64 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<https://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Natural Gas Compression Technology - Associate of Applied Science

The Natural Gas Compression Associate of Applied Science Degree is a program that provides the technical basics and knowledge of gas compression procedures, skills, maintenance, and the use of equipment to prepare for entry-level employment, it covers the safety procedures in the workplace, troubleshooting, repairing and operating the natural gas engines and relative materials.

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 61-62 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|---|---------|
| General Education | | |
| <i>This degree requires courses from Area I, II, IV, and V; students do not need to take any additional General Education courses to meet the requirement</i> | | 13-14 |
| Area I: Communications | | |
| ENGL 1110G | Composition I | |
| Area II: Mathematics | | |
| Any Area II Mathematics course for 3-4 credits ¹ | | |
| Area IV: Social/Behavioral Sciences | | |
| An Area IV course for 3 credits from the list in the footnote ² | | |
| Area V: Humanities | | |
| HIST 1110G | United States History I | |
| <i>General Education Elective</i> | | |
| ENGL 2210G | Professional & Technical Communication | 3 |
| Core Requirements | | |
| HIST 1120G | United States History II | 3 |
| INMT 237 | Hydraulics I | 2 |
| INMT 165 | Equipment Processes | 4 |
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| NGEC 133 | Natural Gas Engine Repair Technology | 5 |

| | | |
|----------|--|---|
| NGEC 175 | Natural Gas Compression Technology I | 4 |
| NGEC 245 | Natural Gas Engine Management and Control Technology | 5 |
| NGEC 185 | Natural Gas Compression Technology II | 4 |
| NGEC 246 | Fuel and Emissions Technology | 5 |
| OEET 110 | Basic Electricity and Electronics | 4 |
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |

Total Credits **61-62**

¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

² The Area IV courses that are recommended for this degree:

- ANTH 1115G Introduction to Anthropology
- ECON 1110G Survey of Economics
- ECON 2110G Macroeconomic Principles
- ECON 2120G Principles of Microeconomics
- GEOG 1120G World Regional Geography
- GEOG 1130G Human Geography
- POLS 1120G American National Government
- POLS 1110G Introduction to Political Science
- SOCI 1110G Introduction to Sociology

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|--|-----------|
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 237 | Hydraulics I | 2 |
| ENGL 1110G | Composition I | 4 |
| Area IV: Social/Behavioral Sciences Course ¹ | | 3 |
| Credits | | 14 |
| Spring | | |
| OEET 110 | Basic Electricity and Electronics | 4 |
| INMT 165 | Equipment Processes | 4 |
| ENGL 2210G | Professional & Technical Communication | 3 |
| NGEC 133 | Natural Gas Engine Repair Technology | 5 |
| Credits | | 16 |

Second Year

| Fall | | |
|--|--|--------------|
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| NGEC 175 | Natural Gas Compression Technology I | 4 |
| NGEC 245 | Natural Gas Engine Management and Control Technology | 5 |
| HIST 1110G | United States History I | 3 |
| HIST 1120G | United States History II | 3 |
| Credits | | 19 |
| Spring | | |
| NGEC 185 | Natural Gas Compression Technology II | 4 |
| NGEC 246 | Fuel and Emissions Technology | 5 |
| Area II: Mathematics Course ¹ | | 3-4 |
| Credits | | 12-13 |
| Total Credits | | 61-62 |

- 1 See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- 2 The Area IV courses that are recommended for this degree:
- ANTH 1115G Introduction to Anthropology
 - ECON 1110G Survey of Economics
 - ECON 2110G Macroeconomic Principles
 - ECON 2120G Principles of Microeconomics
 - GEOG 1120G World Regional Geography
 - GEOG 1130G Human Geography
 - POLS 1120G American National Government
 - POLS 1110G Introduction to Political Science
 - SOCI 1110G Introduction to Sociology

Natural Gas Compression Technology - Certificate of Completion

The Natural Gas Compression Certificate is a program that provides the technical basics and knowledge of gas compression procedures, skills, maintenance, and the use of equipment to prepare for entry-level employment. It covers the safety procedures in the workplace, troubleshooting, repairing and operating the natural gas engines and related materials.

| Prefix | Title | Credits |
|----------------------|---|-----------|
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| NGEC 175 | Natural Gas Compression Technology I | 4 |
| OEET 110 | Basic Electricity and Electronics | 4 |
| INMT 165 | Equipment Processes | 4 |
| NGEC 133 | Natural Gas Engine Repair Technology | 5 |
| ENGL 1110G | Composition I | 4 |
| Total Credits | | 30 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------|---|-----------|
| OETS 100 | Industrial/Construction Safety | 2 |
| OETS 118 | Mathematics for Technicians | 3 |
| INMT 205 | Programmable Logic Controllers and Applications | 4 |
| NGEC 175 | Natural Gas Compression Technology I | 4 |
| Credits | | 13 |

Second Year

| Spring | | |
|----------------------|--------------------------------------|-----------|
| OEET 110 | Basic Electricity and Electronics | 4 |
| INMT 165 | Equipment Processes | 4 |
| ENGL 1110G | Composition I | 4 |
| NGEC 133 | Natural Gas Engine Repair Technology | 5 |
| Credits | | 17 |
| Total Credits | | 30 |

Nursing

The nursing curriculum of NMSU Carlsbad prepares students for beginning nursing practice in a variety of health care settings. The program is approved by the State Board of Nursing, and the Applied Associate Degree in Nursing is accredited by the Accreditation Commission for Education in Nursing (ACEN). Questions regarding accreditation should be directed to ACEN to

Accreditation Commission for Education in Nursing (ACEN)

3343 Peachtree Road NE, Suite 850
Atlanta, GA 30326
(404) 975-5000

Fax (404) 975-5020

email: info@acenursing.org

www.acenursing.org

Upon completion of the **Certificate for Practical Nursing**, graduates are eligible to write the National Council Licensure Exam (NCLEX-PN) which leads to licensure as a Practical Nurse. Upon completion of the **Applied Associate Degree in Nursing**, graduates are eligible to write the National Council Licensure Exam (NCLEX-RN) that leads to licensure as a Registered Nurse.

Please note that certain felonious convictions may prohibit graduates from writing the NCLEX-RN in New Mexico. Students considering application to the nursing program who have any prior felony convictions should contact the appropriate Board of Nursing through which they intend to seek licensure prior to making application to this program. Graduates licensed as registered nurses in New Mexico do not meet licensure requirements in North Dakota.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Program Entrance Requirements

- BIOL 2210 Human Anatomy and Physiology I for the Health Sciences
- CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors).
- NA 101 Nursing Assistant Theory and Lab
- Completion of developmental studies English, math and reading as indicated by the student's placement test results if needed
- Cumulative GPA of 2.75 or higher in courses applicable to the nursing curriculum
- HESI A2 composite score of 75% and 60% in each subject area: Math, Reading Comprehension, Vocabulary and General Knowledge, Grammar, and Anatomy & Physiology
- Submission of a program application packet by **May 15**. Packets are available in the Nursing Administration Office in the Allied Health Building and online at carlsbad.nmsu.edu (<http://carlsbad.nmsu.edu>).
- Science courses repeated more than twice will not be considered for admission requirements.

Courses from other nursing programs are evaluated by the Nursing Program Director; call (575) 234-9300 to inquire. Evaluation of non-nursing credits are processed by the registrar's office at NMSU Las Cruces.

Curriculum Notes

- All courses that are part of the nursing curriculum must be completed with a C or higher.
- Students must be formally accepted into the nursing program to enroll in courses listed under "Nursing Program Requirements."
- CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors) may not be used to fulfill elective credit. Note that CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors) is required for the BSN degree at NMSU Las Cruces.
- NURS 210 Pharmacological Requisites of the Childbearing Family is not required for the LPN option. However, if this course is not taken and the student decides not to exit at the LPN level and wants to continue in the associate degree, the student must take NURS 210 Pharmacological Requisites of the Childbearing Family (offered only in the spring) before progressing to the second year of nursing.
- Some out of state travel is required for certain clinical experiences.

Essential Eligibility Requirements

The following essential requirements and examples of necessary activities (not all inclusive) should be used to assist each applicant in determining whether accommodations or modifications are necessary.

| Essential Function | Example of Necessary Activities |
|--|--|
| Critical thinking abilities sufficient for clinical judgment. | Identify cause/effect relationships in clinical situation; develop nursing care plans. |
| Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds. | Establish rapport with patients/families and colleagues. |

| | |
|---|--|
| Communication abilities sufficient for interactions with others in verbal and written form. | Explain treatment procedures, initiate health teaching, document and interpret nursing actions and patient/client responses. |
| Abilities sufficient to move from room to room and to maneuver in small places. | Move around in patients' rooms, work spaces, and treatment areas, and administer cardio-pulmonary procedures. |
| Abilities sufficient to provide safe and effective nursing care. | Calibrate and use equipment; position patients/clients. |
| Abilities sufficient to monitor and assess health needs. | Hear monitor alarms, emergency signals, auscultatory sounds and cries for help. |
| Abilities sufficient for observation and assessment necessary in nursing care. | Observe patient/client responses. |
| Abilities sufficient for physical assessment. | Perform palpation, functions of physical examination and/or those related to therapeutic intervention, e.g. insertion of a catheter. |
| Ability to operate under stressful situations. | Perform within a crisis situation providing care to meet physical, emotional, or psychosocial needs of the patient/client. |

ADA Guidelines apply to all qualified disabled persons. A qualified disabled person is a person with a disability who, with or without reasonable modification to rules, policies, or practices, and with the removal of architectural, communication, or transportation barriers, or the provision of auxiliary aids and services, meets the essential eligibility requirements for the receipt of services, or the participation in the programs or activities provided by a public entity **and** who can perform the "essential functions" of the position. Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact the appropriate program chair as soon as possible to make necessary accommodations. Students should be prepared to present a disability verification form from their physician.

Practical Nursing - Certificate (p. 274)

Nursing - Associate Degree (p. 275)

NURS 110. Pre-Nursing Freshman Seminar

1 Credit (1)

This Freshman seminar provides an introduction to the university and its resources, an orientation to the pre-nursing curriculum, and overview of concepts for professional nursing practice. Emphasis is placed on exploring the nurse's role as an integral member of the healthcare team across multiple contexts and settings, and developing a professional identity. Consent of Instructor required.

NURS 120. Introduction to Pharmacology

3 Credits (3)

General principles of pharmacology including methods of administration, effect on the body, interactions with other drugs, and classification of drugs. Focus on the health care provider's role in safe pharmacologic intervention. May be repeated up to 3 credits. Crosslisted with: HIT 120. Restricted to Community Colleges campuses only.

NURS 130. Foundations of Pharmacology

3 Credits (3)

This course provides the nursing student with an introduction to the foundations of pharmacology including: science of drug action, principles of medication administration, accurate calculation of drug doses, medication therapy across the lifespan, application of medications to treat health alterations, normal and adverse responses by the client to medication therapy, medication safety, medication regulation, national patient safety goals, and appropriate nursing interventions to achieve the desired goals of medication therapy. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: Community Colleges only.

Corequisite(s): NURS 147 & NURS 149. Restricted to: NUR majors.

NURS 134. Foundation of Nursing Skills and Assessment

3 Credits (1+6P)

This course provides nursing students with introductory nursing knowledge related to performance of nursing skills and assessment including: techniques of fundamental nursing care, basic and intermediate nursing skills, and foundational physical assessment techniques associated with care across the lifespan. Open to students who have been accepted into the nursing program. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 136 & NURS 137 or permission of the Program Director.

NURS 136. Foundations of Nursing Practice

6 Credits (4+6P)

This course will introduce the nursing student to foundational theoretical concepts of professional nursing practice, the nursing process, and foundational nursing skills. It includes developmental concepts related to clients across the lifespan. Clinical experiences in the simulation lab, long-term care, the community, and rehabilitation settings will provide the student with the opportunity to apply learned skills to provide total care to meet needs of one adult client and to develop care planning skills related to actual problems. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 134, NURS 137.

NURS 137. Care of Geriatric Patient**3 Credits (3)**

This course will introduce the nursing student to foundational concepts of age-appropriate/specific care of the older adult who represents the largest population of individuals placing demands on the healthcare system. It includes basic and complex concepts and issues related to care of the older client across the care continuum, provision of cost-effective care in a resource sparse environment. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the nursing program to enroll in this course. Restricted to: NURS majors. Restricted to Community Colleges campuses only.

Corequisite(s): NURS 134 & NURS 136.

NURS 140. Pathophysiology for Allied Health Professionals**3 Credits (3)**

Introduction to the nature of disease and its effect on body systems. Deals with the disease processes affecting the human body via an integrated approach to specific disease entities. Includes a review of normal functions of the appropriate body systems. Diseases are studied in relationship to their etiology, pathology, physical signs and symptoms, diagnostic procedures, complication, treatment modalities, and prognosis. Restricted to Allied Health and Health Information Technology majors. Restricted to: Community Colleges only.

NURS 146. Common Health Deviations**6 Credits (4+6P)**

Common health deviations and the manner by which they alter various body functions are explored. The role of the licensed practical nurse in assisting clients with common health deviations is presented. Ethical and legal implications and the role of the practical nurse are also considered. The licensed practical nursing student will utilize the application of knowledge to client care situation both in the subacute and acute care settings. The nursing process is presented as guide for coordinating client care. Grade of C or better. May be repeated up to 6 credits. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 156, NURS 154, NURS 157, and NURS 210 or consent of program director.

NURS 147. Adult Health I**6 Credits (4+6P)**

This course focuses on application of the nursing process and theoretical concepts of care for adults with commonly occurring health problems. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to continue development of: prioritization skills, proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, care planning skills related to patient actual, psychosocial, and potential problems in the delivery of total nursing care to meet needs of one adult client. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Corequisite(s): NURS 130, NURS 147 lab, & NURS 149.

NURS 149. Mental Health Nursing**3 Credits (2+3P)**

This course will allow the nursing student to develop skills necessary to provide nursing care for clients with mental health problems in various health care settings including: common mental health disorders, psychosocial dysfunction, psychosocial safety/substance abuse issues, violence, suicide, restraints, developmental age related pathophysiology, psychopharmacology, cultural/religious considerations, grief/loss, promotion of mental health, and therapeutic communication. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to develop ability to develop: proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, care planning skills related to patient actual, psychosocial, and potential problems in the delivery of total nursing care to meet needs of one client across the life span with acute/chronic mental health needs. Students must be concurrently enrolled in both the lecture and lab sections of this course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program in order to enroll in the course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 130, NURS 147, & NURS 149L.

NURS 150. Medical Terminology**3 Credits (3)**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as OEHO 120 and BOT 150. May be repeated up to 3 credits. Crosslisted with: BOT 150, AHS 120 and HIT 150.

NURS 153. Medication and Dosage Calculation**1 Credit (1)**

Techniques of dosage calculation for medication and fluid administration. RR applicable. Students must meet NMSU basic skills requirement in mathematics to enroll in this course.

Corequisite(s): NURS 156 and NURS 154.

NURS 154. Physical Assessment**2 Credits (2)**

Beginning techniques of physical assessment by systems will be presented using the nursing process as a guide for providing safe client centered care throughout the life span. Grade of C or better is required. May be repeated up to 2 credits. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite(s): BIOL 1130 or BIOL 2210.

Corequisite(s): NURS 153, NURS 156.

NURS 155. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes.

NURS 156. Basic Nursing Theory and Practice**6 Credits (4+6P)**

Introduction to the nursing profession and the beginning skills of nursing practice as it relates to normalcy. The nursing process is presented as a means of guiding the student in providing safe client centered care. Ethical and legal aspects of nursing practice are also included. Basic clinical nursing skills will be presented and practiced in the nursing lab. The student will perform these skills with clients in an actual health care setting. May be repeated up to 6 credits. Consent of Program Director requires. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Corequisite(s): NURS 153, NURS 154.

NURS 157. Maternal/Child Health Deviations**8 Credits (6+6P)**

This course introduces the student to the concepts and principles of nursing care of the family from conception to adolescence. Utilizing the assessment, analyzing, planning, and implementation phases of the nursing process (the Care map), the student focuses on the supportive-educative nursing system to assist members of the family in meeting self-care requisites and how they are affected by the health deviations common to each developmental level beginning with conception and ending with adolescence. Knowledge gained in theoretical instruction is then applied to the patient care situation. After an introduction to the necessary clinical skills in the campus laboratory setting, students will participate in clinical experiences with the focus on the family from conception to adolescence. The assessment, analysis, planning, and implementation phases of the nursing process are emphasized as a tool to assist patients in meeting universal and developmental self-care requisites. Utilizing the nursing process, the student provides safe, client-centered care to diverse clients and families. Theoretical instruction is applied to client care situations. Students collaborate with clients, families, and the interdisciplinary team in meeting health care needs. Experiences may occur in the physician's office, local health department, day care centers, schools, or the hospital. Grade of C or better required. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite: NURS 156, NURS 153, and NURS 154.

Corequisite: NURS 210.

Learning Outcomes

1. Determine how values of clients, families and medical personnel impact the involvement of clients in their health care related to maternal/child and pediatric clients. Implement individualized client care utilizing an evidenced based approach related to maternal/child and pediatric clients. Choose health protection, health promotion, and disease prevention strategies in the care of maternal/child and pediatric clients. Apply the scope, risk factors, physiologic processes, and clinical management strategies to maternal/child and pediatric clients. Choose resources for continuity of client care related to maternal/child and pediatric clients. Give examples of significant information to report to other disciplines. Apply the principles of delegation in the provision of client care with maternal/child and pediatric clients. Utilize evidenced based information to implement a plan of care and employ nursing interventions for maternal/child and pediatric clients. Use the principles of ethical practice in the delivery of nursing care for maternal/child and pediatric clients. 1 Apply policies, procedures and standards of care related to maternal/child and pediatrics in the provision of client care. 1 Apply nursing interventions to reduce risk of harm to self and others related to maternal/child and pediatric clients. 1 Choose available technology for delivery of nursing care related to maternal/child and pediatric clients.

NURS 201. Special Topics**1-4 Credits**

Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 10 credits. Restricted to: Community Colleges only.

Prerequisite: admission to the nursing program.

NURS 209. Independent Study**1-4 Credits**

Individual studies to meet identified student needs. May be repeated for a maximum of 10 credits. Restricted to: Community Colleges only.

Prerequisite: admission to the nursing program.

NURS 210. Pharmacological Requisites of the Childbearing Family**1 Credit (1)**

Basic concepts of pharmacology including pharmacokinetics, pharmacodynamics, and pharmacotherapeutics, and their relationship to nursing care will be discussed focusing on medications commonly utilized with the childbearing family. Medication classes to be discussed include labor and delivery, analgesic, vitamins, respiratory, gynecological, endocrine, and anti-microbial/anti-infective drugs. Grade of C or better required.

Prerequisite(s): NURS 153, NURS 154 and NURS 156.

Corequisite(s): NURS 157.

Learning Outcomes

1. Effective communication skills in reading, writing, listening, and speaking. Basic critical thinking skills including problem identification, evidence acquisition, evidence evaluation, and reasoning/conclusion. An understanding of personal and social responsibility. An ability to apply the fundamental concepts of quantitative reasoning in mathematics and science. Appropriate information and digital literacy, and skills for personal and professional use.

NURS 211. Pharmacological Requisites of Simple Health Deviations**1 Credit (1)**

Basic concepts of pharmacology including pharmacokinetics, pharmacodynamics, and pharmacotherapeutics, and their relationship to nursing care are addressed focusing on medications related to the psychiatric, gastrointestinal, musculoskeletal, gynecological, hematological, and anti-neoplastic client. Grade of C or better required. Restricted to: Carlsbad campus only.

Prerequisite(s): BIOL 2210 and BIOL 2225 and NURS 153, NURS 154, NURS 156, NURS 157 and NURS 210.

Corequisite(s): NURS 246 and NURS 258.

NURS 212. Pharmacological Requisites of Complex Health Deviations**1 Credit (1)**

Basic concepts of pharmacology including pharmacokinetics, pharmacodynamics, and pharmacotherapeutics, and their relationship to nursing care is examined focusing on medications related to complex health deviations. Drug classes to be discussed include cardiovascular, renal, endocrine, and neurological. Grade of C or better required.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 246, NURS 258, NURS 210 and NURS 211.

Corequisite(s): NURS 256 and NURS 260.

Learning Outcomes

1. Apply principles of teaching/learning in educating clients on the use, adverse effects and interactions of pharmacotherapeutic agents used to treat complex health deviations. Collaborate with members of the health care team in the delivery of pharmacotherapeutics to clients with complex health deviations. Give examples of commonly prescribed drugs used to treat clients with complex health deviations and related pharmacokinetics and pharmacodynamics. Discuss the relationship between the use of pharmacotherapeutics and the treatment of disease in clients with complex health deviations. Identify safety issues and minimize risk potential associated with pharmacotherapeutics.

NURS 224. Maternal Child Nursing**5 Credits (4+3P)**

This course provides the intermediate nursing student with an in-depth review of care of the childbearing woman, family structures and roles, and nursing care of the child from birth through adolescence. Emphasis includes the care of pre-partum, intra-partum and postpartum clients, the neonate and health deviations in pediatric clients. Clinical experiences in the simulation lab, the community, and acute care settings will provide the student with the opportunity to apply learned skills to provide total care to meet needs of up to two adult, neonatal, or pediatric clients and to apply care planning skills related to actual, psychosocial and potential problems. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 235, & NURS 236.

NURS 226. Adult Health II**6 Credits (4+6P)**

This course focuses on application of nursing process and theoretical concepts of care for adults with complex health alterations. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to apply: prioritization skills, maintain proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, and care planning skills related to patient actual, psychosocial, and potential problems in the delivery of nursing care to meet needs of three adult clients. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 224 & NURS 235.

NURS 235. Nursing Leadership and Management**1 Credit (1)**

This course introduces the intermediate nursing student to professional practice principles of nursing leadership and management including: health policy and politics, fiscal management & budgeting, conflict management, decision making, interdisciplinary practice, working with teams, roles in disaster planning and management, application of standards of care to risk management, organization of care delivery, health care systems, processes, and practice environments. May be repeated up to 1 credits. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Corequisite(s): NURS 224, NURS 226.

NURS 236. Nursing Preceptorship - Adult Health III**6 Credits (2+12P)**

This course is the final course involving care of the patient with acute or chronic illness. It focuses on care of patients with complex or multi-system problems allowing the graduating nursing student to discuss and apply all the skills learned in previous nursing courses. After successfully passing the HESI exam, students have clinical practice with preceptor in various health care settings. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to: organize care of a group of clients, maintain proficiency in performance of nursing skills, collaborate with clients, families, peers and health care team members, and support care planning skills related to patient actual, psychosocial, and potential problems in the delivery of nursing care to meet needs of the preceptors group of clients. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program and have successfully completed all level 1, 2 and 3 nursing courses may enroll in this course. Clinical may include inpatient or outpatient care, days, evenings, nights, or weekend experiences. Students are required to work the preceptors assigned schedule. NCLEX Review must be done concurrently. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 201.

NURS 246. Health Deviations I**7 Credits (4+9P)**

Introduction to medical/surgical clients, whose health care needs are routine and predictable. Focus is on simple health deviations, including concepts relative to health promotion and maintenance. The nursing process is utilized to provide evidenced based, safe client centered care. Students are expected to apply clinical judgment, communicate and collaborate with clients and the interdisciplinary team in providing care for a group of two to three clients. Grade of C or better required. May be repeated up to 7 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 156, NURS 154, NURS 157 and NURS 210.

Corequisite(s): NURS 211, NURS 258.

NURS 256. Health Deviations II**8 Credits (6+12P)**

Concepts and principles applied to clients with complex health deviations. Building upon knowledge gained in NURS 246, focus will be on acutely ill clients. The nursing process continues to serve as a guide to provide safe, client centered care. The student collaborates with the interdisciplinary team in all aspects of client care. Student experiences the role of the staff nurse under the guidance and direction of the nursing instructor. Grade of C or better required. May be repeated up to 8 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 210, NURS 211, NURS 246, and NURS 258.

Corequisite(s): NURS 212, NURS 260.

Learning Outcomes

1. Apply each step of the nursing process as a method of organizing the nursing care for patients with complex health deviations. Discuss the patient's health care needs that occur as a result of complex health deviations. Explain methods the nurse can employ in allowing the patient to assume the right and responsibility for his own care. Incorporate the concepts and principles derived from the biological, developmental, social, nutritional and computer sciences and nursing knowledge that relate to the nursing care of patients with complex health deviations. Explain the roles and functions of the members of the health care team including ancillary personnel as they relate to the care of patients with complex health deviations. Explain the rationale for the performance of the following technical skills: a. EKG monitoring; b. Rhythm strip interpretation; c. Hemodynamic monitoring and interpretation; d. Tracheal suctioning Recognize the nurse's role in establishing a therapeutic relationship with patients experiencing complex health deviations.

NURS 258. Psychosocial Requisites: A Deficit Approach**3 Credits (2+3P)**

Nursing theory and practice as it relates to the care of the client experiencing psychosocial health deviations. The role of the nurse is discussed along with the ethical and legal aspects of care for the client with psychosocial disorders. Building upon the communication skills of listening and responding, the student develops the therapeutic skills of interpersonal relationships. Grade of C or better is required. May be repeated up to 3 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 210, and NURS 246.

Corequisite(s): NURS 211, NURS 246.

NURS 260. Management of Patients with Health Deviations**2 Credits (2)**

A capstone course to the nursing program in which principles in management and delegation to less prepared personnel is explored. A review of leadership roles, legal issues, quality initiatives, informatics and scope of practice is included. Preparation for the NCLEX is an integral portion of the course. Grade of C or better is required. May be repeated up to 2 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 210, NURS 211, NURS 246, and NURS 258.

Corequisite(s): NURS 212, NURS 256.

Learning Outcomes

1. Discuss nursing practice concepts relevant to the practice of professional nursing. Evaluate principles of quality improvement and safety into nursing practice within healthcare organizations and systems. Apply leadership concepts through the application of policies that apply to healthcare delivery. Promote a culture of safety through anticipating and eliminating potentially harmful situations. Collaborate in systems analysis when clinical errors or near misses occur to reduce harm, minimize blame, and encourage transparency. Integrate evidence in determining best clinical practice. Demonstrate basic knowledge of healthcare policy, finance, and regulatory environments, including local, state, national, and global healthcare trends. Use an ethical framework to evaluate the impact of policies of healthcare, especially for vulnerable populations.

Licensed Practical Nursing - Certificate of Completion

| Prefix | Title | Credits |
|-------------------------------------|--|-----------|
| Core Curriculum Requirements | | |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| CEPY 1120G | Human Growth and Behavior | 3 |
| ENGL 1110G | Composition I | 4 |
| PSYC 1110G | Introduction to Psychology | 3 |
| Nursing Program Requirements | | |
| NURS 146 | Common Health Deviations | 6 |
| NURS 153 | Medication and Dosage Calculation | 1 |
| NURS 154 | Physical Assessment | 2 |
| NURS 156 | Basic Nursing Theory and Practice | 6 |
| NURS 157 | Maternal/Child Health Deviations | 8 |
| Total Credits | | 41 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

Note: BIOL 2210 Human Anatomy and Physiology I for the Health Sciences and NA 101 Nursing Assistant Theory and Lab must be completed prior to entering the nursing program.

First Year

| Fall | | Credits |
|----------------------|--|----------------|
| NURS 153 | Medication and Dosage Calculation | 1 |
| NURS 154 | Physical Assessment | 2 |
| NURS 156 | Basic Nursing Theory and Practice | 6 |
| PSYC 1110G | Introduction to Psychology | 3 |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| Credits | | 16 |
| Spring | | |
| NURS 157 | Maternal/Child Health Deviations | 8 |
| CEPY 1120G | Human Growth and Behavior | 3 |
| ENGL 1110G | Composition I | 4 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| Credits | | 19 |
| Summer | | |
| NURS 146 | Common Health Deviations | 6 |
| Credits | | 6 |
| Total Credits | | 41 |

Nursing - Associate in Nursing

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 69-71 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|--|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| ENGL 1110G | Composition I (Recommended) | |
| Area II: Mathematics | | |
| MATH 1130G or MATH 1220G | Survey of Mathematics (Recommended) ³ College Algebra | |
| Area III: Laboratory Science | | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) ⁴ | |
| Area IV: Social/Behavioral Sciences | | |
| CEPY 1120G | Human Growth and Behavior (Recommended) | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Elective | | 3 |
| PSYC 1110G | Introduction to Psychology (Recommended) | |
| Core Requirements | | |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences ² | 4 |
| NA 101 | Nursing Assistant Theory and Lab (or Current CNA certificate) ² | 6 |
| Major Requirements | | |
| <i>Freshman Year Courses</i> | | |
| NURS 153 | Medication and Dosage Calculation | 1 |
| NURS 154 | Physical Assessment | 2 |
| NURS 156 | Basic Nursing Theory and Practice | 6 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| NURS 157 | Maternal/Child Health Deviations | 8 |
| NURS 210 | Pharmacological Requisites of the Childbearing Family | 1 |
| <i>Sophomore Nursing Courses</i> | | |
| NURS 211 | Pharmacological Requisites of Simple Health Deviations | 1 |
| NURS 246 | Health Deviations I | 7 |
| NURS 258 | Psychosocial Requisites: A Deficit Approach | 3 |
| NURS 212 | Pharmacological Requisites of Complex Health Deviations | 1 |
| NURS 256 | Health Deviations II | 8 |
| NURS 260 | Management of Patients with Health Deviations | 2 |
| Total Credits | | 69-71 |

- ¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.
- ² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ MATH 1220G College Algebra or MATH 1130G Survey of Mathematics is recommended for the degree but students may need to take any prerequisites needed to enter MATH 1220G or MATH 1130G first.
- ⁴ Note: CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors), BIOL 2210 Human Anatomy and Physiology I for the Health Sciences, and NA 101 Nursing Assistant Theory and Lab must be completed prior to entering the nursing program.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

| First Year | | Credits |
|---|--|---------|
| The following classes must be completed prior to entering the nursing program | | |
| CHEM 1120G | Introduction to Chemistry Lecture and Laboratory (non majors) ¹ | 4 |

| | | |
|--|---|-----------|
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| NA 101 | Nursing Assistant Theory and Lab | 6 |
| Credits | | 14 |
| Fall | | |
| NURS 153 | Medication and Dosage Calculation | 1 |
| NURS 154 | Physical Assessment | 2 |
| NURS 156 | Basic Nursing Theory and Practice | 6 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| General Education Elective Course | | 3 |
| PSYC 1110G | Introduction to Psychology (Recommended) | |
| Credits | | 16 |
| Spring | | |
| NURS 157 | Maternal/Child Health Deviations | 8 |
| NURS 210 | Pharmacological Requisites of the Childbearing Family | 1 |
| Area IV: Social/Behavioral Sciences Course | | 3 |
| CEPY 1120G | Human Growth and Behavior (Recommended) | |
| Area I: Communications Course | | 4 |
| ENGL 1110G | Composition I (Recommended) | |
| Credits | | 16 |
| Second Year | | |
| Fall | | |
| NURS 211 | Pharmacological Requisites of Simple Health Deviations | 1 |
| NURS 246 | Health Deviations I | 7 |
| NURS 258 | Psychosocial Requisites: A Deficit Approach | 3 |
| Area II: Mathematics Course | | 3 |
| MATH 1130G or MATH 1220G | Survey of Mathematics (Recommended) or College Algebra | |
| Credits | | 14 |
| Spring | | |
| NURS 212 | Pharmacological Requisites of Complex Health Deviations | 1 |
| NURS 256 | Health Deviations II | 8 |
| NURS 260 | Management of Patients with Health Deviations | 2 |
| Credits | | 11 |
| Total Credits | | 71 |

- ¹ Successful completion of CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors) satisfies General Education Area III: Science requirement (4 credits).
- ² Note: CHEM 1120G Introduction to Chemistry Lecture and Laboratory (non majors) , BIOL 2210 Human Anatomy and Physiology I for the Health Sciences, and NA 101 Nursing Assistant Theory and Lab must be completed prior to entering the nursing program.
- ³ Note: MATH 1220G College Algebra or MATH 1130G Survey of Mathematics is recommended for the degree but students may need to take any prerequisites needed to enter MATH 1220G College Algebra or MATH 1130G Survey of Mathematics first.

Paralegal Studies

The Paralegal Studies Certificate program is designed to provide the student with an overall knowledge of legal issues and a variety of skills that go beyond what is necessary for a legal secretary. Those skills encompass the ability to interview clients and witnesses, to conduct research, and to aid attorneys and other professionals in the preparation of legal documents and to assist attorneys in preparation for trial.

The course of study provides opportunities for the student to gain advanced knowledge of law, including torts, criminal law, family law, business law, and estate planning as well as other areas of law applicable to the modern practice. The student will receive training in skills needed to work in various setting that utilize paralegals such as government agencies, private non-profit agencies, corporate legal departments, private law offices, and title, abstract, and real estate offices.

Students who want to earn an Applied Associate Degree in Paralegal Studies will be able to apply the Paralegal Studies Certificate program courses to that degree. The Paralegal Certificate program can be completed in one year and requires completion of 30-31 credits. The Applied Associate Degree in Paralegal Studies program can be completed in two years and requires completion of 60-61 credits.

PL S 160. Legal System for the Paralegal**3 Credits (3)**

Introduction to the court system, administrative agencies, functions of law offices, and professional conduct and legal ethics. Restricted to: Community Colleges only.

Prerequisite(s): ACT standard score in English of 16 or higher or a Compass score 76 or higher; for those scoring 13-15 in English on ACT or 35-75 on Compass, successful complete of CCDE 105N or CCDE 110N; for those scoring 12 or below on the ACT standard score in English or 34 or below on the Compass, successful completion of CCDE 105N & CCDE 110N.

PL S 161. Legal Terminology**3 Credits (3)**

Survey of the language of the law that will serve either as an introductory course or as a review course to prepare students for the certification test.

PL S 162. The Virtual Law Office**3 Credits (3)**

The Virtual Law Office class is a 'hands-on', project oriented course designated to provide the student with the basic law office skills needed to function successfully in a law office setting. The student will gain a practical, working knowledge of the procedures necessary to work in a law office. The skills learned in the class will directly translate to real life situations. Restricted to: Community Colleges only.

Prerequisite(s): PL S 160.

PL S 180. Constitutional Law for the Paralegal**3 Credits (3)**

Case standing of the law of the Constitution and Bill of Rights with regard to day-to-day applications in the law practice. Documents dealing with constitutional problems in both civil and criminal areas of law will be drafted and discussed.

Prerequisite: PL S 160.

PL S 190. Criminal Law for the Paralegal**3 Credits (3)**

Introduction to federal and state criminal law; criminal proceedings, prosecution and defense, sentencing and appeal.

Prerequisite: PL S 160.

PL S 200. Legal Ethics for the Paralegal**3 Credits (3)**

Introduction to ethical dilemmas faced in the workforce and the rules of ethics developed by the American Bar Association, various national paralegal organizations, and the Supreme Court of New Mexico. Restricted to: Community Colleges only.

Prerequisite(s): PL S 160.

PL S 203. Immigration Law**3 Credits (3)**

Survey of the basics of immigration law including the rights and obligations of citizenship and the naturalization process.

Prerequisite: PL S 160.

PL S 221. Internship I**2-4 Credits**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships can be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. Restricted to Community Colleges campuses only.

Prerequisite(s): PL S 274.

PL S 222. Internship II**1-3 Credits**

Continuation of PL S 221. Each credit requires specified number of hours of on-the-job work experience. Restricted to Community Colleges campuses only.

Prerequisite(s): PL S 221.

PL S 231. The Law of Commerce for the Paralegal**3 Credits (3)**

Law of contracts, negotiable instruments, bank transfers, secured transactions, debtor-creditor relations, agency, and business types and their formation. Students will study the relevant statutes as well as draft documents associated with these types of legal practice. Restricted to: Community Colleges only.

Prerequisite(s): PL S 160.

PL S 272. Bankruptcy Law for the Paralegal**3 Credits (3)**

Individual and corporate bankruptcy; the basic principles and processes of bankruptcy law as a system of debtor relief and debt collection.

Prerequisite: PL S 160.

PL S 274. Legal Research and Writing for the Paralegal I**3 Credits (3)**

Legal memoranda, briefs, and pleadings will be prepared and written based on the student's original research. Research materials and techniques will be identified and studied; introduction of computer usage in legal research.

Prerequisite: PL S 160 and ENGL 1110G.

PL S 275. Tort and Insurance for the Paralegal**3 Credits (3)**

Primary legal principles of tort and insurance law and means of establishing insurance plans, types of torts and insurance, as well as use of specific forms and procedures relating to these areas.

Prerequisite: PL S 160.

PL S 276. Wills, Trusts, and Probate for the Paralegal**3 Credits (3)**

Cases and statutes dealing with wills, trusts, and probate. Emphasis on preparation and drafting of documents and the application of the law and documents to the client's problems.

Prerequisite: PL S 160.

PL S 277. Family Law for the Paralegal**3 Credits (3)**

Methods of conducting client interviews and drafting of pleadings and research relative to families. Laws relating to marriage, divorce, custody, support, adoption, name change, guardianship, and paternity.

Prerequisite: PL S 160.

PL S 278. Litigation for the Paralegal**3 Credits (3)**

The law of procedure and evidence will be considered through rules and cases. Case situations will be used to identify and solve problems.

Prerequisite: PL S 160.

PL S 279. Legal Research and Writing for the Paralegal II**3 Credits (3)**

Continuation of PL S 274. Advanced training in legal research problems with a focus on analysis, writing, and preparation of sophisticated legal memoranda and documents.

Prerequisite: PL S 274.

PL S 280. Interviewing and Investigation for the Paralegal**3 Credits (3)**

Techniques of legal interviewing and investigation with emphasis on development of human relations and communication skills.

Prerequisite: PL S 160.

PL S 298. Independent Study**1-3 Credits (1-3)**

Individual studies directed by consenting faculty with prior approval by department head. Restricted to Community Colleges campuses only.

Prerequisite(s): PL S 160.

Paralegal Studies - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|-----------------------------|---------|
| General Education | | |
| <i>This degree requires courses from Areas I, IV, V, and VI students must select one course from the remaining areas to complete General Education requirements</i> | | 13 |
| Area I: Communications | | |
| ENGL 1110G | Composition I (C or better) | |
| Area IV: Social/Behavioral Sciences | | |
| Choose one from the following for three credits: | | |
| CEPY 1120G | Human Growth and Behavior | |
| PSYC 1110G | Introduction to Psychology | |
| SOCI 1110G | Introduction to Sociology | |
| Area V: Humanities | | |
| Choose any "G" course from the PHIL, HIST, or ENGL prefix ¹ | | |
| Area VI: Creative and Fine Arts | | |

Choose any "G" course from the ARTH, ARTS, MUSC or THEA prefix ¹

| | | |
|--|--|-----------|
| <i>General Education Elective</i> | | |
| COMM 1115G | Introduction to Communication | 3 |
| or COMM 1130G | Public Speaking | |
| Related Requirements | | |
| BLAW 2110 | Business Law I | 3 |
| OATS 105 | Business English | 3 |
| or OATS 106 | Business Mathematics | |
| Choose one from the following: | | 3 |
| OATS 213 | Word Processing I | |
| OATS 214 | Word Processing II | |
| BCIS 1110 | Introduction to Information Systems | |
| Major Requirements ² | | |
| PL S 160 | Legal System for the Paralegal | 3 |
| PL S 180 | Constitutional Law for the Paralegal | 3 |
| PL S 190 | Criminal Law for the Paralegal | 3 |
| PL S 200 | Legal Ethics for the Paralegal | 3 |
| PL S 231 | The Law of Commerce for the Paralegal | 3 |
| PL S 274 | Legal Research and Writing for the Paralegal I | 3 |
| PL S 275 | Tort and Insurance for the Paralegal | 3 |
| PL S 277 | Family Law for the Paralegal | 3 |
| PL S 278 | Litigation for the Paralegal | 3 |
| PL S 279 | Legal Research and Writing for the Paralegal II | 3 |
| PL S 280 | Interviewing and Investigation for the Paralegal | 3 |
| Electives | | |
| Choose onf from the following: | | 3 |
| CJUS 1110G | Introduction to Criminal Justice | |
| POLS 1120G | American National Government | |
| Any three credit PL S course not listed as a major requirement above | | |
| Total Credits | | 61 |

- ¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ² Cumulative GPA of 2.5 and a "C" or better required in these courses; PL S courses taken more than 7 years prior to graduation must be repeated.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and/or course prerequisites. Visit with an advisor for help with creating a customized plan.

| | | |
|--------------------------------|--------------------------------------|----------------|
| First Year | | |
| Fall | | Credits |
| OATS 105 | Business English | 3 |
| or OATS 106 | or Business Mathematics | |
| Choose one from the following: | | 3 |
| CEPY 1120G | Human Growth and Behavior | |
| PSYC 1110G | Introduction to Psychology | |
| SOCI 1110G | Introduction to Sociology | |
| BLAW 2110 | Business Law I | 3 |
| PL S 160 | Legal System for the Paralegal | 3 |
| PL S 180 | Constitutional Law for the Paralegal | 3 |
| Credits | | 15 |
| Spring | | |
| ENGL 1110G | Composition I | 4 |
| COMM 1115G | Introduction to Communication | 3 |
| or COMM 1130G | or Public Speaking | |
| Choose one from the following: | | 3 |

| | | |
|--|--|-----------|
| OATS 213 | Word Processing I | |
| OATS 214 | Word Processing II | |
| BCIS 1110 | Introduction to Information Systems | |
| PL S 200 | Legal Ethics for the Paralegal | 3 |
| PL S 274 | Legal Research and Writing for the Paralegal I | 3 |
| Credits | | 16 |
| Second Year | | |
| Fall | | |
| Area V: Humanities Course ¹ | | 3 |
| PL S 190 | Criminal Law for the Paralegal | 3 |
| PL S 231 | The Law of Commerce for the Paralegal | 3 |
| PL S 275 | Tort and Insurance for the Paralegal | 3 |
| PL S 277 | Family Law for the Paralegal | 3 |
| Credits | | 15 |
| Spring | | |
| Area VI: Creative and Fine Arts Course ¹ | | 3 |
| PL S 278 | Litigation for the Paralegal | 3 |
| PL S 279 | Legal Research and Writing for the Paralegal II | 3 |
| PL S 280 | Interviewing and Investigation for the Paralegal | 3 |
| Choose one Elective Course from the following: | | 3 |
| CJUS 1110G | Introduction to Criminal Justice | |
| POLS 1120G | American National Government | |
| Any PL S course not already taken as a major requirement | | |
| Credits | | 15 |
| Total Credits | | 61 |

¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Paralegal Studies - Certificate of Completion

| Prefix | Title | Credits |
|--|--|-----------|
| <i>Related Requirements</i> | | |
| ENGL 1110G | Composition I | 4 |
| COMM 1115G | Introduction to Communication | 3 |
| or COMM 1130G | Public Speaking | |
| Choose one from the following: | | 3 |
| CEPY 1120G | Human Growth and Behavior | |
| PSYC 1110G | Introduction to Psychology | |
| SOCI 1110G | Introduction to Sociology | |
| BLAW 2110 | Business Law I | 3 |
| OATS 105 | Business English | 3 |
| or OATS 106 | Business Mathematics | |
| OATS 213 | Word Processing I | 3 |
| or OATS 214 | Word Processing II | |
| or BCIS 1110 | Introduction to Information Systems | |
| <i>Major Requirements ²</i> | | |
| PL S 160 | Legal System for the Paralegal | 3 |
| PL S 180 | Constitutional Law for the Paralegal | 3 |
| or PL S 190 | Criminal Law for the Paralegal | |
| PL S 200 | Legal Ethics for the Paralegal | 3 |
| PL S 274 | Legal Research and Writing for the Paralegal I | 3 |
| Total Credits | | 31 |

- ¹ ENGL 1110G Composition I with a "C" or better.
- ² Cumulative GPA of 2.5 and a "C" or better required in these courses; PL S courses taken more than 7 years prior to graduation must be repeated.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|--|-----------|
| OATS 105 or OATS 106 | Business English or Business Mathematics | 3 |
| CEPY 1120G or PSYC 1110G or SOCI 1110G | Human Growth and Behavior or Introduction to Psychology or Introduction to Sociology | 3 |
| BLAW 2110 | Business Law I | 3 |
| PL S 160 | Legal System for the Paralegal | 3 |
| PL S 180 or PL S 190 | Constitutional Law for the Paralegal or Criminal Law for the Paralegal | 3 |
| Credits | | 15 |

Second Year

| Spring | | |
|---|--|-----------|
| ENGL 1110G | Composition I | 4 |
| COMM 1115G or COMM 1130G | Introduction to Communication or Public Speaking | 3 |
| OATS 213 or OATS 214 or BCIS 1110 | Word Processing I or Word Processing II or Introduction to Information Systems | 3 |
| PL S 200 | Legal Ethics for the Paralegal | 3 |
| PL S 274 | Legal Research and Writing for the Paralegal I | 3 |
| Credits | | 16 |
| Total Credits | | 31 |

Phlebotomist Technician - Certificate of Achievement

This course prepares students in one semester to be workforce ready and serve the community as a well-trained and well-educated phlebotomist technician. It provides students the opportunity to go directly into the workforce or apply their hands-on experience from this course to pursuing additional education within the health and medical field.

| Prefix | Title | Credits |
|--------|-------------------------|---------|
| NA 115 | Phlebotomist Technician | 6 |

Prerequisite/Corequisite: OEEM 101 CPR for the Health Care Professional

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|----------------------|-------------------------|----------|
| NA 115 | Phlebotomist Technician | 6 |
| Credits | | 6 |
| Total Credits | | 6 |

Pre-Business

The **Associate Degree in Pre-Business** requires the completion of those courses which are needed before a major field may be declared in the College of Business Administration and Economics at NMSU Las Cruces. It is a generalized two-year curriculum that provides students with the necessary general education and lower division courses that constitute a solid base for a bachelor's degree in one of the many areas of business

concentration including accounting, finance, management, marketing, real estate, and economics. The program also provides management skills for employment in entry level positions.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements.

Pre-Business - Associate in Pre-Business (p. 282)

Prebusiness - Associate in Prebusiness

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|--|---------|
| General Education | | |
| <i>Area I: Communications</i> | | |
| <i>English Composition - Level 1</i> | | |
| Choose one from the following: | | 4 |
| ENGL 1110G | Composition I | |
| ENGL 1110H | Composition I | |
| ENGL 1110M | Composition I | |
| <i>English Composition - Level 2</i> | | |
| ENGL 2210G | Professional & Technical Communication | 3 |
| <i>Oral Communication</i> | | |
| Choose one from the following: | | 3 |
| AXED 2120G | Effective Leadership and Communication in Agriculture | |
| COMM 1115G | Introduction to Communication | |
| COMM 1130G | Public Speaking | |
| HNRS 2175G | Introduction to Communication Honors | |
| <i>Area II: Mathematics</i> | | |
| MATH 1220G | College Algebra (Foundation Requirement) ^{1, 2} | 3 |
| <i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i> | | |
| Area III: Laboratory Science Course (4 credits) ³ | | 10 |
| Grades of C- or better are required in ECON 2110G and ECON 2120G | | |
| ECON 2110G | Macroeconomic Principles | |
| ECON 2120G | Principles of Microeconomics | |
| <i>Area V: Humanities</i> ³ | | |
| Area VI: Creative and Fine Arts ³ | | 3 |
| <i>General Education Elective</i> | | |
| MATH 1430G | Applications of Calculus I (Foundation Requirement) | 3 |
| Core Requirements | | |
| <i>Foundation Requirements</i> ² | | |
| MATH 1350G | Introduction to Statistics ((grade of C- or better)) | 3 |
| <i>College of Business Lower Division Requirements</i> | | |
| ACCT 2110 | Principles of Accounting I | 3 |
| ACCT 2120 | Principles of Accounting II | 3 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| BUSA 1110 | Intro to Business | 3 |
| Electives, to bring the total credits to 60 ⁴ | | 13 |
| Total Credits | | 60 |

¹ Students may be required to take MATH 1215 Intermediate Algebra, depending on their math placement. MATH 1220G College Algebra or MATH 1430G Applications of Calculus I or MATH 1350G Introduction to Statistics fulfills the general education requirement in Math.

- ² All Foundation Requirement Courses must be taken, or satisfied with transfer credits, regardless of which Mathematics or Statistics courses satisfies the Area II General Education course: MATH 1220G College Algebra, MATH 1430G Applications of Calculus I and MATH 1350G Introduction to Statistics or A ST 311 Statistical Applications must be completed. If MATH 1350G Introduction to Statistics is taken before MATH 1220G College Algebra, then the Statistics course will satisfy the Area II Requirement and MATH 1220G College Algebra must be taken as a Foundation Requirement.
- ³ See the General Education section (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) of the catalog for a full list of courses.
- ⁴ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | Credits |
|---|---|-----------|
| Fall | | |
| Choose one from the following: | | 4 |
| ENGL 1110G | Composition I | |
| ENGL 1110H | Composition I | |
| ENGL 1110M | Composition I | |
| MATH 1220G | College Algebra ¹ | 3 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| Area VI: Creative and Fine Art ² | | 3 |
| Choose one from the following: | | 3 |
| AXED 2120G | Effective Leadership and Communication in Agriculture | |
| COMM 1115G | Introduction to Communication | |
| COMM 1130G | Public Speaking | |
| HNRS 2175G | Introduction to Communication Honors | |
| Credits | | 16 |
| Spring | | |
| ENGL 2210G | Professional & Technical Communication | 3 |
| ECON 2110G | Macroeconomic Principles | 3 |
| BUSA 1110 | Intro to Business | 3 |
| Area V: Humanities ² | | 3 |
| Elective Course ³ | | 4 |
| Credits | | 16 |

Second Year

| | | |
|---|------------------------------|-----------|
| Fall | | |
| ACCT 2110 | Principles of Accounting I | 3 |
| MATH 1430G | Applications of Calculus I | 3 |
| Elective Course ³ | | 3 |
| Area III: Laboratory Science ² | | 4 |
| Credits | | 13 |
| Spring | | |
| ACCT 2120 | Principles of Accounting II | 3 |
| ECON 2120G | Principles of Microeconomics | 3 |
| MATH 1350G | Introduction to Statistics | 3 |
| Elective Courses ³ | | 6 |
| Credits | | 15 |
| Total Credits | | 60 |

- ¹ Students may be required to take MATH 1215 Intermediate Algebra, depending on their math placement. MATH 1220G College Algebra or MATH 1430G Applications of Calculus I or MATH 1350G Introduction to Statistics fulfills the general education requirement in Math.
- ² See the General Education section (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) of the catalog for a full list of courses.

- ³ Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Science

The **Associate of Science degree** offers the choice of three different **optional** concentrations, which allow for an easier transition into a baccalaureate science major depending on the student's choice of major. This degree differs from the Associate of Arts degree in that there is a heavy emphasis in science and mathematics, a requirement for any Bachelor of Science degree. In order to earn an Associate of Science degree, the student must earn at least 16 credits in laboratory sciences. This degree meets all the New Mexico Common Core requirements necessary to complete a bachelor degree.

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. A grade of C- or better is required for all courses for the degree.

TOTAL CREDIT REQUIRED FOR DEGREE: 60

IT IS STRONGLY RECOMMENDED TO CHOOSE A CONCENTRATION listed below.

Additional approved lab science classes can be found in Area III of the NM Common Core list, in the NMSU-C catalog. Any lab science class not listed below from the NM Common Core list must be approved through a sub/waiver request process in consultation with an advisor.

Associate of Science Degree (p. 285)

Options

(Options are optional)

Biology Option

BIOL 2610G Principles of Biology: Biodiversity, Ecology, and Evolution & BIOL 2610L Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory (4 cr.)

BIOL 2110G Principles of Biology: Cellular and Molecular Biology & BIOL 2110L Principles of Biology: Cellular and Molecular Biology Laboratory (4 cr.)

CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors (4 cr.)

CHEM 1225G General Chemistry II Lecture and Laboratory for STEM Majors (4 cr.)

Natural Resources Option

ENVS 1110G Environmental Science I (4 cr.)

BIOL 2610G Principles of Biology: Biodiversity, Ecology, and Evolution & BIOL 2610L Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory (4 cr.)

CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors (4 cr.)

CHEM 1225G General Chemistry II Lecture and Laboratory for STEM Majors (4 cr.)

Physical Sciences Option

CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors (4 cr.)

CHEM 1225G General Chemistry II Lecture and Laboratory for STEM Majors (4 cr.)

PHYS 1230G Algebra-Based Physics I & PHYS 1230L Algebra-Based Physics I Lab (4 cr.)

PHYS 1240G Algebra-Based Physics II & PHYS 1240L Algebra-Based Physics II Lab (4 cr.)

Recommended electives for each Option:

Biology Option

PHYS 1230G Algebra-Based Physics I & PHYS 1230L Algebra-Based Physics I Lab (4 cr.)

PHYS 1240G Algebra-Based Physics II & PHYS 1240L Algebra-Based Physics II Lab (4 cr.)

MATH 1511G Calculus and Analytic Geometry I (4 cr.)

MATH 1511G Calculus and Analytic Geometry I (4 cr.)

MATH 1521G Calculus and Analytic Geometry II (4 cr.)

Natural Resources Option

BIOL 2110G Principles of Biology: Cellular and Molecular Biology & BIOL 2110L Principles of Biology: Cellular and Molecular Biology Laboratory (4 cr.)

CHEM 2115 Survey of Organic Chemistry and Laboratory (4 cr.)

GEOL 1110G Physical Geology (4 cr.)

MATH 1511G Calculus and Analytic Geometry I (4 cr.)

MATH 1521G Calculus and Analytic Geometry II (4 cr.)

FWCE 1110G Introduction to Natural Resources Management (3 cr.)

FWCE 2110 Principles of Fish and Wildlife Management (3 cr.)

PHYS 1310G Calculus -Based Physics I & PHYS 1310L Calculus -Based Physics I Lab (4 cr.)

Physical Sciences Option

MATH 1250G Trigonometry & Pre-Calculus (4 cr.)

MATH 1511G Calculus and Analytic Geometry I (4 cr.)

MATH 1521G Calculus and Analytic Geometry II (4 cr.)

BIOL 2610G Principles of Biology: Biodiversity, Ecology, and Evolution & BIOL 2610L Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory (4 cr.)

BIOL 2110G Principles of Biology: Cellular and Molecular Biology & BIOL 2110L Principles of Biology: Cellular and Molecular Biology Laboratory (4 cr.)

GEOL 1110G Physical Geology (4 cr.)

Associate of Science Degree

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 61 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|---|---------|
| General Education | | |
| <i>Area I: Communication</i> | | |
| <i>English Composition - Level 1</i> | | |
| ENGL 1110G | Composition I | 4 |
| <i>English Composition - Level 2</i> | | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| <i>Oral Communication</i> | | |
| COMM 1130G | Public Speaking | 3 |
| or COMM 1115G | Introduction to Communication | |
| <i>Area II: Mathematics</i> | | |
| Choose one from the following: | | 3-4 |
| MATH 1220G | College Algebra ¹ | |
| MATH 1250G | Trigonometry & Pre-Calculus ¹ | |
| MATH 1511G | Calculus and Analytic Geometry I ¹ | |
| <i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i> | | 11 |
| Two Area III: Laboratory Sciences courses | | |
| Area IV: Social/Behavioral Science Course (3 credits) ² | | |

| | |
|---|--------------|
| Area V: Humanities ² | 3 |
| Area VI: Creative and Fine Arts ² | 3 |
| General Education Elective ² | 3-4 |
| Core Requirements | |
| Laboratory Science Courses ³ | 16 |
| CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors | |
| Electives, to bring the total credits to 61⁴ | 12 |
| Total Credits | 61-63 |

- Students who place above MATH 1220G College Algebra must take an additional 3 credits of higher-level MATH or science electives. Students may also need to complete any prerequisites before entering the course of their choice.
- See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- 8 credits must be "G" courses and students must have 24 credits total of Area III: Laboratory Science Courses. (See below for Recommended Courses based on subject area).
- Students should complete these electives with additional courses in either Mathematics (Area II), Laboratory Sciences (Area III) or Engineering Electives to bring total to 60 credits. Mathematics and Science courses can be courses from General Education, in addition to the courses already required to fulfill the General Education requirements. (See below for Recommended Courses based on subject area).

Laboratory Science Course Recommendations

It is strongly recommended to choose an option to focus your studies. Please note that some classes are only offered in a particular semester and may have prerequisites.

Option: Biology

Laboratory Science Courses

| Prefix | Title | Credits |
|----------------------------|---|---------|
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | 4 |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | 4 |
| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | 4 |
| CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors | 4 |

Mathematics, Engineering and additional Laboratory Science Courses

| Prefix | Title | Credits |
|----------------------------|--|---------|
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | 4 |
| PHYS 1240G & PHYS 1240L | Algebra-Based Physics II and Algebra-Based Physics II Lab | 4 |
| MATH 1511G | Calculus and Analytic Geometry I | 4 |
| MATH 1521G | Calculus and Analytic Geometry II | 4 |

Option: Natural Resources

Laboratory Science Courses

| Prefix | Title | Credits |
|----------------------------|---|---------|
| ENVS 1110G | Environmental Science I | 4 |
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | 4 |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | 4 |
| CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors | 4 |

Mathematics, Engineering and additional Laboratory Science Courses

| Prefix | Title | Credits |
|----------------------------|---|---------|
| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | 4 |
| CHEM 2115 | Survey of Organic Chemistry and Laboratory | 4 |
| GEOL 1110G | Physical Geology | 4 |

| | | |
|----------------------------|--|---|
| MATH 1511G | Calculus and Analytic Geometry I | 4 |
| MATH 1521G | Calculus and Analytic Geometry II | 4 |
| PHYS 1310G & PHYS 1310L | Calculus -Based Physics I and Calculus -Based Physics I Lab | 4 |

Option: Physical Science

Laboratory Science Courses

| Prefix | Title | Credits |
|----------------------------|--|---------|
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | 4 |
| CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors | 4 |
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | 4 |
| PHYS 1240G & PHYS 1240L | Algebra-Based Physics II and Algebra-Based Physics II Lab | 4 |

Mathematics, Engineering and additional Laboratory Science Courses

| Prefix | Title | Credits |
|----------------------------|---|---------|
| MATH 1250G | Trigonometry & Pre-Calculus | 4 |
| MATH 1511G | Calculus and Analytic Geometry I | 4 |
| MATH 1521G | Calculus and Analytic Geometry II | 4 |
| BIOL 2610G & BIOL 2610L | Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory | 4 |
| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | 4 |
| GEOL 1110G | Physical Geology | 4 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|--|---|--------------|
| ENGL 1110G | Composition I | 4 |
| Area III: Laboratory Science Course ¹ | | 4 |
| Area III: Laboratory Science Course ² | | 4 |
| Elective | | 4 |
| Credits | | 16 |
| Spring | | |
| COMM 1115G or COMM 1130G | Introduction to Communication or Public Speaking | 3 |
| MATH 1220G or MATH 1250G or MATH 1511G | College Algebra ³ or Trigonometry & Pre-Calculus or Calculus and Analytic Geometry I | 3-4 |
| Area III: Laboratory Science Course ¹ | | 4 |
| Area IV: Social/Behavioral Science Course ¹ | | 3 |
| Area III: Laboratory Science Course ² | | 4 |
| Credits | | 17-18 |

Second Year

| Fall | | |
|---|---|-----------|
| ENGL 2210G or ENGL 2221G | Professional & Technical Communication or Writing in the Humanities and Social Science | 3 |
| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | 4 |
| Area V: Humanities Course ¹ | | 3 |
| Elective Course ⁴ | | 4 |
| Credits | | 14 |
| Spring | | |
| Area III: Laboratory Science Course ² | | 4 |
| Area VI: Creative and Fine Arts Course ¹ | | 3 |

| | |
|-------------------------------------|--------------|
| Elective Course ⁴ | 4 |
| Gen Ed Elective Course ⁴ | 3-4 |
| Credits | 14-15 |
| Total Credits | 61-63 |

¹ See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

² 8 credits must be "G" courses and students must have 24 credits total of Area III: Laboratory Science Courses. (See below for Recommended Courses based on subject area).

Biology Option

- BIOL 2610G Principles of Biology: Biodiversity, Ecology, and Evolution/BIOL 2610L Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory
- BIOL 2110G Principles of Biology: Cellular and Molecular Biology/BIOL 2110L Principles of Biology: Cellular and Molecular Biology Laboratory
- CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors
- CHEM 1225G General Chemistry II Lecture and Laboratory for STEM Majors

Natural Resources Option

- ENVS 1110G Environmental Science I
- BIOL 2610G Principles of Biology: Biodiversity, Ecology, and Evolution/BIOL 2610L Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory
- CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors
- CHEM 1225G General Chemistry II Lecture and Laboratory for STEM Majors

Physical Science Option

- CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors
- CHEM 1225G General Chemistry II Lecture and Laboratory for STEM Majors
- PHYS 1230G Algebra-Based Physics I/PHYS 1230L Algebra-Based Physics I Lab
- PHYS 1240G Algebra-Based Physics II/PHYS 1240L Algebra-Based Physics II Lab

³ Students who place above MATH 121G College Algebra must take an additional 3 credits of higher-level MATH or science electives. Students may also need to complete any prerequisites before entering the course of their choice.

⁴ **Mathematics, Engineering and Additional Laboratory Science Electives:**

Biology Option

- PHYS 1230G Algebra-Based Physics I/PHYS 1230L Algebra-Based Physics I Lab
- PHYS 1240G Algebra-Based Physics II/PHYS 1240L Algebra-Based Physics II Lab
- MATH 1511G Calculus and Analytic Geometry I
- MATH 1521G Calculus and Analytic Geometry II

Natural Resources Option

- BIOL 2110G Principles of Biology: Cellular and Molecular Biology/BIOL 2110L Principles of Biology: Cellular and Molecular Biology Laboratory
- CHEM 2115 Survey of Organic Chemistry and Laboratory
- GEOL 1110G Physical Geology
- MATH 1511G Calculus and Analytic Geometry I
- MATH 1521G Calculus and Analytic Geometry II
- PHYS 1310G Calculus -Based Physics I/PHYS 1310L Calculus -Based Physics I Lab

Physical Science Option

- MATH 1250G Trigonometry & Pre-Calculus
- MATH 1511G Calculus and Analytic Geometry I
- MATH 1521G Calculus and Analytic Geometry II
- BIOL 2610G Principles of Biology: Biodiversity, Ecology, and Evolution/BIOL 2610L Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory
- BIOL 2110G Principles of Biology: Cellular and Molecular Biology/BIOL 2110L Principles of Biology: Cellular and Molecular Biology Laboratory
- GEOL 1110G Physical Geology

Social Work

The **Associate Degree in Social Services** is designed to prepare students for careers in social service or community health agencies as paraprofessionals. In addition, because of the large New Mexico Common Core component, the degree also helps prepare the student for a successful transition into a bachelor's program in Social Work or other majors.

The bachelor degree requirement for a second language requires a grade of C or better grades through the **1120** level in any foreign language. If the student is a native speaker, the requirement is met with 113, 213 and 214 sequence in the language. If the student has taken one or two years of a second language in high school, they should take the language placement test to determine the level of course in which they should begin. See an advisor. Students interested in the Las Cruces campus Bachelor Degree of Social Work program may also be interested in the Associate in Social Work.

Students planning to pursue a Bachelor's Degree of Social Work must apply for that Social Work Program. **Students (particularly transfer students) should contact the Social Work Advisor in Las Cruces for advising and for the application packets.**

Graduation Requirements

ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU. Students must earn a grade of C or better in all General Education/NM Common Core and Social Work courses. **TOTAL CREDITS REQUIRED FOR DEGREE: 60**

Social Work - Associate Degree (p. 289)

Social Work - Associate of Social Work

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 60 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|---|--|---------|
| General Education | | |
| <i>Area I: Communication</i> | | |
| <i>English Composition - Level 1</i> | | |
| ENGL 1110G | Composition I | 4 |
| <i>English Composition - Level 2</i> | | |
| Choose one from the following: | | 3 |
| ENGL 2210G | Professional & Technical Communication | |
| ENGL 2221G | Writing in the Humanities and Social Science | |
| <i>Oral Communication</i> | | |
| COMM 1130G | Public Speaking | 3 |
| or COMM 1115G | Introduction to Communication | |
| <i>Area II: Mathematics</i> | | |
| MATH 1350G | Introduction to Statistics (Major Requirement) ¹ | 3 |
| <i>Area III/IV: Laboratory Science and Social/Behavioral Sciences</i> | | 10 |
| PSYC 1110G | Introduction to Psychology (Major Requirement) | |
| SOWK 2110G | Introduction to Human Services & Social Work (Major Requirement) | |
| BIOL 1120G & BIOL 1120L | Human Biology and Human Biology Laboratory | |
| <i>Area V: Humanities</i> | | |
| PHIL 1115G | Introduction to Philosophy (Recommended) | 3 |
| <i>Area VI: Creative and Fine Arts</i> | | |
| Choose one from the following: | | 3 |
| ARTH 1115G | Orientation in Art (Recommended) | |
| MUSC 1130G | Music Appreciation: Western Music (Recommended) | |
| THEA 1110G | Introduction to Theatre (Recommended) | |
| <i>General Education Elective ²</i> | | 3-4 |
| Core Requirements | | |
| <i>Second Language (8 credits)</i> | | |
| SPAN 1110 | Spanish I | 4 |
| SPAN 1120 | Spanish II | 4 |
| Or two semesters of a second language | | |
| Major Requirements (10 credits) | | |
| BCIS 1110 | Introduction to Information Systems | 3 |
| PSYC 2221 | Applied Psychology | 3 |
| or PSYC 2230 | Psychology of Adjustment | |
| HMSV 2110 | Case Management | 3 |
| FYEX 1110 | First-year Seminar | 1 |
| Electives, to bring the total credits to 60 ³ | | 10 |
| <i>Recommended</i> | | |
| CEPY 1120G | Human Growth and Behavior | |
| MATH 1220G | College Algebra | |

| | | |
|----------------------|---|--------------|
| SOCI 1110G | Introduction to Sociology | |
| Total Credits | | 60-61 |
| 1 | MATH 1350G Introduction to Statistics is recommended for the degree but students may need to take any prerequisites needed to enter MATH 1350G first. | |
| 2 | See the General Education (http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/) section of the catalog for a full list of courses. | |
| 3 | Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor. | |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|------------------------------|--|-----------|
| FYEX 1110 | First-year Seminar | 1 |
| BCIS 1110 | Introduction to Information Systems | 3 |
| SOWK 2110G | Introduction to Human Services & Social Work | 3 |
| ENGL 1110G | Composition I | 4 |
| Elective Course ² | | 3 |
| Credits | | 14 |

| Spring | | Credits |
|-----------------------------|---|-----------|
| BIOL 1120G & BIOL 1120L | Human Biology and Human Biology Laboratory | 4 |
| ENGL 2210G or ENGL 2221G | Professional & Technical Communication or Writing in the Humanities and Social Science | 3 |
| MATH 1350G | Introduction to Statistics ⁴ | 3 |
| PSYC 1110G | Introduction to Psychology ¹ | 3 |
| Credits | | 13 |

Second Year

| Fall | | Credits |
|---------------------------------|---|-----------|
| SPAN 1110 or GRMN 1110 | Spanish I ¹ or German I | 4 |
| PHIL 1115G | Introduction to Philosophy | 3 |
| COMM 1130G or COMM 1115G | Public Speaking or Introduction to Communication | 3 |
| Elective Course ² | | 3 |
| Area VI: Creative and Fine Arts | | 3 |
| Choose one from the following: | | |
| ARTH 1115G | Orientation in Art | |
| MUSC 1130G | Music Appreciation: Western Music ((Recommended)) | |
| THEA 1110G | Introduction to Theatre | |
| Credits | | 16 |

| Spring | | Credits |
|--|---|--------------|
| SPAN 1120 or GRMN 1120 | Spanish II or German II | 4 |
| PSYC 2221 or PSYC 2230 | Applied Psychology or Psychology of Adjustment | 3 |
| HMSV 2110 | Case Management | 3 |
| Elective Course ² | | 4 |
| General Education Elective Course ³ | | 3-4 |
| Credits | | 17-18 |

Total Credits **60-61**

¹ Students can take either SPAN 1110 Spanish I and SPAN 1120 Spanish II or two semesters of another Second Language prefix (GER, FREN, etc.)

- 2 Elective credit may vary based on prerequisites, dual credit, AP credit, and/or certificate coursework. The amount indicated in the requirements list is the amount needed to bring the total to 60 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor. MATH 1220G College Algebra, CEPY 1120G Human Growth and Behavior and SOCI 1110G Introduction to Sociology are recommended electives
- 3 See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- 4 MATH 1350G Introduction to Statistics is recommended for the degree but students may need to take any prerequisites needed to enter MATH 1350G first.

Surgical Technology

The Associate of Applied Science in Surgical Technology prepares students to demonstrate basic entry-level skills and concepts appropriate for performing the duties of a surgical technologist. Some of the technology skills and concepts include the aseptic technique, preparation for specific surgical procedures, participation in patient and instrumentation preparation for individual surgical cases, and collaboration with interdisciplinary team members for providing high quality patient outcomes. This program prepares the student for professional readiness for employment and attaining certification status.

Surgical Technologist will have numerous job opportunities upon graduation. Surgical Technologist may also be called operating room technicians and assist in surgical operations. They prepare operating rooms, arrange equipment, and assist doctors and nurses during surgeries. Typical work settings are hospitals, outpatient surgery centers, physician offices, and dentist offices.

PROGRAM OUTCOMES

At the completion of the **Surgical Technology of Applied Science Associate Degree** program, the student should be able to:

1. *Integrate the Surgical Technology knowledge base in affective, cognitive, and psychomotor domains; demonstrate skills following established criteria, protocols and objectives in the affective, cognitive, and psychomotor domains.*
2. *Demonstrate, discuss, and apply appropriate Surgical Technology procedures and protocols in various health care settings and situations; react appropriately and with professional demeanor while in various health care settings and situations.*
3. *Compare, contrast, discuss, demonstrate and apply knowledge of interpersonal skills and communications relative to procedures and protocols from the Surgical Technologist perspective when working with patients, patients' significant others, colleagues, other members of the health care team, and members of the community.*
4. *Operate all equipment effectively, efficiently, and safely while using appropriate protocols.*
5. *Function effectively, efficiently, and safely in the Surgical Technologist role.*
6. *Compare, contrast, discuss, demonstrate, and apply critical thinking skills, problem solving skills, ethical behavior and knowledge of Surgical Technologists capabilities, roles, responsibilities, ethical guidelines, scope of practice, and skills in a variety of settings and with a variety of procedures.*
7. *Compare, contrast, discuss, and demonstrate skills related to information literacy; access, gather, interpret, and analyze information, and accurately report it, especially as it pertains to Surgical Technology.*
8. *Compare, contrast, discuss, and integrate an understanding and valuing of their place in the health care system, as well as for other health care professionals.*

COURSE INFORMATION

The course number indicates whether the course is a freshman (100 level) or sophomore (200 level) course. The (3+3p) means that the class meets for 150 minutes per week for lectures and also requires 150 minutes per week of "laboratory" (practice, field work, or recitation). The suffix "G" indicates an approved general education course. The letter "N" will be added as a suffix to the course number when the course credits are not applicable to the baccalaureate and specified associate degrees.

ADMISSION TO THE ST PROGRAM

1. High school diploma or GED certificate.
2. Satisfactory scores on placement tests: Students who fail to make a satisfactory score on the placement tests will be required to enroll and pass the appropriate developmental class with a "C" or better. Placement test scores may not be utilized in lieu of a "D" or "F" in any developmental class.

3. **CRIMINAL BACKGROUND CHECKS:** Surgical Technology is a very selective medical field and criminal background checks are required for many positions per Department of Health for employment and certification. The Joint Commission also requires healthcare organizations to verify criminal background information on individuals who provide services, care, and treatment to patients/clients during practicum activities.
4. A "C" must be maintained in all ST curriculum courses to progress and/or graduate with AAS in Surgical Technology.

Students are admitted to the ST program in the Spring semester of each year. The deadline to apply for the program is 5:00 pm May 1. Students wishing to make application must complete all requirements set forth in the current application packet and submit to the Allied Health Director starting August 15th.

GRADUATION

The **Associate Degree of Applied Science in Surgical Technology** is conferred at the completion of the ST program. The total requirements of the program must be completed before a degree is conferred.

Surgical Technology - Associate of Applied Science (p. 293)

SURG 120. Surgical Technology Clinical I **2-4 Credits (6P)**

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. This course is designed to prepare the student to enter the surgical environment. This course provides an introduction to the operating room, observation of surgical procedures, direct participation in the preoperative (pre-op, intra-op, post-op) preparation of individual cases and professional roles and responsibilities of individual members of the surgical team. Direct supervision is provided by the clinical professional. May be repeated up to 4 credits. Students must be admitted into Surgical Technology Program to enroll in this course.

Prerequisite(s): BIOL 2310, BIOL 2210, BIOL 2225, NURS 150.

Corequisite(s): SURG 140, SURG 145.

SURG 140. Introduction to Surgical Technology **4 Credits (4)**

This is an orientation to surgical technology theory, surgical pharmacology and anesthesia, technology sciences and patient care concepts and is designed to prepare the student to enter the surgical environment with entry-level knowledge necessary to understand patient responses to disease, illness, hospitalization, surgical procedures, commonly used pharmacological and anesthetic agents, and legal, moral, and ethical issues that could be encountered in the surgical environment. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission to Surgical Technology Program; BIOL 2310, BIOL 2225, & NURS 150.

SURG 145. Fundamentals of Perioperative Concepts & Techniques **4-5 Credits (3+3P)**

This is an in-depth coverage of perioperative concepts such as aseptic/sterile principles and practice, infectious processes, wound healing and creation and maintenance of the sterile field. This course is designed to prepare the student to enter the surgical environment with entry-level knowledge of aseptic technique principles and practices, the creation and maintenance of the sterile field including equipment, supplies and instrumentation, and basic case preparation and procedures. An introduction to diseases and disease processes that may be displayed by the surgical patient and the patient's bodily responses to disease are also included. May be repeated up to 5 credits.

Prerequisite(s): Admission to Surgical Technology Program, BIOL 2310, BIOL 2210, BIOL 2225, & NURS 150.

SURG 150. Surgical Procedures I **4-5 Credits (3-5+3P)**

This course is an introduction to surgical procedures and its related pathologies. Emphasis on surgical procedures related to general, obstetrics/gynecology, genitourinary, otorhinolaryngology and orthopedic surgical specialties incorporating instruments, equipment. It is designed to prepare the student to function actively in the surgical environment with entry-level knowledge of surgical procedures. This course expands the basic foundation principles and combines the study of common surgical procedures to include anatomy, physiology and pathophysiology. Specific patient care concepts, medications, instrumentation, equipment, supplies and complication related to selected surgical procedures will be discussed. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 140, SURG 145, and SURG 120.

SURG 155. Pharmacology for the Surgical Technology **2 Credits (2)**

This is an orientation to surgical pharmacology and anesthesia and is designed to prepare the student to enter the surgical environment with knowledge necessary to categorize the classification of drugs, calculate drug dosages and identify the therapeutic use, routes of administration, indications, contraindications and adverse effects of pharmacologic agents used in the perioperative setting. This course is the foundation for the acquisition of program specific competencies as identified by the AST Core Curriculum. Restricted to Carlsbad campus only.

SURG 160. Surgical Procedures II**6 Credits (6)**

This is an introduction to surgical procedures and related pathologies. Emphasis on surgical procedures related to thoracic, peripheral vascular, plastic/reconstructive, ophthalmology, cardiac and neurological surgical specialties incorporating instruments. The course is designed to prepare the student to continue to function actively in the surgical environment with entry-level knowledge of more complex surgical procedures. This course expands the basic foundation principles and combines the study of complex surgical procedures to include anatomy, physiology, and pathophysiology. Specific patient care concepts, medications, instrumentation, equipment, supplies, and complications related to specific surgical procedures will be discussed. Realities of clinical practice and concepts of death and dying will also be discussed. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 150, SURG 260.

SURG 230. Professional Readiness**2 Credits (2)**

This course transitions the student into professional readiness for employment, professional readiness for attaining certification and professional readiness for maintaining certification status. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 140, SURG 145, SURG 120, SURG 150, SURG 260.

Corequisite(s): SURG 160, SURG 265.

SURG 260. Surgical Technology Clinical II**4 Credits (12P)**

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. This course is designed to provide the student the opportunity to function actively in the role as a surgical technologist and health care team member in a clinical setting under the direct supervision of faculty and health care staff. Applications of basic principles and practices combined with a supervised clinical experience participating in common surgical procedures is the focus. Admission to Surgical Technology Program necessary to enroll in the course. Restricted to Community Colleges campuses only.

Prerequisite(s): SURG 120, SURG 140, & SURG 145.

SURG 265. Surgical Technology Clinical III**4 Credits (9P)**

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. This course is designed to provide the student the opportunity to function actively in the role of a surgical technologist and health care team member in a clinical setting under the direct supervision of faculty and health care staff. Refinement and application of basic principles and practices combined with entry-level employment competency expectations is the focus. Preparation for the National Certification Examination for Surgical Technologists is also included. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 260.

Surgical Technology - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 63-65 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

All courses must be completed with a C or higher.

| Prefix | Title | Credits |
|--|--|---------|
| General Education | | |
| Choose one course from the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| This degree requires courses that will complete Area III; students must select three courses from the remaining areas to complete General Education requirements. The courses listed under each Area are recommended options for students to choose from to meet the Area requirement. | | |
| Area I: Communications | | |
| ENGL 1110G | Composition I (Recommended) | |
| COMM 1115G | Introduction to Communication (Recommended) | |
| COMM 1130G | Public Speaking (Recommended) | |
| Area II: Mathematics | | |
| MATH 1220G | College Algebra (Either Recommended) | |
| or MATH 1130G | Survey of Mathematics | |
| Area III: Laboratory Science | | |
| Students will complete this Area based on the required combination of BIOL 2310/BIOL 2310L, BIOL 2210 and BIOL 2225 (see below) | | |
| Area IV: Social/Behavioral Science | | |
| CEPY 1120G | Human Growth and Behavior (Recommended) | |
| Area V: Humanities ² | | |
| Area VI: Creative and Fine Arts | | |
| PHIL 1145G | Philosophy, Law, and Ethics (Either Recommended) | |

| | | |
|--|--|--------------|
| or PHIL 2110G | Introduction to Ethics | |
| <i>General Education Elective</i> | | 3-4 |
| ENGL 2210G | Professional & Technical Communication (Recommended) | |
| PHLS 1110G | Personal Health & Wellness (Recommended) | |
| MATH 1350G | Introduction to Statistics (Recommended) | |
| Core Requirements | | |
| HIT 150 | Introduction to Medical Terminology | 3 |
| Completion of the following may meet the Area III: Laboratory Science with the 9-credit hour rule ³ | | |
| BIOL 2310 & 2310L | Microbiology and Microbiology Lab | 4 |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences | 4 |
| BIOL 2225 | Human Anatomy and Physiology II | 4 |
| Major Requirements | | |
| <i>Technical Requirements</i> ⁴ | | |
| SURG 140 | Introduction to Surgical Technology | 4 |
| SURG 145 | Fundamentals of Perioperative Concepts & Techniques | 5 |
| SURG 120 | Surgical Technology Clinical I | 4 |
| SURG 155 | Pharmacology for the Surgical Technology | 2 |
| SURG 150 | Surgical Procedures I | 5 |
| SURG 260 | Surgical Technology Clinical II | 4 |
| SURG 160 | Surgical Procedures II | 6 |
| SURG 265 | Surgical Technology Clinical III | 4 |
| SURG 230 | Professional Readiness | 2 |
| Total Credits | | 63-65 |

- ¹ Each course selected must be from a different area and student cannot take multiple courses in the same area. For this degree Area III: Laboratory Science is complete with the 9-credit rule, student's will only need to select 8-10 credits of coursework to satisfy the General Education requirements instead of the standard 12-14 credits.
- ² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- ³ Students taking nine or more credits in a specific subject area, even though the courses are not designated as General Education courses, will have met the general education requirements for that subject area.
- ⁴ Students must complete all General Education & Core Requirement to be accepted into the Surgical Technology program and enroll in SURG courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| | | |
|---|---|----------------|
| Fall | | Credits |
| Gen Ed Course - One course from either Area I, II, IV, V or VI ^{1, 2} | | 3-4 |
| Gen Ed Course - One course from either Area I, II, IV, V or VI ^{1, 2} | | 3 |
| BIOL 2210 | Human Anatomy and Physiology I for the Health Sciences ³ | 4 |
| HIT 150 | Introduction to Medical Terminology | 3 |
| Credits | | 13-14 |
| Spring | | |
| BIOL 2225 | Human Anatomy and Physiology II ³ | 4 |
| GEN Ed Course - One course from either Area I, II, IV, V or VI ^{1, 2} | | 3 |
| General Education Elective Course - Any "G" course, except Area III ^{1, 2} | | 3-4 |
| Credits | | 10-11 |
| Summer | | |
| BIOL 2310 & 2310L | Microbiology and Microbiology Lab ³ | 4 |
| Credits | | 4 |

Second Year**Fall**

| | | |
|----------|---|---|
| SURG 140 | Introduction to Surgical Technology | 4 |
| SURG 145 | Fundamentals of Perioperative Concepts & Techniques | 5 |
| SURG 155 | Pharmacology for the Surgical Technology | 2 |
| SURG 150 | Surgical Procedures I | 5 |

| | |
|----------------|-----------|
| Credits | 16 |
|----------------|-----------|

Spring

| | | |
|----------|---------------------------------|-----|
| SURG 120 | Surgical Technology Clinical I | 2-4 |
| SURG 160 | Surgical Procedures II | 6 |
| SURG 260 | Surgical Technology Clinical II | 4 |

| | |
|----------------|--------------|
| Credits | 12-14 |
|----------------|--------------|

Summer

| | | |
|----------|----------------------------------|---|
| SURG 230 | Professional Readiness | 2 |
| SURG 265 | Surgical Technology Clinical III | 4 |

| | |
|----------------|----------|
| Credits | 6 |
|----------------|----------|

| | |
|----------------------|--------------|
| Total Credits | 61-65 |
|----------------------|--------------|

- Each course selected must be from a different area and student cannot take multiple courses in the same area. For this degree Area III: Laboratory Science is complete with the 9-credit rule, student's will only need to select 8-10 credits of coursework to satisfy the General Education requirements instead of the standard 12-14 credits.
- See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.
- Students taking nine or more credits in a specific subject area, even though the courses are not designated as General Education courses, will have met the general education requirements for that subject area.

Welding Technology

The **Welding Technology** program provides specialized training to prepare students for entry-level positions as a welder. All aspects of welding are covered including oxy-acetylene welding and cutting, braze welding, arc welding, gas metal arc welding (GMAW), gas tungsten arc welding (GTAW) and pipe welding.

Graduation Requirements

Certificate in Welding Technology: WorkKeys® scores of level 4 in Reading for Information, Locating Information, and Applied Mathematics; cumulative GPA of 2.0 or higher. A minimum of 6 credits earned toward the certificate must be completed at NMSU or one of its community colleges. If the certificate requires fewer than 6 credits, all credits must be completed at NMSU or one of its community colleges. Individual academic program may have additional requirements.

AAS in Welding Technology: ENGL 1110G Composition I with a C or higher; placement into college-level math and reading courses or completion of developmental courses with a C or higher; cumulative GPA of 2.0 or higher. A minimum of 15 of the 60 credits for the associate's degree must be completed at NMSU or one of its community colleges. Individual academic programs may have additional requirements. **TOTAL CREDITS REQUIRED FOR DEGREE: (64)**

Welding Technology - Certificate (p. 298)

Welding Technology - Associate of Applied Science (p. 297)

WELD 100. Structural Welding I

6 Credits (3+6P)

Development of basic skills in SMAW, OFC, and OFW in accordance with the AWS entry-level welder program.

WELD 102. Welding Fundamentals

3 Credits (2+2P)

Survey of welding and cutting processes for nonmajors. Classroom instruction and laboratory work with OFC/OFW, SMAW, GMAW, FCAW, and plasma arc cutting.

WELD 105. Introduction to Welding

3 Credits (3)

Welding practices, procedures, and terminology. Welding safety, equipment types, electrode types in usage, joint design and testing procedures.

WELD 110. Blueprint Reading (Welding)**3 Credits (3)**

Interpretation of prints related to welding. Emphasis on AWS standard symbols for welding, brazing, and nondestructive examination.

WELD 115. Structural Welding II**6 Credits (3+6P)**

Continuation of WELD 100. Emphasis on AWS entry and advanced level welder skills with SMAW, including all-position welding with mild and stainless steel electrodes. Plasma arc and air-carbon arc cutting, metallurgy, heat treatment, and weld defects.

Prerequisite: WELD 100.

WELD 120. Basic Metallurgy**3 Credits (3)**

Properties of ferrous and nonferrous materials. Service conditions and heat treatment of metals related to welding trade.

Prerequisites: WELD 100 or consent of instructor.

WELD 125. Introduction to Pipe Welding**3 Credits (2+2P)**

Pipe fit-up and welding techniques for pipe fitting and pipe weld joint using SMAW, GMAW, GTAW, and FCAW, 2G welding of pipe. Restricted to: Community Colleges only.

Prerequisite(s): WELD 100, WELD 130, and WELD 140, or consent of instructor.

WELD 126. Industrial Pipe Welding**3 Credits (3)**

Enhancement of WELD 125. Development of more advanced pipe welding skills.

Prerequisite(s): WELD 110, WELD 130 and WELD 140.

Corequisite(s): WELD 125.

WELD 130. Introduction to GMAW MIG)**3 Credits (2+2P)**

Development of basic skills with gas metal arc welding (MIG) in accordance with AWS entry-level welder objectives. Wire electrodes, shielding/purge gases, and modes of metal transfer.

WELD 140. Introduction to GTAW TIG)**3 Credits (2+2P)**

Development for basic skills with gas tungsten arc welding (TIG) in accordance with AWS entry/advanced welder objectives. Welding mild steel, tungsten electrode preparation, filler wire selection, and equipment set-up.

WELD 150. Pipe Welding II**3 Credits (2+2P)**

Continuation of WELD 125; with fillet and groove welded joints in a horizontal fixed and 45-degree fixed positions (5-F, 5-G, 6-F, 6-G).

Prerequisite: WELD 125.

WELD 151. Industrial Pipe Welding II**3 Credits (3)**

Enhancement of WELD 150. Development of more advanced pipe welding skills. Emphasis on industry driven test.

Prerequisite(s): WELD 125 and WELD 126.

Corequisite(s): WELD 150.

WELD 160. Introduction to SAW and FCAW**3 Credits (2+2P)**

Submerged arc and flux-cored arc welding. Demonstrations and practice with machine travel submerged arc welding (SAW), flux-cored arc welding (FCAW-G, FCAW-S) on mild steel plate and pipe. Restricted to: Community Colleges only.

WELD 170. Welded Fabrication**3 Credits (1+4P)**

Development of fabrication skills including basic layout, measuring, and utilization of various welding processes including out-of-position welding. Use of common shop tools.

Prerequisites: WELD 100, WELD 110, WELD 130, and OETS 104 or OETS 118.

WELD 180. GTAW II**3 Credits (2+2P)**

Continuation of WELD 140. Development of more advanced GTAW skills. Emphasis on pipe welding with mild steel, stainless steel, and aluminum.

Prerequisite: WELD 140 or consent of instructor.

WELD 190. Welded Art**3 Credits (1+4P)**

Students explore the possibilities of welded art in the form of sculpture, jewelry, furniture and as a framework to support other art media. Offered as an elective for students who wish to create art using welding. May be repeated up to 12 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): WELD 102.

WELD 211. Welder Qualification**6 Credits (3+6P)**

Laboratory and classroom instruction on AWS and ASME Welder Performance Qualification Tests. All position plate and pipe techniques and tests for SMAW, GMAW, GTAW, FCAW, and SAW. Nondestructive and destructive examination methods. Basics of welding codes. Restricted to majors.

Prerequisites: OETS 104 or OETS 118; and WELD 100, WELD 110, WELD 120, WELD 130, WELD 140, WELD 160 and WELD 180 or consent of instructor.

WELD 221. Cooperative Experience I**1-6 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U. Restricted to majors.

Prerequisites: WELD 100 or WELD 101 and consent of instructor.

WELD 255. Special Problems in Welding Technology**1-6 Credits**

Individual studies in areas of welding technology. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

WELD 295. Special Topics**1-4 Credits**

Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Welding Technology - Associate of Applied Science

Students must complete all University degree requirements, which include: General Education requirements and elective credits to total at least 63-66 credits. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

| Prefix | Title | Credits |
|--|------------------------------|--------------|
| General Education | | |
| Choose one course from four of the following six content areas for a total of 12-14 credits. ^{1, 2} | | 12-14 |
| Area I: Communications | | |
| Area II: Mathematics | | |
| Area III: Laboratory Science | | |
| Area IV: Social/Behavioral Sciences | | |
| Area V: Humanities | | |
| Area VI: Creative and Fine Arts | | |
| General Education Electives ² | | 3-4 |
| Core Requirements | | |
| OETS 118 | Mathematics for Technicians | 3 |
| WELD 100 | Structural Welding I | 6 |
| WELD 105 | Introduction to Welding | 3 |
| WELD 110 | Blueprint Reading (Welding) | 3 |
| WELD 115 | Structural Welding II | 6 |
| WELD 125 | Introduction to Pipe Welding | 3 |
| WELD 126 | Industrial Pipe Welding | 3 |
| WELD 130 | Introduction to GMAW MIG) | 3 |
| WELD 140 | Introduction to GTAW TIG) | 3 |
| WELD 150 | Pipe Welding II | 3 |
| WELD 151 | Industrial Pipe Welding II | 3 |
| WELD 170 | Welded Fabrication | 3 |
| WELD 211 | Welder Qualification | 6 |
| Total Credits | | 63-66 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. Visit with an advisor for help with creating a customized plan.

First Year

| Fall | | Credits |
|---|------------------------------|--------------|
| WELD 100 | Structural Welding I | 6 |
| WELD 125 | Introduction to Pipe Welding | 3 |
| WELD 130 | Introduction to GMAW MIG) | 3 |
| WELD 140 | Introduction to GTAW TIG) | 3 |
| Credits | | 15 |
| Spring | | |
| WELD 115 | Structural Welding II | 6 |
| WELD 150 | Pipe Welding II | 3 |
| WELD 105 | Introduction to Welding | 3 |
| General Education Elective Course ¹ | | 3-4 |
| Credits | | 15-16 |
| Summer | | |
| WELD 170 | Welded Fabrication | 3 |
| GEN Ed Course - One course from Areas I-VI ^{1,2} | | 3 |
| Credits | | 6 |

Second Year

| Fall | | |
|---|-----------------------------|--------------|
| WELD 110 | Blueprint Reading (Welding) | 3 |
| WELD 126 | Industrial Pipe Welding | 3 |
| OETS 118 | Mathematics for Technicians | 3 |
| GEN Ed Course - One course from Areas I-VI ^{1,2} | | 3 |
| Credits | | 12 |
| Spring | | |
| WELD 211 | Welder Qualification | 6 |
| WELD 151 | Industrial Pipe Welding II | 3 |
| GEN Ed Course - One course from Areas I-VI ^{1,2} | | 3-4 |
| GEN Ed Course - One course from Areas I-VI ^{1,2} | | 3-4 |
| Credits | | 15-17 |
| Total Credits | | 63-66 |

¹ Each course selected must be from a different area and students cannot take multiple courses in the same area.

² See the General Education (<http://catalogs.nmsu.edu/carlsbad/essential-information-students/general-education-courses/>) section of the catalog for a full list of courses.

Welding Technology - Certificate

| Prefix | Title | Credits |
|------------------------------|------------------------------|-----------|
| Core Curriculum Requirements | | |
| WELD 100 | Structural Welding I | 6 |
| WELD 105 | Introduction to Welding | 3 |
| WELD 110 | Blueprint Reading (Welding) | 3 |
| WELD 115 | Structural Welding II | 6 |
| WELD 125 | Introduction to Pipe Welding | 3 |
| WELD 130 | Introduction to GMAW MIG) | 3 |
| WELD 140 | Introduction to GTAW TIG) | 3 |
| WELD 150 | Pipe Welding II | 3 |
| Total Credits | | 30 |

A Suggested Plan of Study

Additional classes may be needed based on placement test results and course prerequisites. *Visit with an advisor for help with creating a customized plan.*

First Year

| Fall | | Credits |
|----------------------|------------------------------|-----------|
| WELD 100 | Structural Welding I | 6 |
| WELD 125 | Introduction to Pipe Welding | 3 |
| WELD 130 | Introduction to GMAW MIG) | 3 |
| Credits | | 12 |
| Spring | | |
| WELD 115 | Structural Welding II | 6 |
| WELD 150 | Pipe Welding II | 3 |
| WELD 105 | Introduction to Welding | 3 |
| Credits | | 12 |
| Second Year | | |
| Fall | | |
| WELD 110 | Blueprint Reading (Welding) | 3 |
| WELD 140 | Introduction to GTAW TIG) | 3 |
| Credits | | 6 |
| Total Credits | | 30 |

Course Descriptions

Please note, not all courses listed below are taught at NMSU-C. Please check NMSU-C's current schedule for actual offerings.

A

- A S-ARTS AND SCIENCES (p. 303)
- ACCT-ACCOUNTING (p. 303)
- ACES-AGRI, CONSUMER & ENV SCIE (p. 304)
- AEEC-AGRICULTURAL ECON/ECON (p. 305)
- AERO-AEROSPACE STUDIES (p. 306)
- AERT-AEROSPACE TECHNOLOGY (p. 307)
- AFST-AFRICANA STUDIES (p. 308)
- AGRO-AGRONOMY (p. 309)
- AHS-ALLIED HEALTH SCIENCE (p. 310)
- ANSC-ANIMAL SCIENCE (p. 311)
- ANTH-ANTHROPOLOGY (p. 314)
- ARCH-ARCHITECTURE (p. 317)
- ARTH-ART HISTORY (p. 324)
- ARTS-ART STUDIO (p. 325)
- ASTR-ASTRONOMY (p. 332)
- AUTO-AUTOMOTIVE TECHNOLOGY (p. 332)
- AVIM-AVIATION MAINTENANCE (p. 336)
- AXED-AGRICULTURAL EXTN EDUC (p. 337)

B

- B A-BUSINESS ADMINISTRATION (p. 339)
- BCHE-BIOCHEMISTRY (p. 339)
- BCIS-BUSINESS COMPUTER SYSTEMS (p. 340)
- BCT-BUILDING CONSTRUCTION TECH (p. 340)
- BFIN-BUSINESS FINANCE (p. 343)
- BIOL-BIOLOGY (p. 343)

- BLAW-BUSINESS LAW (p. 350)
- BLED-BILINGUAL EDUCATION (p. 351)
- BMGT-BUSINESS MANAGEMENT (p. 351)
- BOT-BUSINESS OFFICE TECHNOLOGY (p. 354)
- BUSA-BUSINESS ADMINISTRATION (p. 355)

C

- C E-CIVIL ENGINEERING (p. 355)
- C S-COMPUTER SCIENCE (p. 356)
- CCDE-DEVELOPMENTAL ENGLISH (p. 358)
- CCDM-DEVELOPMENTAL MATHEMATICS (p. 358)
- CCDR-DEVELOPMENTAL READING (p. 359)
- CCDS-DEVELOPMENTAL SKILLS (p. 359)
- CEPY-COUNSELING & EDUCATIONAL PSYCHOLOGY (p. 360)
- CHEF-CULINARY ARTS (p. 362)
- CHEM-CHEMISTRY (p. 364)
- CHIN-CHINESE (p. 369)
- CHME-CHEMICAL & MATERIALS ENGR (p. 370)
- CHSS - COMM HEALTH/SOC SRVCS (p. 371)
- CJUS-CRIMINAL JUSTICE (p. 372)
- COMM-COMMUNICATION (p. 374)
- CSEC-CYBERSECURITY (p. 375)
- CTEC-CYBER TECHNOLOGY (p. 376)
- CTFM-CLTHNG/TXTLS/FSHN MRCHDSG (p. 379)

D

- DANC-DANCE (p. 380)
- DAS-DENTAL ASSISTING (p. 387)
- DHYG-DENTAL HYGIENE/HYGIENIST (p. 389)
- DMS-DIAGNOSTIC MED SONOGRAPHY (p. 391)
- DRFT-DRAFTING (p. 394)

E

- E E-ELECTRICAL ENGINEERING (p. 398)
- E T-ENGINEERING TECHNOLOGY (p. 398)
- ECED-EARLY CHILDHOOD EDUCATION (p. 404)
- ECON-ECONOMICS (p. 412)
- EDLT-EDUCATIONAL TECHNOLOGY (p. 414)
- EDUC-EDUCATION (p. 414)
- ELAD-EDUCATIONAL LEADERSHIP ADMINISTRATION (p. 417)
- ELT - ELECTRONICS TECHNOLOGY (p. 418)
- ELWK-ELECTRICAL LINEWORKER (p. 420)
- ENGL-ENGLISH (p. 420)
- ENGR-ENGINEERING (p. 426)
- ENTR-ENTREPRENEURSHIP (p. 429)
- ENVS-ENVIRONMENTAL SCIENCE (p. 429)
- EPWS-ETMLGY/PLNT PTHLGY/WD SCI (p. 429)

F

- FCSC-FAMILY AND CONSUMER SCIENCES (p. 430)
- FCST-FAMILY AND CHILD STUDIES (p. 431)
- FDMA-FILM & DIGITAL MEDIA ARTS (p. 432)

- FIRE-FIRE INVESTIGATION (p. 447)
- FREN-FRENCH (p. 449)
- FSTE-FOOD SCIENCE & TECHNOLOGY (p. 451)
- FWCE-FISH,WILDLF,CONSERV ECOL (p. 452)
- FYEX-FIRST YEAR EXPERIENCE (p. 453)

G

- GENE-GENETICS (p. 457)
- GEOG-GEOGRAPHY (p. 457)
- GEOL-GEOLOGY (p. 459)
- GNDR-WOMEN'S STUDIES (p. 461)
- GRMN-GERMAN (p. 461)

H

- HIST-HISTORY (p. 463)
- HIT-HEALTH INFO TECHNOLOGY (p. 468)
- HLED-HEALTH EDUCATION (p. 469)
- HMSV-HUMAN SERVICES (p. 470)
- HNRS-HONORS (p. 470)
- HORT-HORTICULTURE (p. 477)
- HOST-HOSPITALITY AND TOURISM (p. 479)
- HRTM-HOTEL/RESTRNT/TOURISM MGT (p. 480)
- HVAC-HEATING/AC/REFRIGERATION (p. 482)

I

- I E-INDUSTRIAL ENGINEERING (p. 483)
- INMT - INDUSTRIAL MAINTENANCE (p. 484)
- INST-INSTRUMENT & CONTR TECH (p. 485)
- INTEGRATED NATURAL SCIENCES (p. 486)

J

- JAPN-JAPANESE (p. 486)
- JOUR-JOURNALISM (p. 488)

L

- L SC-LIBRARY SCIENCE (p. 488)
- LANG-LANGUAGE (p. 490)
- LAWE-LAW ENFORCEMENT (p. 490)
- LIBR-LIBRARY SCIENCE (p. 492)
- LING-LINGUISTICS (p. 493)

M

- M E-MECHANICAL ENGINEERING (p. 493)
- M SC-MILITARY SCIENCE (p. 494)
- MAT-AUTOMATION & MANUFACTURING (p. 495)
- MATH-MATHEMATICS (p. 496)
- MGMT-MANAGEMENT (p. 504)
- MKTG-MARKETING (p. 505)
- MUSC-MUSIC (p. 507)

N

- NA - NURSING ASSISTANT (p. 514)
- NAV-NAVAJO (p. 517)
- NGEC-NATURAL GAS ENGINE COMP (p. 517)
- NURS-NURSING (p. 519)
- NUTR-NUTRITION (p. 524)

O

- OATS-OFFICE ADMINISTRATION TECHNOLOGY SYSTEMS (p. 524)
- OEEM-BIOMEDICAL TECHNOLOGY (p. 528)
- OECS-COMPUTER TECHNOLOGY (p. 529)
- OEEM- PARAMEDIC (p. 533)
- OEET- ELECTRICAL TRADES (p. 536)
- OEGR-DIGITAL GRAPHIC TECH (p. 537)
- OEGS-GEOGRAPHIC INFO SYS (p. 537)
- OETS-TECHNICAL STUDIES (p. 537)

P

- PHED-PHYSICAL EDUCATION (p. 538)
- PHIL-PHILOSOPHY (p. 540)
- PHLS-PUBLIC HEALTH SCIENCES (p. 541)
- PHYS-PHYSICS (p. 542)
- PL-S-PARALEGAL SERVICES (p. 549)
- POLS-POLITICAL SCIENCE (p. 550)
- PORT-PORTUGUESE (p. 552)
- PSYC-PSYCHOLOGY (p. 552)

R

- RADT-RADIOLOGIC TECHNOLOGY (p. 553)
- RESP - RESPIRATORY THERAPY (p. 556)
- RGSC-RANGE SCIENCE (p. 558)

S

- SIGN-SIGN LANGUAGE (p. 558)
- SMET-SCIENCE/MATH/ENG/TECH (p. 559)
- SOCI-SOCIOLOGY (p. 560)
- SOIL-SOIL (p. 561)
- SOWK-SOCIAL WORK (p. 562)
- SPAN-SPANISH (p. 562)
- SPED-SPECIAL EDUCATION (p. 565)
- SPHS-SPEECH & HEARING SCIENCE (p. 565)
- SPMD-SPORTS MEDICINE (p. 566)
- SUR-SURVEYING (p. 569)
- SURG-SURGICAL TECHNOLOGY (p. 570)

T

- TCEN-ENVIRONMENTAL/ENERGY TECH (p. 571)
- THEA-THEATER (p. 573)

W

- WATR-WATER UTILITIES (p. 577)
- WELD-WELDING TECHNOLOGY (WELD) (p. 578)

A S-ARTS AND SCIENCES (A S)

A S 100. Insights: University Experience for Future Careers

1 Credit (1)

Research and investigation of college majors and career opportunities.

A S 101. Success Seminar

1 Credit (1)

Academic and personal strategies and campus resources to enhance scholastic achievement. May be repeated up to 1 credits.

A S 103. Quantitative Foundations

3 Credits (3)

Course is designed to prepare students for College level mathematics. Initial assessments generate individualized paths to mastery of fundamental skills. Course also covers strategies and campus resources to enhance scholastic achievement. Traditional Grading with RR. May be repeated up to 6 credits. Traditional Grading with RR. Restricted to Las Cruces campus only.

A S 200. Interdisciplinary Topics

1-4 Credits

An interdisciplinary approach to subject matter cutting across departmental fields. Specific subjects to be announced in the Schedule of Classes.

ACCT-ACCOUNTING (ACCT)

ACCT 101. Supplemental Instruction to ACCT 221

1 Credit (1)

Collaborative workshop for students in ACCT 221 – Financial Accounting. Course does not count toward departmental degree requirements. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

Corequisite(s): ACCT 221.

ACCT 200. A Survey of Accounting

3 Credits (3)

Emphasis on financial statement interpretation and development of accounting information for management. For engineering, computer science, and other non business majors. Community Colleges only.

Prerequisite: one C S course or consent of instructor.

ACCT 2110. Principles of Accounting I

3 Credits (3)

An introduction to financial accounting concepts emphasizing the analysis of business transactions in accordance with generally accepted accounting principles (GAAP), the effect of these transactions on the financial statements, financial analysis, and the interrelationships of the financial statements.

Learning Outcomes

1. Analyze business transactions, their effects on the financial statements and the interrelationships of the financial statements involving the following: Cash transactions; Receivables and Net Realizable Value; Operational Assets and Depreciation; Inventory; Current Liabilities; Long-term Liabilities
2. Define, identify and demonstrate the impact of adjusting entries on financial statements.
3. Explain and demonstrate the differences between cash and accrual basis accounting.
4. Define and identify generally accepted accounting principles.

ACCT 2120. Principles of Accounting II**3 Credits (3)**

An introduction to the use of accounting information in the management decision making processes of planning, implementing, and controlling business activities. In addition, the course will discuss the accumulation and classification of costs as well as demonstrate the difference between costing systems.

Prerequisite(s): ACCT 2110.

Learning Outcomes

1. Identify the differences between financial and managerial accounting.
2. Illustrate the accumulation of costs in cost accounting systems.
3. Describe the basic elements of the budgeting process, its objectives and budget preparation.
4. Define and classify cost behavior.
5. Perform cost-volume-profit analysis for decision-making.
6. Perform differential (incremental) analysis for business decision making.
7. Explain the cause of the variance and its effect on the income statement.
8. Explain and demonstrate the difference between traditional costing and activity-based costing.

ACES-AGRI, CONSUMER & ENV SCIE (ACES)

ACES 1120. Freshman Orientation**1 Credit (1)**

Orientation to University life, including the understanding and utilization of resources that promote University success. Designed to promote success in achieving a career objective and perseverance for degree completion. Promotes a recognition of changes required in moving from high school to the University. Eight weeks in length, required for all freshmen in the College of Agricultural, Consumer and Environmental Science.

Learning Outcomes

1. Orient students to NMSU and to the College of Agricultural, Consumer and Environmental Sciences.
2. Develop an understanding of the personal skill set needed for academic success.
3. Develop awareness of the academic and personal resources available to NMSU students.
4. Help students create a peer network that will support their academic and personal success.
5. Strengthen skills in oral and written communications

ACES 1210. Financial Fitness for College Students**1 Credit (1)**

An introduction to personal financial practices in post high school and/or college lives. Emphasis is placed on budgeting, savings, investment, college debt, student loans, credit cards, scams and consumer protection.

Learning Outcomes

1. Discuss the importance of personal financial management during college years.
2. Discuss the essentials of following:
 3. a. paying yourself first and budgeting,
 4. b. differentiating between needs and wants,
 5. c. the significance of building and having good credit,
 6. d. managing debt,
 7. e. understanding and minimizing student loan debt,
 8. f. investing,
 9. g. life success principles, e.g., goal setting, time management, stress management.
10. Choose online financial tools to help them succeed financially.

ACES 1220. Academic Excellence**1-3 Credits (1-3)**

Academic curriculum of excellence that includes the development of collaborative learning and student success environment, learning diverse learning styles and multiple intelligences, and developing multi-contextual academic communication styles. Restricted to: Open to all ACES majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Demonstrate an understanding of the relationship between time management and academic success.
2. Express a familiarity with college culture.
3. Communicate a comprehension of study skills and test taking strategies.
4. Apply material learned to other aspects to enhance academic excellence.
5. Develop an academic and career life plan that will highlight goals, taking into account life
6. circumstance
7. Become competent in appropriate professional/academic
8. communication

AEEC-AGRICULTURAL ECON/ECON

AEEC 1110. Introduction to Agricultural Economics and Business**3 Credits (3)**

This course is an orientation to agricultural economics and business through the discovery process for the consumer in the food, fiber, and natural resource sectors of the global economy. The course discusses the application of micro-and macro-economic principles as they relate to agricultural economics and business. May be repeated up to 3 credits.

Learning Outcomes

1. Gain a broad understanding of the role of the consumer in the market-place for agricultural commodities, producers, agencies and the global market structure.
2. Apply introductory economic principles to applied global situations.
3. Employ economic concepts in the application of production level decision making.
4. Employ economic prin
5. ciples to the basic and global agricultural community.
6. Understand relationships that exist between producers and consumers.

AEEC 1120. Careers in Food and Agribusiness**1 Credit (1)**

This course is an orientation to agribusiness management including careers available in the food and fiber supply chain. Students will learn about agricultural production and marketing in New Mexico, the United States, and the world. Students will be introduced to faculty and staff within the department, learn about career opportunities available to AEAB graduates, and develop a greater appreciation of agricultural management issues. Students must be in Freshman status only or obtain consent of instructor to enroll.

Learning Outcomes

1. Become familiar with career opportunities in agricultural economics and agricultural business Understand knowledge and skills desired by employers Become acquainted with faculty and staff in the Department of Agricultural Economics and Agricultural Economics and resources available to students within the Department Refine written and verbal communication skills

AEEC 2110. Principles of Food and Agribusiness Management**3 Credits (3)**

This course introduces the business management theory and application of theory related to businesses within the food and fiber supply chain. Topics include management and financial principles, market planning, and organization theory in small business situations.

Learning Outcomes

1. Demonstrate, refine and expand written and oral communication skills
2. Develop an understanding of basic financial statements, their use and analysis
3. Understand the roles management and management styles play in modern agribusiness
4. Learn about the history of agribusiness domestically and internationally
5. Integrate the role of technology into modern agribusiness management

AEEC 2120. Introduction to Food and Agribusiness Accounting**3 Credits (3)**

This course outlines the purpose and methods of keeping and analyzing farm and ranch records. Course topics include financial statements, efficiency measures, analysis of the business, and tax computations.

Learning Outcomes

1. Understand the terminology and principles used in modern farm and ranch financial management statements. Evaluate capital investments, analyze farm business performance, and develop tools for financial planning and analysis Evaluate farm and ranch cash flows

AEEC 2130G. Survey of Food and Agricultural Issues**3 Credits (3)**

Survey of food and agricultural issues, including: geography of food production and consumption; human-agricultural-natural resource relations; agriculture in the United States and abroad; modern agribusiness; food safety; food, agriculture, and natural resources policy; ethical questions; role and impact of technology. Crosslisted with: FSTE 2130G.

Learning Outcomes

1. Understand of global agriculture including production techniques used in various geographical regions, consumption trends, and political and social constraints.
2. Synthesis information about agricultural issues and make informed arguments
3. Articulate discuss modern issues in agriculture
4. Write coherent arguments relative to personal beliefs regarding agricultural issues

AEEC 2140. Technology and Communication for Business Management**3 Credits (2+2P)**

This course helps students improve their skills related to data analysis, information management, and communication. Drawing examples from a variety of management, business, technological and research situations, students discover the versatility and functionality of modern computer software. The course emphasizes a 'hands-on' approach.

Learning Outcomes

1. Demonstrate an understanding of the meaning of terms used to describe common techniques and concepts in business information systems. Demonstrate the use and application of tools to develop spreadsheets and documents at a professional level

AEEC 2996. Special Topics**1-4 Credits**

Specific subjects and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester. No more than 9 credits toward a degree. Consent of instructor required.

Learning Outcomes

1. Varies

AERO-AEROSPACE STUDIES (AERO)

AERO 121. Heritage and Values**2 Credits (1.25+2P)**

"Heritage and Values of the United States Air Force," is a survey course designed to introduce students to the United States Air Force and provides an overview of the basic characteristics, missions, and organization of the Air Force. Includes Leadership Lab practicum. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

AERO 122. Heritage and Values II**2 Credits (1.25+2P)**

"Heritage and Values of the United States Air Force," is a survey course designed to introduce students to the United States Air Force and provides an overview of the basic characteristics, and organization of the Air Force. Includes Leadership Lab practicum. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

AERO 221. Team and Leadership Fundamentals**2 Credits (1.25+2P)**

"Teams and Leadership Fundamentals," focuses on laying the foundation for teams and leadership. The topics include skills that allow cadets to improve their leadership on a personal level and within a team. The courses will prepare cadets for their field training experience where they will be able to put the concepts learned into practice. The purpose is to instill a leadership mindset and to motivate sophomore students to transition from AFROTC cadet to AFROTC officer candidate. Includes Leadership Lab practicum. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

AERO 222. Team and Leadership Fundamentals II**2 Credits (1.25+2P)**

"Team and Leadership Fundamentals," focuses on laying the foundation for teams and leadership. The topics include skills that will allow cadets to improve their leadership on a personal level and within a team. The courses will prepare cadets for their field training experience where they will be able to put the concepts learned into practice. The purpose is to instill a leadership mindset and to motivate sophomore students to transition from AFROTC cadet to AFROTC officer candidate. Includes Leadership Lab practicum. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

AERO 223. Air Force Leadership Development**1 Credit (2P)**

This course prepares cadets to excel in field training. Cadets are prepared in all facets of field training, including: leadership competency evaluations, the Cadet's Guide to Field Training, individual drill evaluations, attention to detail, dining hall procedures, maintenance of living areas, and the group problem solving process. Restricted to: Main campus only.

AERT-AEROSPACE TECHNOLOGY (AERT)

AERT 105. Aerospace Engineering PLTW**4 Credits (2+4P)**

Introduce the student to Aerospace Engineering (AE) concepts and history. Studied topics include History of Flight, Aerodynamics, Rocket Science, Orbital Physics, Systems Engineering and Life Support/Environmental Systems. Restricted to: Community Colleges only.

AERT 111. Basic Electricity and Electronics**3 Credits (2+2P)**

Fundamentals of electricity and electronics, basic circuit devices, meters, transistors, integrated fiber optics, and industrial application topics. Minimum math proficiency of CCDM 103 or CCDM 104 required or math placement into CCDM 114 or higher. Restricted to: Community Colleges only. Crosslisted with: ELT 105

AERT 121. Introduction to the Aerospace Workplace**4 Credits (2+4P)**

The course covers space history, regulations, controls, aerospace industry terminology and acronyms as well as hands-on activities related to tools, procedures, and standard practices. Restricted to: Community Colleges only.

AERT 122. Aerospace Safety and Quality**3 Credits (2+2P)**

Covers identification of hazards, personal protective equipment, safe practices, and protection of personnel, property, and equipment in the aerospace environment. Basic principles of quality assurance engineering and quality control relating to work processes will be discussed. Restricted to: Community Colleges only.

AERT 211. Electromechanical Devices**4 Credits (2+4P)**

Theory and application of electromechanical devices and digital control circuits. Includes AD and DA converters, pneumatics, hydraulics, programmable logic controllers, DC, AC and stepper motors, and servomechanisms. Crosslisted with: MAT 240.

Prerequisite(s): ELT 160.

AERT 212. Materials and Processes (Basic Metallurgy)**3 Credits (2+2P)**

Basic Metallurgy: Aluminum and its alloys (Alclad), hardening, tempering, annealing, anodizing, magnetism, titanium, copper, stainless steel, surgical steel, safety wire, iron rust. Metallurgical Processes: Welding and soldering. Inspection Fundamentals: Eddy currents, magnetic particles (ferrous and non-ferrous metals), ultrasonic, x-ray, visual, corrosion and corrosion control, and vacuum bagging. Restricted to: Community Colleges only.

AERT 213. Aerospace Fluid Systems**3 Credits (2+2P)**

This course includes a familiarization of fluid system components, characteristics, and applications. Cryogenic and hypergolic materials and high pressure systems are also covered. Restricted to: Community Colleges only.

AERT 214. Aerospace Systems**3 Credits (2+2P)**

This course provides an introduction to expendable and reusable spacecraft systems including hydraulic, pneumatic, electrical, propulsion, mechanical, HVAC, and ECLSS (Environmental Control and Life Support System). How systems interact with computer and data acquisition systems is also covered. Restricted to: Community Colleges only.

AERT 221. Inspection Requirements and Planning Metrology**3 Credits (2+2P)**

Course teaches the benefits of inspection, quality control, material conditions. Also covers measurements, including temperature, ultrasonic, vibration and more. Restricted to: Community Colleges only.

AERT 222. Electromechanical Systems**3 Credits (2+2P)**

Principles and applications of preventive and corrective maintenance procedures on industrial production machines using systems technical and maintenance manuals to develop troubleshooting procedures using systems block and schematic diagrams. Crosslisted with: MAT 245.

Prerequisite(s)/Corequisite(s): AERT 221 or MAT 240. Prerequisite(s): ELT 160.

AERT 224. Aerospace Tests and Measurements**3 Credits (2+2P)**

This course covers electrical and mechanical testing procedures (primarily non-destructive testing), equipment, measurements, and instrumentation involved in aerospace systems. Verification of tool and equipment calibration is also covered.

Prerequisite(s)/Corequisite(s): AERT 221. Restricted to: Community Colleges only.

AERT 225. Cooperative Experience**1-3 Credits (1-3)**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Consent of instructor required. Graded: S/U. Restricted to: Community Colleges only.

AERT 255. Special Topics**1-4 Credits (1-4)**

Specific topics to be announced in the Schedule of Classes. Restricted to: Community Colleges only.

AERT 290. Independent Study**1-3 Credits (1-3)**

Individual studies in areas directly related to aerospace. Consent of instructor required. Restricted to: Community Colleges only.

AFST-AFRICANA STUDIES

AFST 1110G. Introduction to Africana Studies**3 Credits (3)**

An interdisciplinary course that introduce students to the histories, cultures, and experiences of global people of African descent. NMSU Specific Description This course presents a survey of the experiences of Blacks across the African Diaspora with particular attention given to the experience of Blacks in the United States. This course will examine the experiences of Black people across various disciplines and fields of academic inquiry. African people, and their descendants across the diaspora, have contributed to the political, cultural, economic, and social landscape of the world. This course will assist you in understanding the Black/Africana experience in the U.S. and around the world.

Learning Outcomes

1. Students will carry out critical analysis and engagement with complex, interdependent global systems and legacies (natural, physical, social, cultural, economic, and political) and their implications for people's lives and the earth's sustainability. Students will explore issues/objects/works through collection and analysis of evidence that result in informed conclusions/judgments, understanding and analysis of critical literacy and ethics pertaining to the dynamics of diversity, equity, inclusion and social change. Students will examine habits of mind characterized by the comprehensive exploration of issues, ideas, artifacts and events related to diversity, equity and inclusion before accepting or formulating an opinion or conclusion. Students will demonstrate the capacity to combine or synthesize existing ideas, images, or expertise in original ways. Students will prepare, purposeful presentations designed to increase knowledge, foster understanding, or promote change in listener's values, beliefs, or behaviors pertaining to the dynamics of diversity, equity, inclusion and social change. Students will develop and express ideas in writing and learning in many genres and styles using different writing technologies, mixing texts, data and images that relate to the dynamics of diversity, equity, inclusion and social change. Students will show the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situation. Students will demonstrate the ability to know a need for information or visual literacy and understanding of the dynamics of historic and contemporary inequality and how they shape individual and community power, biases, structural arrangements and social justice bias. Students will enact behaviors and efforts and interact with others on the team to enhance the quality and quantity of contributions made to team discussions. 1 Students will design, evaluate and implement strategies to answer open-ended questions in multiple ways. 1 Students will work to make a difference in the civic life of communities and develop the combination of knowledge, skills and values and motivation to make a difference. 1 Students will develop their cognitive, affective and behavioral skills and characteristics to support effective and appropriate interaction in a variety of cultures. 1 Students will develop their ethical self-identity as they practice ethical decision making skills while learning how to describe and analyze positions on ethical issues. 1 Students will engage in self-reflection regarding one's own history and position in contemporary U.S. society as well as in a global context. 1 Student learners will connect perspectives and integrate relevant experience and academic knowledge from multiple disciplines.

AFST 2110G. African American History**3 Credits (3)**

This course surveys the long and turbulent journey of African-Americans, the rich culture they have cultivated, and their persistent struggle for freedom from the perspective, interests, aspirations, possibilities and envisioned destinies of African descended peoples. From African antiquity to the 21st century, students will study: 1) The African background; 2) The Holocaust of Enslavement; 3) Black Resistance and Abolition; 4) Reconstruction; 5) The Jim Crow Era; 6) Civil Rights and Black Power, and; 7) The Post-Industrial/Post Civil Rights Era. (unique)

Learning Outcomes

1. Demonstrate a full ability to analyze and interpret how enslavement and oppression shape the racial, gendered, social, economic, and political realities of African descended people in the U.S. Recognize and respond to ethical challenges/social justice issues that affect African American people. Acquire a critical understanding of the human condition.

AFST 2140G. Black Women in the African Diaspora**3 Credits (3)**

This survey course reviews the contributions of Black women to the Black Diasporic Story. NMSU Specific Description This course critically surveys Black women's history and experiences across the African Diaspora. Particular attention is given to Black women's experiences in North America. Some of the topics covered include: Black women and the building of nation-states; Black women in the U.S. slave system; Black women in race and gender movements in the U.S. and Latin America; systemic and institutionalized violence against Black women; Black motherhood; Black Latinas and the politics of identity; representations of Black women in popular culture; radical activism and Black lesbian identity, as well as the emergence and growth of Black feminist theory and selected other topics. In addition, students will engage in an autobiographical project on a Black woman they select to study.

Learning Outcomes

1. Students will gain theoretical knowledge of the field of Black feminist thought. Students will explore the relationship between Black feminist theory and the larger more general body of work on feminism. Students will study the historical, political and social experiences of Black women in the Americas. Students will understand the intersecting relationship between race, gender, class and sexuality. Students will critically analyze the representations of Black women in popular culture.

AGRO-AGRONOMY (AGRO)

AGRO 1110G. Introduction to Plant Science (Lecture & Lab)**4 Credits (3+2P)**

This is an introductory course for understanding plant science. Basic biological, chemical, and physical principles of various plants are covered. The focus of this course is on plants/crops used in agriculture production of food and fiber as well as pasture and range plants. Plant taxonomy and soil properties will also be discussed. Same as HORT 1115G.

Learning Outcomes

1. Describe the basic structure of plants including growth and function.
2. Define photosynthesis, respiration, and translocation
3. Utilize plant taxonomy techniques to identify various plants.
4. Classify soils based on their chemical and physical properties.
5. Explain how different soil properties affect plant growth and sustainability.

AGRO 2160. Plant Propagation**3 Credits (2+2P)**

Practical methods of propagating horticultural plants by seed, cuttings, layering, grafting, division and tissue culture. Examination of relevant physiological processes involved with successful plant propagation techniques. Crosslisted with HORT 2160.

Learning Outcomes

1. Practical methods of propagating plants by seed, cuttings, layering, grafting, division, and tissue culture through experiential, "hands-on" laboratories.
2. Relevant physiological principles involved in propag
3. ating horticultural plants through lecture discussions
4. and readings.

AGRO 2996. Special Topics**1-4 Credits (1-4)**

Specific subjects and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester. No more than 9 credits toward a degree. May be repeated up to 9 credits. Consent of Instructor required.

Learning Outcomes

1. Varies

AHS-ALLIED HEALTH SCIENCE (AHS)

AHS 102. Careers in the Health Fields

1-3 Credits (1-3)

This course will provide students with a broad understanding of health careers as well as emerging issues in health. This will also include the study of the functional roles of practice, education, administration, and research in health fields. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

AHS 115. Dietary Guidelines & Meal Planning

4 Credits (4)

A combination of the science of nutrition and the current Dietary Guidelines for Americans with practical application to meal planning and preparation. Strategies and techniques used to plan and prepare healthful and appetizing meals are explored. Evidenced-based dietary guidelines are provided to meet the needs of individuals and groups with chronic diseases. Menu development, modification and analysis are reviewed. Restricted to Community Colleges campuses only.

AHS 120. Medical Terminology

3 Credits (3)

The study and understanding of medical terminology as it relates to diseases, their causes and effects, and the terminology used in various medical specialties. Emphasis will be placed on learning the basic construction of medical words, appropriate spelling, use of medical terms, and use of medical abbreviations. Same as HIT 150. May be repeated up to 3 credits. Crosslisted with: NURS 150, BOT 150 and HIT 150. Restricted to Community Colleges campuses only.

AHS 140. Essentials of Anatomy and Physiology

4 Credits (3+3P)

Essentials of anatomy and physiology for those considering a career in health as well as those interested in understanding their own body and the basics of health.

AHS 153. Introduction to Anatomy and Physiology I

4 Credits (3+3P)

Survey of human anatomy and physiology.

Prerequisite: high school biology or high school chemistry, or CHEM 1120G, or consent of instructor.

AHS 155. Special Topics

1-6 Credits

Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 6 credits.

AHS 190. Clinical Skills & Concepts for Medical Assisting I

6 Credits (3+6P)

A core course designed to provide an introduction to the theory, concepts, and skills needed for entry-level medical assisting positions. Content includes basic theory and concepts designed to support safe and effective practice as a medical assistant in ambulatory care settings. Includes a skills laboratory for hands-on practice and 96 hours of supervised clinical in the work environment. Restricted to Community Colleges campuses

Learning Outcomes

1. Apply theoretical knowledge associated with medical assisting in providing basic healthcare services.
2. Perform essential clinical skills within the medical assistant scope of practice in ambulatory clinic settings.
3. Recognize factors that affect procedures and results, and take appropriate actions with predetermined limits when indicated, including patient compromise or complications.
4. Demonstrate professional conduct and interpersonal communication skills with patients, other health care professionals, and with the public.
5. Recognize the responsibilities of other health care personnel and interact with them with respect for their jobs and patient care.
6. Apply basic scientific principles in learning new techniques and procedures.
7. Relate vital sign and laboratory findings to common disease processes.

AHS 202. Legal and Ethical Issues in Health Care

3 Credits (3)

Consideration of legal and ethical issues in modern health care delivery.

AHS 250. Spanish for Health Professionals

3 Credits (3)

Spanish for Health Professionals is a 3 credit course geared toward individuals working or majoring in health related areas. The course focus is on conversation and vocabulary needed for the workplace and task based practical skills. Restricted to: Community Colleges only.

AHS 280. Medical Office Administration & Management

4 Credits (2+4P)

A core course designed to provide the theory, concepts, and skills needed in preparation for entry-level medical assisting positions. Content includes theory and concepts related to medical office administration. The course includes skills, hands-on practice, and 40 hours of supervised clinical in the work environment in ambulatory care settings. Restricted to Community Colleges campuses only.

AHS 290. Clinical Skills & Concepts for Medical Assisting II**6 Credits (3+6P)**

A core course designed to provide the theory, concepts, and skills needed in preparation for entry-level medical assisting positions. Content includes theory and concepts related to specialty areas of healthcare practice, as well as consideration for conditions affecting persons throughout the life span. The course includes a skills laboratory for hands-on practice and 96 hours of supervised clinical in the work environment with specialized populations and procedures in both ambulatory and acute care settings. Restricted to Community Colleges campuses

Learning Outcomes

1. Apply theoretical knowledge associated with medical assisting in providing basic healthcare services.
2. Perform essential clinical skills within the medical assistant scope of practice in ambulatory clinic settings where specialized care is given, as well as, acute care settings.
3. Recognize factors that affect procedures and results, and take appropriate actions within predetermined limits when indicated, including patient compromise or complications.
4. Demonstrate professional conduct and interpersonal communication skills with patients, other health care professionals, and with the public.
5. Recognize the responsibilities of other health care personnel and interact with them with respect for their jobs and patient care.
6. Apply basic scientific principles in learning new techniques and procedures.
7. Relate vital sign and laboratory findings to common disease processes.

ANSC-ANIMAL SCIENCE (ANSC)

ANSC 1110. Animal Science Careers**1 Credit (1)**

Introduction to scientific disciplines and career options in animal-agriculture career skill development, including resume preparation, networking, importance of internships, and leadership experiences in animal agriculture.

Learning Outcomes

1. Increasing the understanding of career opportunities in animal agriculture.
2. Gain a broad experience in the development of creative thinking about the career choices available in animal agriculture.
3. Apply the increased knowledge of career development in the career path and internship directions for each student.
4. Gain leadership experience that will be impactful for the student in their pursuit of a career in animal agriculture.

ANSC 1120. Introduction to Animal Science**3 Credits (3)**

This course is designed to provide an introduction to nutrients and their function in livestock animals. Basic feed identification, evaluation, and diet formulation will be discussed. The anatomy of the digestive tract of animals and their ability to utilize feedstuffs is presented. Classification, digestion, absorption, transport and metabolism of major nutrients required by animals are studied

Learning Outcomes

1. Identify conventional and non-conventional feedstuffs that are fed to livestock animals.
2. Describe various methods for feed processing and storage.
3. Assess the nutritional value of a ration or feed ingredients.
4. Interpret the NRC (Nutrient Requirement Council) guidelines for feeding livestock.
5. List the basic digestive anatomy for all classes of livestock.
6. Describe nutritional deficiencies and digestive disorders common to livestock animals

ANSC 1120H. Introduction to Animal Science Honors**3 Credits (3)**

This course is designed to provide an introduction to nutrients and their function in livestock animals. Basic feed identification, evaluation, and diet formulation will be discussed. The anatomy of the digestive tract of animals and their ability to utilize feedstuffs is presented. Classification, digestion, absorption, transport and metabolism of major nutrients required by animals are studied. Additional course work will be required. Restricted to Las Cruces campus only.

Prerequisite(s): Eligibility for membership in honors college.

Learning Outcomes

1. Identify conventional and non-conventional feedstuffs that are fed to livestock animals.
2. Describe various methods for feed processing and storage.
3. Assess the nutritional value of a ration or feed ingredients.
4. Interpret the NRC (Nutrient Requirement Council) guidelines for feeding livestock.
5. List the basic digestive anatomy for all classes of livestock.
6. Describe nutritional deficiencies and digestive disorders common to livestock animals

ANSC 1120L. Introduction to Animal Science Lab**1 Credit (2P)**

Students will observe and participate in activities related to farm animal management and will include areas of livestock selection, nutrition, reproductive physiology, animal ID and animal health. This lab is required for animal science majors.

Prerequisite(s)/Corequisite(s): ANSC 1120.

Learning Outcomes

1. To provide the students with an understanding of the principles, concepts and terminology of today's livestock industry

ANSC 1130. Western Equitation I**2 Credits (4P)**

Basic principles of Western riding, including care and management of the riding horse, equitation equipment, and development of riding skills.

ANSC 1140. Introduction to Dairy Science**3 Credits (3)**

Introduction to the basic aspects of dairy science and how to apply key concepts to the practical feeding and management of dairy cattle and production of dairy products. Students should also obtain an appreciation for the size and diversity of the dairy industry.

Prerequisite(s)/Corequisite(s): ANSC 1120. Restricted to Las Cruces campus only.

Learning Outcomes

1. Learn key concepts in dairy production and management
2. Be familiar with terms used in production of milk and milk products

ANSC 1160. Introductory Horse Science**3 Credits (2+2P)**

The light horse industry; breeds; introduction to feeding, breeding, marketing and management; handling and selecting horses for breeding and performance.

Learning Outcomes

1. Describe and identify breeds of horses, their characteristics and their uses.
2. Demonstrate knowledge of basic physiology of horses by recalling parts of the horse, including bones, muscle, tendons and ligaments. Also, by ageing horses via teeth, body condition scoring and taking vital signs.
3. Demonstrate safe and proper handling of horses.
4. Demonstrate comprehension of basic nutrition and feedstuffs by formulating/correcting diets in clinical and non-clinical situations.
5. Recall aspects of basic reproduction by calculating a stallion book and recalling appropriate procedures for breeding.
6. Create informative articles that seek to educate the lay horse person about a topic covered in class.

ANSC 1170. Introduction to Animal Metabolism**3 Credits (3)**

Principles underlying the mechanisms of animal metabolism as they relate to production, maintenance, and health of animals.

Prerequisite: CHEM 1215G.

Learning Outcomes

1. This course provides an introduction to the study of the physiology of life.
2. The first part of the course covers acids and bases and the chemical nature of organic compounds.
3. The second part of the course relates to the chemistry of biomolecules (nutrients) and summarizes the chemical reactions of life (metabolism).

ANSC 1180. Companion Animal in Society**3 Credits (3)**

Examination of the historical, current, and potential future roles of companion animals in human society. Topics include animal domestication, breeds, exotic companion animals, the companion animal industry, and competitions and sports involving companion animals. Emphasis is on canine and feline species. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Discuss the theories regarding why, how, and when companion animals became domesticated.
2. Describe how selective breeding has optimized certain physiological and behavioral traits of companion
3. animals in order to fulfill the needs of individual people and society.
4. Explain the concept of human-companion animal interaction (HAI) and the influence this bond has on human behavior, health, society, and government policy/laws.
5. Understand the breadth and economic impact of the rapidly expanding companion animal industry and the recent expenditure trends of pet owners.
6. Discuss the past and present uses of companion animals and theorize regarding the future uses of companion animals in society
7. Be effective in searching for, and critically evaluating, scientific based resources.

ANSC 2120. Equine Management**3 Credits (3)**

Introduction and application of the business skills necessary to effectively manage the equine operation. Students will learn how to use strategic thinking and sound business management practices to succeed in the demanding equine industry.

Prerequisite: ANSC 1160.

Learning Outcomes

1. Develop a working knowledge of the business principles needed to operate a successful entrepreneurial enterprise.
2. Increase the awareness of the need for business principles in the aggregate function of an equine operation.
3. Gain a greater perspective of accounting, economic and financial principles in an equine business operation.

ANSC 2130. Western Equitation II**2 Credits (4P)**

Intermediate principles of Western riding, including reading horse behavior, limbering-up exercises, and developing riding skills. Introduction to rollbacks, turnarounds and stops.

Prerequisite: consent of instructor.

Learning Outcomes

1. Increasing the understanding of the student relative to equitation practices
2. Increase the students' ability to apply principles of Western Equitation to applied settings across a broad spectrum of outlets
3. Prepare the student to engage equine in a professional manner

ANSC 2140. Introduction to Companion Animal Science**3 Credits (3)**

Introduction to the care of common companion animal species. Species specific housing and nutrition are covered in the context of maximizing animal health and well-being and reducing disease. May be repeated up to 3 credits.

Learning Outcomes

1. Accurately use scientific terminology common to the companion animal discipline.
2. Compare and contrast the physiological similarities and differences between the various companion animal species studied in class.
3. Create dietary plans based on the nutritional needs of different companion animal species to optimize animal health and lifespan.
4. Identify symptoms of disease/injury at the early stages of illness in order to obtain Veterinary care and treatment as quickly as possible.
5. Design and construct species specific cages/vivariums to maximize animal well-being and health.
6. Educate others regarding providing the best possible care for a variety of companion animal species.

ANSC 2150. Management of Equine Operations**3 Credits (3)**

Introduction and application of business skills necessary to effectively manage the equine operation. Students will learn how to use strategic thinking and sound business management practices to succeed in the demanding equine industry.

Prerequisite(s): ANSC 1160.

Learning Outcomes

1. Acquire a working knowledge of different sectors of the equine industry, including business practices, management and marketing skills.

ANSC 2310. Introduction to Meat Science**3 Credits (2+3P)**

Fundamental aspects of the red meat industry. Lecture topics and laboratory exercises include the nutrient value of meat, meat preservation, meat safety, muscle structure and contraction, slaughter and processing of beef, lamb and pork, sausage manufacture, meat curing, meat cookery, and muscle and bone anatomy.

Learning Outcomes

1. Increasing the understanding of meat science applications across animal agriculture.
2. Increase the students' ability to apply principles of production to the industry perspective.
3. Apply the increased knowledge of meat science in a global situation.
4. Gain an understanding of the components involved in the development and processing of the red meat industry.

ANSC 2330. Animal Production**3 Credits (2+2P)**

Production and utilization of beef cattle, sheep, and swine; emphasis on feeding, breeding, management problems and marketing; selection of animals for breeding and market

Learning Outcomes

1. Increasing the understanding of meat animal production.
2. Increase the students' ability to apply principles of production to the industry perspective.
3. Apply the increased knowledge of meat animal production to global situations.
4. Gain a broader understanding of the importance of meat animals in the global food system.

ANSC 2340. Genetics in Animal Science**3 Credits (3)**

Introduction to genetics and inheritance relative to livestock production. Introduction to procedures for collection and use of performance information in livestock improvement programs.

Prerequisites: BIOL 2610G.

Learning Outcomes

1. Gain a broader understanding of the role genetic impacts in the livestock industry.
2. Employ an increased knowledge of impact of genetics in the food animal industry and the production
3. and economic principles that apply.
4. Recognition of the global impacts of genetics in the food animal industry in a global setting.

ANSC 2996. Special Topics**1-4 Credits**

Specific subjects and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester. No more than 9 credits toward a degree.

Learning Outcomes

1. Varies

ANTH-ANTHROPOLOGY (ANTH)

ANTH 1115G. Introduction to Anthropology**3 Credits (3)**

Anthropology is the systematic study of the humanity both past and present. The course introduces students to the four subfields of anthropology, which include archaeology, biological, linguistic and cultural anthropology. Students will learn about the concepts and methods that anthropologists use to study our species and gain a broader perspective on the human experience.

Learning Outcomes

1. Describe and summarize terms, approaches, and cultural and biological adaptations in the four subfields of anthropology. Explain and analyze conceptual and ethical arguments in the four subfields of anthropology. Effectively communicate content, perspectives, and ideas in four subfields of anthropology. Critically evaluate sources, approaches, and arguments in the four subfields of anthropology.

ANTH 1135G. Introduction to Biological Anthropology**3 Credits (3)**

This course provides a basic introduction to the broad field of biological anthropology. The research interests of biological anthropologists include the history and development of modern evolutionary biology, molecular and population genetics, modern primates, the primate and human fossil record, and modern human biological diversity.

Corequisite(s): ANTH 1135L.

Learning Outcomes

1. Summarize the basic principles of evolution and recognize how they apply to the human species. Recognize the biological and behavioral continuity of humans with all life, and especially other modern primate species. Identify ways in which the human species is biologically and behaviorally unique. Summarize fossil evidence for human evolution. Distinguish the major Paleolithic industries and outline the behavioral and cognitive changes indicated by the fossil and archeological evidence. Critically evaluate popular accounts of human variation and human evolution. Interpret modern human dilemmas (e.g., overpopulation, co-evolution of disease, and genetic engineering) from an evolutionary perspective. Discuss in class and analyze in writing scholarly arguments concerning course concepts.

ANTH 1135L. Introduction to Biological Anthropology Lab**1 Credit (2P)**

This laboratory course expand on the topics covered in lecture course and uses scientific methods and principles to examine evidence for the process of evolution, the nature of heredity, human evolutionary history and family tree relationships, primate ecology and behavior, and modern human diversity.

Hands-on experience with fossil and skeletal material will be an important part of the learning process. Corequisite(s): ANTH 1135G

Learning Outcomes

1. Demonstrate an understanding of the scientific method. Employ principles of Mendelian genetics to determine genotype and phenotype probabilities, and calculate gene, genotype, and phenotype frequencies using the Hardy-Weinberg Equilibrium formula. Demonstrate an understanding of cell structure and functions. Use common lab and anthropometric equipment such as a compound microscope and calipers. Discuss primate evolution, and compare and contrast members of the Primate order in terms of structure, behavior, and phylogeny. Classify hominid species based upon selected traits such as anatomical changes associated with bipedalism, changes in the size and structure of the brain, and the development of culture. Locate and describe the major bones of the human skeleton, and identify characteristics of human skeletons or skulls such as gender, age, and ancestry. Discuss current research in genome analysis of various hominid populations.

ANTH 1136. Introduction to Historic Preservation**3 Credits (3)**

Introduction to historic preservation, its history, goals, methods, legal basis, and economic importance. Explores public role in decision-making.

Community Colleges only.

Learning Outcomes

1. Understand why historic preservation is important;
2. be familiar with what is important to preserve;
3. know who among the general public, state, and federal governments is responsible for preserving the past;
4. Have gained experience in how we all preserve.

ANTH 1137G. Human Ancestors**3 Credits (3)**

Evolutionary history of the human species from its origin in the primate order, with primary emphasis on the evolution of humankind during the past three million years. Examination of the social lives of apes and consideration of similarities to and differences from them. Biological foundations of human behavior, emphasizing thought, movement, and interaction.

Learning Outcomes

1. Describe the evolution of the human species, from its origin in the primate order to the emergence of Homo sapiens, and to the present-day.
2. Describe the social lives of apes and identify similarities to and differences between apes and humans.
3. Explain the biological foundations of human behavior.

ANTH 1140G. Introduction to Cultural Anthropology**3 Credits (3)**

This is an introductory course that provides an overview of cultural anthropology as a subfield within the broader discipline of anthropology and as a research approach within the social sciences more generally. The course presents core concepts and methods of cultural anthropology that are used to understand the ways in which human beings organize and experience their lives through distinctive cultural practices. More specifically, this course explores social and cultural differences and similarities around the world through a variety of topics such as: language and communication, economics, ways of making a living, marriage and family, kinship and descent, race, ethnicity, political organization, supernatural beliefs, sex and gender, and globalization. This course ultimately aims to present a broad range of perspectives and practices of various cultural groups from across the globe.

Learning Outcomes

1. Introduce students to the basic concepts and research methods of cultural anthropology as one of the disciplines of social science, including fundamental concepts, such as culture and society, which form the pillars of the discipline (e.g., cultural relativism, cultural persistence and change, world-view and enculturation). Comprehend the importance of studying cultural anthropology. Demonstrate knowledge of the practice of anthropological research in the modern world that is increasingly multicultural, transnational and globally interconnected (e.g., globalization and modern world system). Demonstrate an awareness of how students' own cultures shape their experiences and the way they see the world, as well as help them understand and interact with other cultures. Understand how beliefs, values and assumptions are influenced by culture, biology, history, economic, and social structures. Gain a sense of relationship with people possessing different experiences from their own. Gain a deeper understanding and appreciation for cultural anthropology as a broad discipline through learning about its practices, and differentiating cultural anthropology from other disciplines that study

ANTH 1160G. World Archaeology**3 Credits (3)**

This course is an exploration of human evolution and cultural development throughout the world. Students will be introduced to basic anthropological methods and theories and will learn how anthropological research has contributed to our understanding of major themes in human prehistory, including human evolution, the origins of culture, migration and colonization, animal and plant domestication, and the rise and fall of civilizations.

Learning Outcomes

1. Describe and explain the major developments in human prehistory.
2. Identify and describe major archaeological cultures throughout the world.
3. Employ critical thinking skills in the evaluation of competing theories about the past.
4. Select and use relevant archaeological evidence to explain how prehistoric populations adapted to their natural and cultural environments.
5. Demonstrate competency in written communication.

ANTH 2140G. Indigenous Peoples of North America**3 Credits (3)**

This course is a general survey of the history and ethnology of indigenous groups in North America. The course is designed to give students a comprehensive view of major issues pertaining to the indigenous cultures of North America, such as family structure, social organization, subsistence and contemporary economies, environmental adaptation, Indian-White relations, religious practices, and contemporary issues.

Learning Outcomes

1. Demonstrate familiarity with common elements pertaining to the languages and social organization of indigenous peoples in North America.
2. Recognize fundamental differences and similarities among traditional indigenous cultures.
3. Describe social relations of indigenous peoples in relationship to other ethnic groups.
4. Identify and analyze important ways that European societies and cultures and indigenous societies and cultures interacted from the time of Columbus to the present.
5. Evaluate the impacts of Euroamerican policies and programs on indigenous cultures.
6. Distinguish major social issues facing contemporary indigenous communities in North America.
7. Understand objectives and limitations of cross-cultural analysis in anthropology as they relate to the study of indigenous peoples in North America.
8. Demonstrate research and communication skills as they relate to the study of indigenous peoples in North America.

ANTH 2150. Indigenous Peoples of the American Southwest**3 Credits (3)**

This course is a study of indigenous cultural groups of the American Southwest. Students will explore historical and contemporary cultural and social patterns of American Indian, Hispanic and Anglo-American groups.

Learning Outcomes

1. Describe socio-cultural developments, geographic environments, and characteristics of major cultural groups that currently inhabit the American Southwest.
2. Recognize underlying similarities as well as the wide range of variability of the cultural groups in the American Southwest.
3. Recognize the impacts and effects of Euroamerican colonization on indigenous cultural groups in the American Southwest.
4. Describe the historical interactions and accommodations among indigenous cultural groups in the American Southwest.
5. Examine the processes of cultural change within major cultural groups in the American Southwest.
6. Identify and analyze some of the contemporary issues faced by major cultural groups in the American Southwest.

ANTH 2996. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Learning Outcomes

1. Varies

ARCH-ARCHITECTURE

ARCH 1105. Orientation and Mentoring in Architecture-Construction-Engineering (ACE)

1-6 Credits (1-6)

This course is intended for high school dual credit students and college/university students wishing to explore careers in Architecture, Construction, and Engineering (ACE), which includes the specific fields of Architectural, Civil, Mechanical, Structural, Interior, Landscape, Sustainability, and Environmental. Students receive one-on-one mentoring, attend field trips, and engage in hands-on activities. May be repeated up to 6 credits. Restricted to Community Colleges campuses

Learning Outcomes

1. Career opportunities related to 'ACE'
2. Career requirements: Education
3. Career requirements: Experience and/or examination(s)
4. Overview of construction/management
5. Overview of Architecture
6. Overview of Civil engineering
7. Overview of Surveying
8. Overview of Mechanical Engineering
9. Overview of Electrical Engineering
10. 1 Overview of Landscape Architecture
11. 1 Overview of Interior Design
12. 1 Overview of Sustainable design
13. 1 Overview of the Design Process
14. 1 Basic Structural Specifications.
15. 1 Structural drafting/detailing principles
16. 1 AutoCAD applications: Sheet Layout, Drawing Standards, Efficiency, Speed, Accuracy
17. 1 Structural CAD software applications
18. 1 Sustainability in Structural Systems

ARCH 1110. Architectural Drawing

4 Credits (2+4P)

This course is designed as an introduction to architectural drawing and design for students without prior experience in the fine arts. Students are guided through a series of spatial and analytical exercises that focus attention on not only how architects draw, but also the reasoning and processes embedded within the technique. Students are provided exposure to a wide range of interconnected architectural concepts and to manual and digital drawing, as well as modeling techniques for architectural and interior design. Students will learn how to represent composition, form, and space by orthographic drawing, paraline and perspective views, and freehand sketching. Three-dimensional model building techniques will also be introduced.

Learning Outcomes

1. Gain understanding of basic methods of architectural drawing
2. Explore and gain understanding of concepts of spatial design and its representation through exercises
3. That stress analytical ability and an awareness of rational design process
4. Gain an understanding of the design process with practice and various exercises
5. Gain exposure to architectural delineation
6. Demonstrate an understanding of specific skills and concepts related to architectural drawing
7. Create and modify architectural models through various phases of a project
8. Demonstrate a knowledge of graphic standards according to industry conventions
9. Identify the various phases of work with regard to the architectural and interior design professions
10. 1Develop analytical and critical thinking skills

ARCH 1112. Global Issues and Sustainability**3 Credits (3)**

Introduction to global environmental issues (historic, present, and future), and the impact on tomorrow's design and construction professions. Issues will include, but shall not be limited to global warming, energy consumption, population, natural resource consumption, air and water quality, waste management, facilities operation management, politics, and facilities design & construction. The impact on the design and construction industry, including 'Green Building' and 'LEED Accreditation and Certification/Criteria' will also be addressed. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Discover global environmental history to better understand sustainable topics and change your behavior in the future.
2. Expand your knowledge on environment, natural resource consumption, human intervention, politics, and design and construction industry to support your education and future careers.
3. Learn how the US Green Building Council LEED (Leadership in Energy and Environmental Design) certification and Accredited Professional training expands your knowledge on green building design criteria; will help you determine whether you want to take the LEED exam.
4. Examine the many sides of climate change and its effects on the globe as well as our individual microclimate and personal lives to learn how to adapt to the current changes
5. Learn how to effectively research, report, present, and debate environmental topics to help you in your education and future careers.

ARCH 1114. Introduction to Architectural Design**3 Credits (2+2P)**

This course provides students who possess a basic background in architecture and architectural drawing with an introduction to architectural design. Students are guided through a series of spatial and analytical exercises that focus attention on two dimensional, three dimensional, and four dimensional design. This course will build on direct linkages to ARCH 1120 and ARCH 1110 to further students' exposure to interconnected architectural concepts of process, organizational strategies, and analysis of material methodology while utilizing abstract and practiced graphical architectural conventions. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): ARCH 1120 and ARCH 1110.

Learning Outcomes

1. Develop critical thinking strategies through a series of connected exercises in order to explain, demonstrate, categorize, compare, contrast and assess information/evidence.
2. Explore concepts of design through spatial design and apply these concepts through a series of progressive representational exercises that stress analytical ability and an awareness of rational design process.
3. Gain skills in the application of graphical communication in a range of media.
4. Enhance abilities in selecting specific information and applying that information to problem solve issues/concerns required to complete a task, while considering other implications.
5. Develop skill sin writing and speaking effectively and use representational media appropriate for both within the profession and with the public.
6. Gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.
7. Utilize basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.
8. Apply fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.
9. Demonstrate basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system

ARCH 1120. Introduction to Architecture**3 Credits (2+2P)**

This course provides students the tools and vocabulary to analyze, interpret and discuss the built environment from the social, historical, perceptual and technical determinants. Students are introduced to elements, principles, and theories of architecture through their social, historical, and technical determinants. The course seeks to lay a foundation in architectural studies, including introducing students to fundamental vocabulary and concepts.

Learning Outcomes

1. Identify and describe significant architects and iconic buildings
2. Discuss social, cultural, and aesthetic contributions of specific architects and projects
3. Explain architectural concepts via written and graphic communication
4. Recall basic processes and vocabulary of architectural professional practice
5. Understand our built environment and the language of design and architecture
6. Understand how buildings are constructed and explain the process of development
7. Describe and discuss design elements, principles, and theories
8. Understand the relationships among owner, surveyors, designers, architects, engineers, and contractors
9. Research design texts and analyze buildings, landscapes, interiors, sustainability, and products to
10. increase knowledge of important elements of architecture and design
11. Identify the various styles, periods, and movements and their social, historical, and technical impacts on architecture

ARCH 1121. Computers in Architecture**3 Credits (2+2P)**

Explore various software and photography techniques widely used in the architectural field. In addition to using industry standard CAD program as primary 2-d drafting tool, focus is to produce digital architectural models and renderings, presentation boards, and animations. Digital images will be produced and enhanced through basic techniques in photography and integration of various software. Both individual and group work will be required.

Learning Outcomes

1. Demonstrate the use of the computer and plotters/printers
2. Define and understand different terminologies
3. Demonstrate the understanding of different files using windows operating system
4. Understanding the appropriate use of the software in order to produce necessary drafting outcomes
5. Use proper plotting and printing procedures in order to increase efficiency and minimize paper waste
6. Demonstrating the use of different line types as they relate to drafting

ARCH 1122. Architectural Design Studio I**5 Credits (1+8P)**

Enhancement of general graphic communication skills and introduction to fundamental design including exploration, development and defense of design concepts; structural order; 2D and 3D processes in manual and digital architectural graphic expression; model building; general communication and presentation techniques; and development of course portfolio. Course is Studio/critique-based with considerable amount of work/hours required. This course is designed to be taken during student's last year in the Pre-Architecture program at DACC. Consent of Instructor required. Restricted to Community Colleges only.

Prerequisite(s): Grade of B- or better in both ARCH 1120 and ARCH 1110.

Learning Outcomes

1. Write and speak effectively and use representational media appropriate for both within the profession and with the general public.
2. Raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards
3. Gather, assess, record, and comparatively evaluate relevant information and performance in order to
4. support conclusions related to a specific project or assignment.
5. Effectively use basic formal, organizational and environmental principles and the capacity of each to inform two-and three-dimensional design.
6. Apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two-and three-dimensional design.
7. Examine and comprehend the fundamental principles present in relevant precedents and to make
8. informed choices about the incorporation of such principles into architecture and urban design projects.
9. Prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability
10. requirements, and an assessment of their implications for the project; and a definition of site selection and
11. design assessment criteria.
12. Respond to site characteristics, including its context and developmental patterning, the fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design. Design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.
13. 1Demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.
14. 1Understand the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

ARCH 1220. Architecture World History I**3 Credits (2+2P)**

A survey of the development of world architecture from the ancient era to the advent of the enlightenment in Europe. Major emphasis is on the visual, intellectual, cultural and technological aspects of the ancient and indigenous cultures of the classical and pre-modern world. Community Colleges only. Restricted to Alamogordo, Dona Ana and Grants campuses.

Learning Outcomes

1. Identify major architectural monuments from prehistory to the Renaissance (1400's) in the Western world
2. Demonstrate an understanding of major monuments, styles of architecture and building traditions of non-Western cultures
3. Recognize the relationship of movements and styles in Western architecture to their counterparts in painting and sculpture from the various historical periods
4. Describe the basic principles of urban design
5. Express an appreciation of architectural achievements and the ways in which the elements of art {line, form, color, texture, light, etc.) combine to produce objects of beauty in the built environment
6. Describe basic engineering concerns and achievements in architecture

ARCH 1310. Introduction to Architecture, Engineering, & Construction**3 Credits (3)**

Introduction to and exploration of careers in the fields of architecture, engineering, and construction. Specific fields to include: architecture, civil engineering, mechanical engineering, structural engineering, engineering technology, residential construction, commercial construction, geographical information systems (GIS), surveying, sustainable design, and green building Crosslisted with: DRFT 100.

Learning Outcomes

1. Prepare accurate written technical documents, Produce drawing documents that are technically sound, Develop and practice productive work skills, and Upgrade technical knowledge and skills to keep pace with real-world changes ARCT 100 Course Competencies Describe different career options in architecture, engineering, and construction, Define the roles of different design professionals and support staff, Explain related educational and professional licensing requirements, Articulate employer expectations, Explore related courses and programs of study at DACC and NMSU, and Develop good workplace skills and professional, productive work habits.

ARCH 2111. Architectural Delineation I**3 Credits (2+2P)**

Introduction to visual literacy, architectural graphic communication, & basic analytical skills. Architectural concepts primarily explored through the application of technical drawing, descriptive geometry, & material manipulation; primarily black & white media. Use of digital tools and media as applicable. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Develop and utilize visual observation skills
2. Translate visual observations into graphical information
3. Develop and utilize critical thinking in the development of projects
4. Develop effective line drawing techniques
5. Produce graphical representations using various shading techniques
6. Communicate design concepts and ideas clearly

ARCH 2113. Sustainable Design in Architecture**3 Credits (3)**

This course provides students with hands-on opportunity to increase their awareness in, and respond to the issues of responsible environmentally friendly building design by engaging in an integrated design process combining 'Traditional Design Process' with 'Sustainable Environmental Design' strategies. Students will expand their awareness of global environmental impacts due to design and construction, and gain knowledge in the industry's leading design 'tool' LEED (Leadership in Energy and Environmental Design) green building design rating system. LEED strategies will be utilized in the design of individual projects apply LEED in practical, individual design development, and develop an integrated building model utilizing the concept of BIM (Building Information Modeling). Such project development will require learning a basic design process and specific sequence including conceptual design, schematic design, design development and BIM (utilizing a BIM software such as REVIT, or AutoCad Architecture). May be repeated up to 3 credits.

Prerequisite(s): DRFT 109 or DRFT 165 or ARCH 2114.

Learning Outcomes

1. Understand Global Issues that impact sustainability of resources and quality of/equity in life.
2. Understand the impact of buildings on the environment
3. Identify the basic principles of 'green' design and construction
4. Identify and Interpret basic principles of the LEED green building rating system
5. Engage in research of green technologies and design practices
6. Understand the essential steps of the design process
7. Develop a basic building design which qualifies for at least LEED Certified rating
8. Utilize a BIM integrated software package to develop a virtual Building Information Models
9. Develop presentation posters and slideshow of design work
10. Conduct project presentations, and critique work of peers in a clear, concise manner

ARCH 2114. Construction Documents**3 Credits (2+2P)**

Basic use of CAD to produce residential, commercial, and industrial architectural working drawings, including floor plans, sections, foundation plans and details, exterior and interior elevations, framing plans, and site plans. Use and application of building and zoning codes, typical construction methods and materials, and accessibility requirements. Basic 3-D modeling, AIA layering standards, sheet layout, and construction document coordination.

Restricted to: Community Colleges only.

Prerequisite(s)/Corequisite(s): DRFT 109.

Learning Outcomes

1. Create full 3D architectural project models, both via tutorials, and independently
2. Set models up as working drawings.
3. Have a working knowledge of the tools that the majority of users will use to work with Revit Architecture.
4. Project File management skills

ARCH 2115. Architecture Design Studio II**5 Credits (1+8P)**

Advanced graphic communication, design, and 3D physical model representation. Focus on site analysis, programming and fundamental design issues of context, environment, program development and space planning, 2D and 3D design and presentation techniques. Course is 'Studio/critique-based' with considerable amount of outside work/hours required. This course is designed to be taken during student's last year in the Pre-Architecture program at DACC. Restricted to Alamogordo, Dona Ana and Grants campuses.

Prerequisite(s): Grade of C- or better in ARCH 1122.

Learning Outcomes

1. Write and speak effectively and use representational media appropriate for both within the profession and with the general public.
2. Raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards
3. standards
4. Gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.
5. Effectively use basic formal, organizational and environmental principles and the capacity of each to inform two-and three-dimensional design.
6. Apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two-and three-dimensional design.
7. Examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.
8. Prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including
9. existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.
10. Respond to site characteristics, including its context and developmental patterning, the fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.
11. Design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.
12. 1Demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.
13. 1 Understand the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

ARCH 2116. Architectural Delineation**3 Credits (2+2P)**

Continuation of ARCH 2111 with an emphasis in color media.

Prerequisites: ARCH 2111.

Learning Outcomes

1. Develop and utilize visual observation skills
2. Translate visual observations into graphical information
3. Develop and utilize critical thinking in the development of projects
4. Develop effective line drawing techniques
5. Produce graphical representations using various shading techniques
6. Communicate design concepts and ideas clearly

ARCH 2122. LEED Accreditation Exam Prep**3 Credits (3)**

This course is intended for anyone in the construction or architectural design fields who is interested in learning more about green building and the LEED (Leadership in Energy and Environmental Design) strategies, and are also interested in learning about how to become LEED accredited. Overview of the LEED rating systems utilized in the design and operation of buildings, the various LEED building certifications, and accreditation requirements for professionals. Highlights include interpretation of the LEED Reference Guides, accepted strategies for meeting LEED certification, sample practice exams, integrated project delivery methods, and a practical approach to problem solving through the use of design problems. Restricted to Community Colleges only.

Learning Outcomes

1. The student completing this course should gain knowledge and skills for each of the topics covered in the Course Outline.
2. Successful completion of this course should give each student a working knowledge of various LEED Rating Systems, and LEED GA Study Guides.
3. Students will develop critical thinking strategies to enable them to develop preliminary design and plan checking for code compliance.
4. Students should develop acceptable and productive work habits

ARCH 2124. Professional Development and Leadership-AIAS**1-3 Credits**

As members and/or officers of student professional organizations, architecture students gain experience through undertaking leadership roles, participating in team building, and becoming involved in service to the community. Students can also gain actual work experience involving skills related to their field of study. Graded S/U.

Learning Outcomes

1. Leadership skills
2. Presentation techniques and public speaking
3. Organizational and teambuilding skills
4. Architecture-related skills
5. Community organizations and service

ARCH 2220. Architectural World History II**3 Credits (2+2P)**

A survey of the development of world architecture from the enlightenment in Europe to the present. Community Colleges only. Restricted to Alamogordo, Dona Ana and Grants campuses.

Prerequisite(s): ARCH 1220 or consent of instructor.

Learning Outcomes

1. Identify major architectural monuments from 1400 to the present in the Western world
2. Identify major architectural monuments from 1400 to the present in the Western world
3. Recognize the relationship of movements and styles in Western architecture to their counterparts in design, painting, and sculpture from the various historical periods
4. Describe the basic principles of urban design
5. Express an appreciation of architectural achievements and the ways in which the elements of art (line, form, color, texture, light, etc.) combine to produce objects of beauty in the built environment
6. Analyze basic engineering concerns and achievements in architecture

ARCH 2994. Portfolio Design in Architecture**3 Credits (3)**

This course is intended for Pre-Architecture students in their last semester of the program. Students develop a comprehensive portfolio that compiles, organizes, and showcases their most accomplished coursework produced in Architecture courses at DACC, in preparation for application to a 4 yr. Architecture program. Skills and techniques in architectural photography, scanning, and design layout using graphic software. Restricted to Community Colleges only.

Corequisite(s): ARCT 2115.

Learning Outcomes

1. Edit and enhance previous drawings, digital files, and models.
2. Research and learn about portfolio and layout styles.
3. Development/Presentation of Final Portfolio for application/transfer purposes, as well as presenting it to the class and other reviewers.
4. Document drawings, models, digital work and other productions accurately and effectively.
5. Organize their coursework and select the images that best showcase learned skills
6. Develop organizational habits to record and document their work and back up digital copies
7. Develop analytical skills to produce an effective layout to then produce a portfolio
8. Organize, layout and design their own portfolio.

ARCH 2995. Cooperative Experience**1-6 Credits**

Supervised cooperative work program. Student employed in approved occupation; supervised and evaluated by employer and instructor. Student meets weekly with instructor. Graded S/U.

Prerequisite: consent of instructor.

Learning Outcomes

1. Varies

ARCH 2996. Special Topics**1-6 Credits**

Topics subtitled in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

Learning Outcomes

1. Varies

ARTH-ART HISTORY

ARTH 1115G. Orientation in Art**3 Credits (2+3P)**

A multicultural examination of the principles and philosophies of the visual arts and the ideas expressed through them.

Learning Outcomes

1. Identify elements of art principles of design.
2. Articulate the relationship of art to the human experience.
3. Write and discuss critically using the vocabulary of art.
4. Interpret art within cultural, social, personal, and historical contexts.
5. Critically analyze an original work of art.

ARTH 2110G. History of Art I**3 Credits (3)**

This survey course explores the art and architecture of ancient pre-historic cultures through the end of the fourteenth century. While focused primarily on the art of the Western civilizations, this course will also provide insights into the works of other major cultures in order to provide alternate views of art and history. Emphasis will be placed on the relationship of artworks to political, social, spiritual, intellectual, and cultural movements that affect and are affected by their creation and development.

Learning Outcomes

1. Identify major artworks from a variety of regions and time periods.
2. Investigate the methods of producing various works of art.
3. Articulate an understanding and appreciation for the political, social, spiritual, intellectual, and cultural contexts of art forms.
4. Comprehend and apply terms, methodologies and concepts common to studies of art history, developing a language to further understanding of art.
5. Compare works across a range of historical styles and periods.

ARTH 2120G. History of Art II**3 Credits (3)**

This survey course will explore the architecture, sculpture, ceramics, paintings, drawings, and glass objects from the 14th century to the modern era. While focused primarily on the art of the Western civilizations, this course will also provide insights into the works of other major cultures in order to provide alternate views of art and history. Emphasis will be placed on the relationship of artworks to political, social, spiritual, intellectual, and cultural movements that affect and are affected by their creation and development. May be repeated up to 3 credits.

Learning Outcomes

1. Identify major artworks from a variety of regions and time periods.
2. Investigate the methods of producing various works of art.
3. Articulate an understanding and appreciation for the political, social, spiritual, intellectual, and cultural contexts of art forms.
4. Comprehend and apply terms, methodologies and concepts common to studies of art history, developing a language to further understanding of art.
5. Compare works across a range of historical styles and periods.

ARTH 2136. Writing in Art**3 Credits (3)**

This class looks at the variety of writings associated with art history and studio art practice. It explores the discipline of art history itself, and introduces students to the specific ways in which art historians study art. Within a workshop setting, students will practice approaches to research, understanding art and writing about art. Students will also be introduced to professional writing practices, including digital formats, relating to studio art.

Learning Outcomes

1. Develop visual literacy in looking at art
2. Analyze a complex art historical argument
3. Apply art specific vocabulary to critically-based writings and discussions of art
4. Develop writing skills to articulate the relationship of art to the human experience

ARTS-ART STUDIO

ARTS 1121. Foundations in Art

3 Credits (2+4P)

The Foundations course will focus on a deceptively simple question. "What is Contemporary Art, and how can we make it?" Through the exploration of basic visual design concepts, collaborative learning, and interdisciplinary studio production, this course will help us to discover what it means to be an artist in the 21st century.

Learning Outcomes

1. Create original works of art through the investigation of ideas and concepts resulting in the communication of meaning. Develop forms that convey meaning. Evaluate works of art through critiques that appraise how the form communicates meaning. Justify the decisions that were made in the use and application of the chosen medium and form to communicate meaning in a work of art. Analyze the differences in clarity of communication between works of art based subject matter, medium and form. Apply knowledge provided in lectures to produce works of art that communicate meaning. Demonstrate an ability to express concepts in visual form. Understand how the choice of subject matter, medium and form translate in the expression of concepts through discussion and description. Remember the fundamental tenets of art, elements and principles of design, through the duplication of them in works of art as well their use in discussions.

ARTS 1145G. Visual Concepts

3 Credits (2+4P)

Visual Concepts is an introduction to the philosophies of art, visual thinking, and principles of visual organization. Designed to give students a broad view of aesthetic traditions, ideologies, and techniques basic to the creation and evaluation of art. Principles and concepts are taught in a common lecture and applied in parallel small studio sections. For non-art majors only.

Learning Outcomes

1. Develop understanding of history, major styles and contemporary issues in art.
2. Introduce students to the language of visual perception and aesthetic evaluation.
3. Introduce students to the fundamental processes of visual perception and artistic expression.
4. Develop students' confidence in using various art materials for artistic expression.
5. Develop students' ability to verbalize ideas and processes in art making.
6. Develop student's ability to communicate through writing about art and art experiences.

ARTS 1240. Design I

3 Credits (3)

This course introduces the fundamentals of two-dimensional design as it applies to fine art and commercial contexts. Emphasis will be on basic color theory, elements of dynamic composition, vocabulary of visual arts and design, and development of visual conceptual skills. Students will use a variety of materials and techniques. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Produce art works that apply and organize the elements of two-dimensional form (line, shape, value, texture, color and space).
2. Produce artworks that apply the principles of two-dimensional design (harmony, variety, repetition, balance, rhythm, proportion, dominance, movement, and economy).
3. Demonstrate effective use of materials and techniques with consideration for craftsmanship and presentation.
4. Use visual art vocabulary in the development and critique of work
5. Explore concepts and ideas: from conceptual, realistic/referential to non-representational

ARTS 1250. Design II

3 Credits (3)

This course introduces the basic formal (aesthetic), spatial, and physical aspects of 3-D form as they can be applied to sculptural and functional design. Techniques that explore structure, mass, volume, scale, surface, form, and function are covered, along with various media, which may include paper, wood, clay, and/or metal. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Apply the artistic qualities of the elements of art and principles of design to three-dimensional form.
2. Create 3 dimensional form using varied sculptural methods, construction techniques and media.
3. Produce 3 D design projects safely with proper use of equipment and materials.
4. Apply realistic, referential, and abstract concepts and ideas to projects.
5. Demonstrate knowledge of 3-D related art vocabulary, origin and trends in sculpture, and 3-D design fundamentals.

ARTS 1310. Introduction to Ceramics**3 Credits (2+4P)**

This course introduces the technical processes and conceptual concerns of working with ceramic material. Various methods of forming functional and expressive works out of clay are explored. Methods used include handbuilding and throwing, basic clay bodies, slip and glaze, and atmospheric firing.

Learning Outcomes

1. Explain the transformation of the ceramic material from raw clay form to glazed ceramic object
2. Demonstrate proficiency of technical ceramic skills
3. Explain larger concepts and design principles
4. Apply basic 3-D design principles in the formation of a work of art, as they apply to the ceramic media
5. Create ceramic works of art based on conceptual prompts
6. Critically evaluate a variety of artwork
7. Gain an understanding of the history of ceramic art from a multicultural perspective

ARTS 1320. Ceramics I**3 Credits (2+4P)**

An introduction to the medium of clay incorporating hand building and wheel throwing to introduce the student to both the sculptural and utilitarian uses of clay. The student will also be introduced to a variety of glazing and firing techniques

Learning Outcomes

1. Demonstrate through critical discourse or writing an introductory knowledge of the history of ceramics, and ceramic language and terminology.
2. Demonstrate through mechanical application an introductory knowledge of the properties of clays, glazes, and a variety firing techniques.
3. Produce a body of work that exemplifies good ceramic design through the effective use of form, surface, and color.
4. Through the production a body of work demonstrate competency in hand building and throwing on the wheel.

ARTS 1410. Introduction to Photography**3 Credits (2+4P)**

This course introduces the making of photographic images from a broad viewpoint to consider both as an art practice and as a cultural practice. The course covers technical information on camera use and functionality, composition and visual design, digital workflow and editing, professional functions of manipulating and enhancing images, and printing correctly and effectively. The historical aspects of photography are also covered. May be repeated up to 3 credits.

Learning Outcomes

1. Gain fluency with basic camera function as well as a working knowledge of other photographic equipment and software to produce technically competent photographs
2. Have a familiarity with current image-editing software to enhance images as well as developing a digital workflow for the management of digital images
3. Be able to develop creative solutions to visual photographic problems
4. Gain awareness of contemporary issues in contemporary art photographic practice that can be applied to the one's own individual practice
5. Develop the ability to critically analyze and discuss photographic images
6. Print and produce a final project that demonstrates synthesis of ideas presented in the course readings, critiques, and individual research
7. Demonstrate photographic terminology, and the many ways photographs function in society, both currently and historically

ARTS 1520. Digital Media I**3 Credits (2+4P)**

This course provides an introduction to two of Adobe's major software applications, Illustrator and Photoshop, which are essential in creating artwork, designing promotional materials, websites and more. Part of the course deals with creating a variety of documents using the major tools of each program, and gaining an understanding of the contemporary graphic design industry and basic elements and principles of design. Community Colleges only.

Learning Outcomes

1. Demonstrate appropriate skills in configuring and navigating computer systems software applications as appropriate to digital image making needs including organization of files using keywords and running batch processes.
2. Exhibit an understanding of a layer based bitmap editing program, through photo retouching, precise use of selection tools, and color adjustment techniques.
3. Create imagery using a vector based illustration program which demonstrates an understanding of vector based drawing tools.
4. Integrate the use of bitmap and vector images using bitmap and vector based image making applications to demonstrate a basic understanding of composition, color, and appropriate image size and resolution.

ARTS 1610. Drawing I**3 Credits (2+4P)**

This course introduces the basic principles, materials, and skills of observational drawing. Emphasis is placed on rendering a 3-D subject on a 2-D surface with visual accuracy. Other topics include historical and contemporary references as well as an investigation of linear perspective, line, value, shape, space & composition. May be repeated up to 3 credits.

Learning Outcomes

1. Produce drawings that demonstrate techniques and mechanics of observational drawing.
2. Demonstrate competency in the following practices: measuring and sighting, gesture, contour line, negative space, shape, value, space, volume, plane and texture.
3. Create drawings primarily from observation with black and white traditional drawing media.
4. Demonstrate effective verbal or written response to one's own art and the art of others.

ARTS 1630. Painting I**3 Credits (2+4P)**

This course introduces the tradition of painting as a medium for artistic expression. Students will investigate materials, tools, techniques, history and concepts of painting. Emphasis is placed on developing descriptive and perceptual skills, color theory, and composition. May be repeated up to 3 credits.

Prerequisite(s): ARTS 1610.

Learning Outcomes

1. Produce paintings that demonstrate the tradition of methods, techniques, materials, and tools of oil painting.
2. Construct a variety of support structures and grounds on which paintings are created
3. Examine the historical origins and practices of painting from the personal, social and cultural perspective.
4. Identify and apply environmentally safe painting practices, care of tools, equipment, and facilities, as well as disposal of mediums, solvents and paints.
5. Apply basic color theory to representational and non-representational painting.

ARTS 1710. Introduction to Printmaking**3 Credits (2+4P)**

This course provides direct experience of exploring basic printmaking processes, including relief, intaglio, and monoprint processes, as well as the investigation of materials/media, tools, techniques, history, and concepts of printmaking. Emphasis is given to solving problems through thematic development while producing a portfolio of prints.

Learning Outcomes

1. Properly operate a printing press and safely handle materials and equipment.
2. Demonstrate an adequate ability to utilize basic historical printmaking techniques that are widely relevant to contemporary, artistic expressions.
3. Utilize formal elements of art and design (line, shape, value, texture, space, and color), to create prints that are formally sophisticated.
4. Create imagery that contains conceptual depth, which can be interpreted by viewers with regard to social, cultural, political, geographical, and/or psychological experiences and relevance.

ARTS 1711. Computer-Based Illustration**3 Credits (2+4P)**

Introduction to the principles of computerized drawing and design. Using the basic concepts, drawing tools, and vocabulary of Adobe Illustrator.

Prerequisite: ARTS 1610, ARTS 1240, or consent of instructor.

Learning Outcomes

1. Demonstrate drawing with the pen tool.
2. Demonstrate the use of blending color and creating shapes.
3. Create spot colors and effectively use them in a page layout.
4. Demonstrate formatting and creating typography.
5. Demonstrate the use of layers, effects, graphic styles, symbols, and brushes
6. Demonstrate competency in creating digital graphics using of Adobe Illustrator software

ARTS 1712. Digital Graphics**3 Credits (2+4P)**

Importing and exporting images and text into various desktop publishing formats. Exploring imaging, drawing, and page layout applications. Introduction to typography.

Prerequisite: ARTS 1520.

Learning Outcomes

1. Demonstrate competency in the use of InDesign software.
2. Create appropriate visual solutions based on target marketing information.
3. Demonstrate competency in the design and production of advertising and promotional materials.
4. Present ideas and concepts effectively and competently.
5. Visually demonstrate design solutions to be used in a portfolio

ARTS 1713. Web Page Design**3 Credits (2+4P)**

Introduction to the creation of well-designed and organized Web sites. Emphasis on building creative but functional user-friendly sites. Introduction to HTML, Flash, Java Script, and Web-authoring software. Community Colleges only.

Prerequisite: ARTS 1520.

Learning Outcomes

1. Outline the structure and functionality of a typical website.
2. Demonstrate design and layout skills.
3. Demonstrate competency in the use of Dreamweaver software.
4. Demonstrate competency in the use of photo editing software.
5. Demonstrate skills learned for website functionality.
6. Create an Internet compatible website.

ARTS 1810. Jewelry and Small Metal Construction I**3 Credits (2+4P)**

This course introduces the basic techniques, materials, and tools traditionally used in the creation of jewelry and/or small-scale sculptural objects.

Learning Outcomes

1. Apply basic jewelry fabrication techniques (such as: piercing, cold connections, soldering, metal forming, casting and stone setting) to complete projects. Create design sketches of the objects prior to fabrication. Demonstrate knowledge of materials and safe practices for making jewelry, as well as small functional and non-traditional objects. Analyze projects through critiques, oral presentations, and discussions.

ARTS 2010. Portfolio Development**3 Credits (2+4P)**

This course presents the practicalities of building an art career with emphasis on developing a professional portfolio through visual aids, resumes, statements, and presentations. It covers professional practices of the studio artist including self-promotion, contracts, research tools for exhibition venues and other art related opportunities.

Prerequisites: ARTS 1712, ARTS 2611, and ARTS 1520, or consent of instructor.

Learning Outcomes

1. Develop a portfolio package with visual aids, photographic documentation, resumes, bios and artist statements.
2. Analyze the qualifications, procedures and portfolio requirements necessary for professional art related opportunities.
3. Complete an oral presentation on a series of personal works.
4. Distinguish pathways for navigating the business side of being a professional artist.

ARTS 2355. Stained Glass**3 Credits (2+4P)**

Instruction in the fundamental fabrication and design techniques for stained glass. Introduction to visual decision making skills, historical, and critical issues of the medium. Community Colleges only.

Learning Outcomes

1. Demonstrate an understanding of the theory, principles and procedures that comprise the art and science of designing at least four (40 stained glass techniques through both written and verbal assessments, as well as, actual completed examples of each technique.
2. Properly select and safely employ various glass studio tools, instruments, procedures, methods and techniques in the fabrication processes of stained glass.
3. Select and apply suitable problem-solving strategies in a practical studio environment.
4. Work cooperatively in a studio classroom.
5. Relate historical background and significant developments of glass in general and stained glass in particular.
6. Understand the chemical processes associated with various processes used in working with and manipulating glass.
7. Develop critical thinking and problem solving strategies in various stained glass fabrication technics.
8. Be able to critically analyze, assess and appreciate the value of glass works of every kind.

ARTS 2410. Black & White Photography**3 Credits (2+2P)**

This course introduces the fundamental techniques of black and white photography, which includes camera functions and use, exposure techniques and film processing, traditional darkroom printing, and presentation of work. Same as ARTS 1410.

Learning Outcomes

1. Demonstrate competent film development and photographic printing skills
2. Demonstrate an emerging understanding of aesthetic, compositional, conceptual, and communicative tools in photography including lighting and dynamic composition techniques.
3. Be able to critically analyze and discuss photographic images using photographic terminology
4. Demonstrate proper image adjustment and correction techniques, and apply proper exposure techniques

ARTS 2430. Photographic Portraiture**3 Credits (2+2P)**

This course covers the study of professional photography that involves people, including studio and environmental portraits. Topics include studio and exterior lighting techniques, and selecting lighting equipment and supplies. Restricted to: Community Colleges only.

Prerequisite(s): ARTS 1410 or FDMA 1545.

Learning Outcomes

1. Demonstrate successful operation of studio lighting equipment and accurately define lighting equipment terminology
2. Illustrate the principles of photographic lighting
3. Demonstrate and apply how to use and modify natural light effectively
4. Demonstrate understanding of different approaches such as formal, informal, candid, vernacular and their cultural implications
5. Distinguish historic and contemporary cultural notions informing different types of portraits

ARTS 2431. Introduction to Graphic Design**3 Credits (2+4P)**

Introduction to the principles of visual communication and digital media, letterforms, typography and identity marks. Projects produced using conventional and digital tools.

Learning Outcomes

1. Demonstrate working knowledge of the graphic design software.
2. Identify and apply basic design concepts for the purpose of visual communication.
3. Conduct visual research and create presentations on design topics.
4. Solve graphic design problems through solving fundamental communication challenges by sketching, drawing, typographic composition, use of image and color.

ARTS 2440. Photo Finishing & Presentation**2 Credits (1+2P)**

Use of visual language for personal expression. Freelance photography; care of original photos; preparation of portfolios, photographic markets, exhibitions and judging, galleries and copyrights. Students will prepare a photographic portfolio. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 1545.

Learning Outcomes

1. Define your target market and create a complete "Personal Promotional Package"
2. Produce a professional Resume Cover Letter.
3. Produce a professional looking Business Card, Letterhead Mailing Labels
4. Produce a single page Promotional Piece, (and possible follow-up material)
5. Produce a PDF Formatted Portfolio (Create in Photoshop Export as PDF)
6. Produce a clean, professional looking traditional hard portfolio with 20-30 pieces
7. Present the Entire Promotional Portfolio and promo materials in a "Job Interview"

ARTS 2610. Drawing II**3 Credits (2+4P)**

This course introduces color and colored media as an element of composition while emphasizing descriptive and perceptual drawing skills and conceptual approaches to contemporary drawing. Restricted to ART and ANVE/DFM majors.

Prerequisite(s): ARTS 1610.

Learning Outcomes

1. Create drawings in wet and dry color media.
2. Practice analyzing and visually translating observed subjects from realistic, referential, and/or objective form, to non-representational or abstract imagery
3. in drawings.
4. Compose fully developed drawings that include a conceptual or historical basis.
5. Engage in effective written and oral critique in response to one's own art and the art of others.

ARTS 2611. Advanced Computer-Base Illustration**3 Credits (2+4P)**

Design custom graphics and create special effects with filtering, special effects on type, graphing, technical illustrations, and three-dimensional drawing using Adobe Illustrator.

Prerequisites: ARTS 1212, ARTS 1711, and ARTS 1520, or consent of instructor.

Learning Outcomes

1. Demonstrate competency in the use of Adobe Illustrator software.
2. Create appropriate visual solutions based on target marketing information.
3. Demonstrate competency in the design and production of advertising and promotional materials.
4. Present ideas and concepts effectively and competently.
5. Visually demonstrate design solutions to be used in a portfolio

ARTS 2616. Aspects of Drawing**2-3 Credits**

Continued work in drawing with emphasis on personal creative endeavor. Community Colleges only.

Prerequisites: ARTS 1610 and ARTS 2610.

Learning Outcomes

1. Advanced skill level in the visual dynamics of line involved in the creation of drawing.
2. Advanced skill level in the visual dynamics of shape involved in the creation of drawing.
3. Advanced skill level in the visual dynamics of value involved in the creation of drawing.
4. Advanced skill level in the visual dynamics of color involved in the creation of drawing.
5. Advanced skill level in the visual dynamics in the combination of line, shape, value and color involved in the creation of drawing.

ARTS 2630. Painting II**3 Credits (2+4P)**

This course focuses on the expressive and conceptual aspects of painting, building on the observational, compositional, technical, and critical skills gained previously. Students will investigate a variety of approaches to subject matter, materials, and creative processes through in-class projects, related out-of-class assignments, library research or museum/gallery attendance, written responses, and critiques. Prerequisite(s): ARTS 1610 and ARTS 1630

Learning Outcomes

1. Produce paintings building on the skills and techniques learned in Painting I
2. Solve unique format, support, ground, over and under texturing surface challenges
3. Practice analyzing and translating observed subjects from realistic, referential, and/or objective form, to non-representational imagery
4. Create paintings that explore personal content, stylization, symbolism, narrative, and/or iconography

ARTS 2635. Painting III**2-3 Credits**

Continuation of ARTS 2630.

Prerequisites: ARTS 1610, ART 1240 (for art majors), ART 1630, or consent of instructor.

Learning Outcomes

1. Color mixing and color relationships
2. Create illusions of space and volume
3. The student will strengthen his or her own personal artistic style. Knowledge of the proper use and maintenance of painting tools
4. Explore and learn the technique of a master painter of the past.
5. Awareness of nature, "eye hand response," and an imaginative or personal use of the medium.
6. Awareness of the creative process, exploring unforeseen possibilities
7. An ability to work independently.
8. Understanding of painting styles and arts vocabulary

ARTS 2839. Introduction to Sculpture**3 Credits (2+4P)**

Beginning sculpture students "explore space" while learning new processes and skills, including mold making, welding and woodworking.

Learning Outcomes

1. Be able to utilize a variety of traditional materials and sculpture processes, including: mold making, metal fabrication/wood fabrication, and the creative integration of mixed media.
2. You will learn to differentiate between objects and installations, and be prepared to explore sculpture in upper division, topics based courses.

ARTS 2993. Art Workshop**0.5 Credits (.5)**

Required for all freshman and sophomore Art majors for four semesters, this workshop is designed to build professional student cohorts within the Department of Art; incorporate visiting artist and scholar lectures into the curriculum; and actively involve students in exhibitions and gallery and departmental events. May be repeated up to 4 credits. Crosslisted with: ARTS 308. Restricted to: BA Studio Art, BA Art History BFA Studio Art, BFA Museum Conservation majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Varies

ARTS 2996. Special Topics in Studio**1-3 Credits**

Specific subjects and credits to be announced in the Schedule of Classes. No more than 9 credits toward a degree.

Prerequisite: consent of instructor.

Learning Outcomes

1. Varies

ASTR-ASTRONOMY (ASTR)

ASTR 1115G. Introduction Astro (lec+lab)

4 Credits (3+2P)

This course surveys observations, theories, and methods of modern astronomy. The course is predominantly for non-science majors, aiming to provide a conceptual understanding of the universe and the basic physics that governs it. Due to the broad coverage of this course, the specific topics and concepts treated may vary. Commonly presented subjects include the general movements of the sky and history of astronomy, followed by an introduction to basic physics concepts like Newton's and Kepler's laws of motion. The course may also provide modern details and facts about celestial bodies in our solar system, as well as differentiation between them – Terrestrial and Jovian planets, exoplanets, the practical meaning of “dwarf planets”, asteroids, comets, and Kuiper Belt and Trans-Neptunian Objects. Beyond this we may study stars and galaxies, star clusters, nebulae, black holes, and clusters of galaxies. Finally, we may study cosmology--the structure and history of the universe. The lab component of this course includes hands-on exercises that work to reinforce concepts covered in the lecture, and may include additional components that introduce students to the night sky.

Learning Outcomes

1. Students will discuss the night sky as seen from Earth, including coordinate systems, the apparent daily and yearly motions of the sun, Moon, and stars, and their resulting astronomical phenomena.
2. Students will list and apply the steps of the scientific method.
3. Students will describe the scale of the Solar System, Galaxy, and the Universe.
4. Students will explain telescope design and how telescopes and spectra are used to extract information about Astronomical objects.
5. Students will describe the formation scenarios and properties of solar system objects.
6. Students will describe gravity, electromagnetism, and other physical processes that determine the appearance of the universe and its constituents.
7. Students will describe methods by which planets are discovered around other stars and current results.
8. Students will describe the structure, energy generation, and activity of the sun.
9. Students will compare our sun to other stars and outline the evolution of stars of different masses and its end products, including black holes.
10. 1Students will describe the structure of the Milky Way and other galaxies and galaxy clusters.
11. 1Students will describe the origin, evolution, and expansion of the universe based on the Big Bang Theory and recent Astronomical observations.
12. 1Students will describe conditions for life, its origins, and possible locations in the universe.

ASTR 1116. Introduction to Astronomy Lab, Special

1 Credit (1)

This lab-only listing exists only for students who may have transferred to NMSU having taken a lecture-only introductory astronomy class, to allow them to complete the lab requirement to fulfill the general education requirement. Consent of Instructor required. , at some other institution). Restricted to Las Cruces campus only.

Prerequisite(s): Must have passed Introduction to Astronomy lecture-only.

Learning Outcomes

1. Course is used to complete lab portion only of ASTR 1115G or ASTR 112
2. Learning outcomes are the same as those for the lab portion of the respective course.

ASTR 1120G. The Planets

4 Credits (3+2P)

Comparative study of the planets, moons, comets, and asteroids which comprise the solar system. Emphasis on geological and physical processes which shape the surfaces and atmospheres of the planets. Laboratory exercises include analysis of images returned by spacecraft. Intended for non-science majors, but some basic math required.

Learning Outcomes

1. Students will describe the sky as seen from Earth, the apparent daily and yearly motions of the Sun, Moon, planets and stars, and resulting astronomical phenomena.
2. Students will apply the process of the scientific method in an astrophysical setting.
3. Students will describe the structure of the solar system and explain the development of the currently accepted model of solar system formation.
4. Students will explain how telescopes and spectra are used to extract information about astronomical objects.
5. Students will describe properties of minor solar system objects, such as dwarf planets, moons, asteroids, meteoroids, and comets.
6. Students will compare and contrast bulk and unique properties of the Terrestrial and Jovian worlds.
7. Students will describe how gravity and other physical processes determine the appearance of the solar system and its constituents.

AUTO-AUTOMOTIVE TECHNOLOGY (AUTO)

AUTO 102. Electrical Measuring Instruments

2 Credits (1+2P)

Selection, operation, and care of electrical measuring instruments.

AUTO 111. Automotive Mechanics Basics**4 Credits (4)**

Basic maintenance procedures of the major components of the automobile using service repair manuals, hand and power tools, precision measurement equipment, fasteners and chemicals. Restricted to: Community Colleges only.

AUTO 112. Basic Gasoline Engines**5 Credits (2+6P)**

Principles of gasoline engine operation. Identification, design, function of engine components; engine disassembly and reassembly; trouble shooting, and rebuilding heads.

AUTO 113. Automotive Electricity and Electronics PT I**4 Credits (2+4P)**

Topics include mastery of DC electricity, use of digital multimeters, troubleshooting electrical problems in starting, charging and accessory systems. Restricted to Community Colleges only.

AUTO 114. Automotive Electricity and Electronics PT II**4 Credits (2+4P)**

Advanced AC and DC automotive electronic circuits. Troubleshooting electronically controlled components including supplemental restraint systems and convenience accessories. Restricted to Community Colleges campuses only.

Prerequisite: AUTO 113.

Learning Outcomes

1. Understand and demonstrate safety rules related to electronically controlled automotive systems. Diagnose and demonstrate knowledge of series, parallel, and combination circuits, and their applications as applied to automotive repair. Demonstrate use of wiring diagrams as a diagnostic aide. Demonstrate use of meters, handheld labsopes, scan tools, and other diagnostic equipment. Demonstrate use of repair manuals, both hard copy and electronic. Demonstrate knowledge, diagnose and repair Air Bag Supplemental Inflatable Restraint systems Demonstrate knowledge, diagnose and repair various convenience electronic systems. Interpret customer concerns, create and complete a diagnostic routine and successfully repair an electrical problem. Diagnose and repair starting and charging systems.

AUTO 115. Automotive Engine Repair**5 Credits (2+6P)**

Principles of gasoline engine operation. Identification of engine parts, operation, and function. Disassembly and reassembly. Engine problem diagnoses (cooling system, lubrication system, engine noises). Restricted to Community Colleges only.

AUTO 117. Electronic Analysis and Tune-Up of Gasoline Engines**5 Credits (2+6P)**

Theory and operation of ignition and emission control systems and fuel system. Use of troubleshooting equipment and diagnostic equipment.

Prerequisite: AUTO 120 or consent of instructor.

AUTO 119. Manual Transmission/Clutch**5 Credits (2+6P)**

Manual transmission, transfer cases, and clutch operating principles. Students will diagnose problems, remove and replace, disassemble, repair, and assemble units.

AUTO 120. Electrical Systems**4 Credits (2+4P)**

Troubleshooting and repair of starters, alternators, and associated circuits. Reading electrical diagrams, diagnosis and repair of electrical accessories.

Prerequisite: consent of instructor.

AUTO 122. Automotive Brakes**4 Credits (2+4P)**

Focus is on theory, diagnosis, and service of drum, disc, and anti-lock braking systems, brake component machining, hydraulic component reconditioning, friction and hardware replacement. Restricted to Community Colleges only.

AUTO 124. Automotive Heating and Air Conditioning**4 Credits (2+4P)**

R12 and R134A air conditioning systems maintenance diagnosis and repair. R12 to R134A conversion procedures. Troubleshooting automatic temperature controls and leak detection. Restricted to Community Colleges only.

AUTO 125. Brakes**5 Credits (2+6P)**

Theory of operation, diagnosis, repair, and maintenance of disc and drum brakes; safety and use of special tools.

AUTO 126. Suspension, Steering, and Alignment**5 Credits (2+6P)**

Types of steering systems, suspension maintenance and repair, four- wheel alignment procedures.

AUTO 127. Basic Automatic Transmission**4 Credits (2+4P)**

Theory and operation of the automatic transmission; maintenance, troubleshooting, diagnosis, and repair of components.

AUTO 129. Automotive Steering and Suspension**4 Credits (2+4P)**

Diagnosis/service of suspension components including shocks, springs, ball joints, manual and power steering systems and four wheel alignment are some areas covered. Restricted to Community Colleges only.

AUTO 130. Introduction to Transportation Industry**3 Credits (3)**

State and national traffic statutes that relate to the trucking industry. A Commercial Driver's License Learner's Permit will be obtained through successful completion of the course.

Prerequisites: Must be 18 years of age, have a current driver's license and consent of instructor.

AUTO 131. Class A CDL**3 Credits (1+4P)**

Instruction in how to perform proper pre-trip inspection; hands-on training with a tractor-trailer unit on the backing range and street driving to develop skills necessary to pass Class A DCL exam. Restricted to Community Colleges campuses only.

Prerequisite(s): Class A CDL restricted license (permit) and either restriction of D.O.T.

AUTO 132. Automotive Air-Conditioning and Heating Systems**4 Credits (2+4P)**

Theory and operation, reading schematic diagrams, troubleshooting, repair, and replacement operations performed.

AUTO 137. Fuel Systems and Emission Controls**4 Credits (2+4P)**

Covers theory and operation of fuel system and emission control. Troubleshooting, vacuum diagrams, overhaul, repair and adjustment of carburetion and fuel injection.

Prerequisites: AUTO 117 or consent of instructor.

AUTO 139. Automotive Computer Controls**4 Credits (2+4P)**

Same as OEPM 139.

AUTO 162. Advanced Non-Structural Repair I**4 Credits (2+4P)**

This course will involve the students in all phases of minor non-structural collision damage repairs. It will encompass sheet metal repair, advanced panel replacement and alignment.

Prerequisite(s): AUTO 161.

AUTO 163. Advanced Non-Structural Repair II**4 Credits (2+4P)**

This course is a continuation of AUTO 162 with emphasis in all phases of minor non-structural damage repair. The student will be instructed in sheet metal repair and panel alignment as well as the R&I of automotive glass and related components.

Prerequisite(s): AUTO 162.

AUTO 164. Automotive Industry Collision Repair I**4 Credits (2+4P)**

This advanced course is a continuation of AUTO 161, 162, and 163. This course will incorporate all areas of major non-structural collision damage repair. Through practical application the student will learn how to effectively repair all heavy collision damage using current I-CAR repair standards and procedures.

Prerequisite(s): AUTO 163.

AUTO 165. Automotive Industry Collision Repair II**4 Credits (2+4P)**

This advanced course is a continuation of AUTO 164 with emphasis on time efficiency. This course will involve the student in all areas of major collision damage repair. The student will be exposed to all applicable I-CAR industry procedures and standards involved in sheet metal and composite panel repair.

Prerequisite(s): AUTO 164.

AUTO 172. Introduction to Automotive Refinishing**4 Credits (2+4P)**

This course is designed to incorporate all aspects of surface preparation, paint safety, refinishing materials, and refinishing fundamentals. Students will receive instructions for the application of acrylic enamel and base coat/clear coat refinishing systems.

AUTO 174. Intermediate Automotive Refinishing**4 Credits (2+4P)**

This course encompasses all areas of surface preparation, damage repair and refinishing procedures that are necessary for achieving a proper spot repair. Students will also be exposed to safe work habits in the refinishing area and correct automotive detailing procedures.

Prerequisite(s): AUTO 172.

AUTO 176. Automotive Color Adjustment & Blending**4 Credits (2+4P)**

This course will help develop the skills needed to match any type of paint. It will expose the student to color theory, color evaluation, color matching, and other color adjustment factors. The student will be instructed in multiple panel paint blending techniques as well.

Prerequisite(s): AUTO 174.

AUTO 178. Automotive Overall Refinishing**4 Credits (2+4P)**

This course encompasses all areas of automotive refinishing. This advanced course is a continuation of AUTO 176 with emphasis in achieving industry refinishing times and standards consistent with that of I-CAR. The student will be exposed to surface preparation and refinishing techniques involved with overall coat/clear coat refinishing system.

Prerequisite(s): AUTO 176.

AUTO 181. Frame and Structural Repair**4 Credits (2+4P)**

This course will involve the student in all areas of frame and structural damage repairs. Through theory and practical application, the student will learn how to diagnose and repair various types of damage include: mash, twist, sag, and side sway. This course will expose the students to safe work habits while using measuring and straightening equipment.

Prerequisite(s): AUTO 165.

AUTO 182. Structural Panel Replacement**4 Credits (2+4P)**

This course is a continuation of AUTO 181 with infancies in structural panel replacement. The student will be exposed to frame and unibody measuring equipment and their proper use in sectioning procedures. Through theory and practical application the student will learn how to ID structural components, properly separate spot welds, position and weld new body panels in place.

Prerequisite(s): AUTO 181.

AUTO 201. Engine Performance I**4 Credits (2+4P)**

Theory, function, service and analysis of engine related subsystems including ignition, fuel, starting, and charging systems. Emphasis is placed on diagnosis and operation of electronic engine control management systems. Restricted to Community Colleges only.

AUTO 203. Engine Performance II**4 Credits (2+4P)**

Study of engine management systems and emission control systems, their function and relationship to vehicle performance and air pollution. Emphasis is placed on the analysis and repair of non-compliant vehicles. Restricted to Community Colleges only.

Prerequisite: AUTO 201.

Learning Outcomes

1. Be able to explain basic electrical theories. Be able to explain basic and advanced engine designs and engine operating theory. Be able to explain engine cooling and lubricating systems. Be able to explain intake and exhaust systems Test battery, starting and charging systems Test ignition systems including point type, electronic trigger type, and distributor-less systems. Test automotive fuel system including fuel tanks, lines, filters and pumps. Test basic electronic fuel injection systems. Test automotive computer input devices and controlled devices 1Demonstrate ability to work with PC based automotive software including Alldata,

AUTO 204. Engine Performance III**4 Credits (2+4P)**

Study of advanced level diagnostic test procedures and the equipment used to analyze OBD-II emission and drivability concerns. Use of Digital Storage Oscilloscopes, current ramping, Scan Tool analysis of 4 and 5 gas analyzers is mastered. Hybrid vehicles and the latest engine control systems are introduced. Restricted to Community Colleges only.

AUTO 205. Manual Drive Train and Axles**4 Credits (2+4P)**

Operation, diagnosis, maintenance, repair or replacement of manual transmissions, clutch assemblies, differentials, drivelines, axles, and manual transaxles. Restricted to Community Colleges only.

AUTO 206. Automatic Transmissions**5 Credits (2+6P)**

Operation, diagnosis, maintenance, and repair of automatic transmissions including rear wheel drive, front wheel drive, and electronically controlled transmissions and transaxles. Restricted to Community Colleges only.

AUTO 208. Introduction to Alternative Fueled Vehicles**3 Credits (3)**

Course will familiarize student with conditions that are resulting in the alternative fueled vehicle movement as well as the design and safety precautions unique to each alternative fuel. Propulsion systems covered include electric vehicles, bio-fueled vehicles, hybrid-electric vehicles and hydrogen powered vehicles, along with other emerging technologies as appropriate. Restricted to: Community Colleges only.

Prerequisite(s): AUTO 113 and AUTO 114.

AUTO 209. Hybrid Vehicle Service Techniques**3 Credits (3)**

Designed for experienced automotive technicians, this course will cover safety procedures, design, operational overview and service techniques as well as minor diagnosis and repair of all classifications of hybrid-electric vehicles. Each student must possess legal Class 'O' high voltage gloves and liners to attend this class. Restricted to: Community Colleges only.

Prerequisite(s): AUTO 113 and AUTO 114.

AUTO 221. Cooperative Experience I**1-6 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U.

Prerequisite: consent of instructor.

AUTO 255. Special Problems in Automotive Technology**1-5 Credits**

Individual studies in areas directly related to automotive technologies. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

AUTO 290. ASE Certification Preparation**1 Credit (1)**

This is the capstone course for the Automotive Technology Program and is a requirement for graduation. Consent of Instructor required. Restricted to: AUTO majors. Restricted to Community Colleges campuses

Learning Outcomes

1. write technical reports explaining customers complaint(s), specific component malfunction(s) and related problems to include repair procedures, specifications, parts and costs associated with each specific repair
2. determine, categorize and document component or systems malfunctions which will be discussed in class
3. adequately identify safety hazards associated with electrical, electronic, hydraulic, pneumatic and mechanical systems before participating in any lab project
4. use a systematic approach to identify, diagnose and repair new hydro, electrical and mechanical systems
5. identify all related parts and components before attempting to repair each system
6. clearly identify and understand the specific function of each component before these systems and subsystems are dismantled for repairs
7. demonstrate proficiency in locating, identifying and following procedures for repairs as outlined on the Mitchell and All-DATA computer information systems
8. retrieve all phases of automotive information needed to repair the following: Electrical and Electronics, Engine Repair, Engine Performance, Automatic transmissions, Heating And Air Conditioning Systems
9. demonstrate proficiency in the proper usage of on-board computer scanners used to identify and properly diagnose possible malfunction within a specific on-board computer system
10. 1 demonstrate proficiency in the proper use of scanners, information and vehicle specifications to determine needed repairs
11. 1 identify, evaluate, diagnosis and repair electrical, electronic and mechanical systems and subsystems

AUTO 295. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes.

AVIM - AVIATION MAINTENANCE

AVIM 101. Aviation Science**3 Credits (3)**

Provides students with basic technical mathematics skills, an overview of general physics as applied to the work of an Airframe and Powerplant (A&P) technician, and instruction in the reading and interpreting of aircraft drawings. Restricted to Alamogordo campus only.

Prerequisite(s): Appropriate Math placement score.

AVIM 102. Shop Practices**3 Credits (3)**

Introduces students to specialty tools, shop safety, workplace practices, basic aviation materials and processes. Students also learn to fabricate fluid lines and fittings, identify type fasteners, and processes for nondestructive testing. Restricted to Alamogordo campus only.

AVIM 103. Ground Operations**3 Credits (3)**

Identifies aircraft fuels, cleaning procedures and corrosion removal, as well as ground operation procedures including safety, fueling, and start-up of aircraft. Restricted to Alamogordo campus only.

AVIM 104. Federal Regulations**2 Credits (2)**

Instruction on how to read, comprehend, and apply all FAA maintenance forms and publications as related to aircraft maintenance. Also describes all rights and privileges of A & P technicians. Restricted to Alamogordo campus only.

AVIM 105. Weight and Balance**2 Credits (2)**

Describes proper procedures for weighing and loading aircraft and center of gravity (C.G.) safety and procedures for jacking aircraft. Restricted to Alamogordo campus only.

AVIM 106. Basic Electricity**3 Credits (3)**

Explains theories and principles of electricity related to aircraft circuitry. Restricted to Alamogordo campus only.

AXED-AGRICULTURAL EXTN EDUC (AXED)

AXED 1110. Introduction to Agricultural, Extension, and Technology Education**3 Credits (3)**

Orientation to programs, philosophies, competencies and leadership skills needed by professionals in agricultural and technology education, extension education, agricultural communications, and related career opportunities in industry, governmental agencies, and international organizations.

Learning Outcomes

1. Orient student to the AXED Department and their role as students.
2. Explore career opportunities (and the related skill sets needed for success) in public schools, career and technical institutions, the cooperative extension service, community, and international development, agricultural communications, agricultural industry associations and public service (e.g., NMDA and USDA).
3. Develop an understanding of the self-leadership skills needed to be effective in a variety of professional and personal environments.
4. Familiarize students with the aspects included within a total program in agricultural or technology education.
5. Strengthen skills in oral and written communications.

AXED 1120. Introduction to Agricultural Communication**3 Credits (3)**

Students will learn about the history and theories of agricultural communications, be introduced to the degree program, explore careers in the field, and examine the role of media in agricultural communications.

Learning Outcomes

1. Identify classes needed in the degree program and relevant clubs.
2. Recall important times in history of agricultural communication and journalism.
3. Comprehend the communication process and identify its components.
4. Identify effective and efficient media for agricultural communication.
5. Analyze the various roles and uses of media in agriculture communication.
6. Apply theories of communication and journalism to class assignments.

AXED 1130. Techniques in Agricultural Mechanization**3 Credits (2+2P)**

Development of competencies in agricultural mechanics including safety, tool identification, operation and maintenance of hand and power tools, cold metal, drafting, and plumbing procedures. Designed for any major wishing to improve mechanical skills needed in agriculturally related occupations in education and industry.

Learning Outcomes

1. To understand basic drafting language used in orthographic and isometric drawings.
2. To develop an understanding of the proper use and safety of basic hand and power tools.
3. To develop skills needed to operate basic hand and power tools correctly.
4. To develop an understanding of surveying methods and building layout for construction.
5. To develop an adequate level of competence in workshop techniques.
6. To prepare students to properly teach and demonstrate these techniques to others who may use them as a means of earning a living.

AXED 2110. Metal Fabrication**3 Credits (2+4P)**

Instruction and skill development in process and procedures of metal fusion, including gas and electric welding techniques, safety, and oxy-acetylene cutting and welding. Designed to improve mechanical skills needed in agriculturally related occupations in education and industry.

Learning Outcomes

1. To develop students understanding and appreciation for metal fabrication, design and teaching.
2. To develop in the student an adequate level of competence in shop work techniques, so that the student may be able to properly teach and demonstrate multiple metal fabrication techniques to others who may use them as a mean of earning a living.
3. To develop the student's fundamental techniques in shielded metal arc welding, oxy-acetylene welding and cutting operations, metal inert gas welding (MIG), and gas tungsten-arc welding as needed in repair and construction of agricultural equipment.
4. Student will understand appropriate shop management techniques and have an appreciation for mechanized agriculture.
5. To assist the student in developing an understanding and comprehension of the fundamental principles that apply to the area of basic shop work included in this course; such as proper selection of electrodes, oxy-acetylene filler rods, welding processes best suited for given welding conditions, the proper tool for the job, etc.
6. To develop in the student comprehension of safety practices that apply to the areas of basic shop work, tools, and equipment required in the course.

AXED 2120G. Effective Leadership and Communication in Agriculture**3 Credits (2+2P)**

Theory and practice in leadership and communication for professionals who must work effectively in leadership and supervisory roles with people in agricultural business, industry, government agencies, and education. Course focuses on contemporary leadership theories. Oral communication skills in informative and persuasive speaking, parliamentary procedure, and for small groups are developed.

Learning Outcomes

1. Understanding Leadership: Definitions of Leadership; Agricultural Education, FFA , Leadership; Leadership Categories; Democratic, Authorization, and Situational Leadership; Personality and Leadership Relations; Developing Leaders; Personal Leadership Development; Ability, Experience, and the Opportunity to Lead; Leadership in the Workplace; Human Relations, Technical, and Conceptual Skills
2. Communication Skills: Communication and Leadership; The Purpose of Communication; Forms of Communication; Communication Barriers and Styles; Verbal and Nonverbal Communication; Feedback; Self Communication and Interpersonal Communication
3. Leading Individuals and Groups: Group Dynamics and Team Building; Democratic Group Leadership; Importance of Groups; Types of Groups; Organizing Groups; Group Dynamics, Development, and Discussion
4. Conducting Successful Meetings: Skills Developed by Bring an Officer; Basic Meeting Functions; Characteristics of a Good Meetings; Planning and Preparing for Meetings; The Meeting Room; Committees; Informative and Motivational Meetings; Group Member Involvement; Officer and Member Responsibilities; Developing a Program of Activities

AXED 2130. Early Field-Based Experience**2 Credits (2)**

First Hand view of the roles of professional educators through field experiences with Cooperative Extension or other government agencies. Includes 4 weeks of classroom instruction and 30 hours of observation in a work setting. Consent of Instructor required. Restricted to Las Cruces campus only.

Learning Outcomes

1. Identify successful characteristics, tips and strategies that an agricultural education professional may use as part of their program.
2. Identify key components of an agricultural education program
3. Actively observe a local agricultural education program.
4. Identify ways that your agency program networks and interacts with clientele and community

AXED 2140. Early Field-Based Experience in Agricultural and Technology Education**2 Credits (2)**

First-hand view of the roles of professional educators through field experiences in a secondary agricultural or technology education setting. Includes 4 weeks of classroom instruction and 30 hours of observations in a classroom setting. Consent of Instructor required.

Learning Outcomes

1. Explain student outcomes related to agricultural education
2. Examine the role of agriculture teachers to accomplish the purpose of agricultural education.
3. Explain the relationship between motivation and learning
4. Describe how teachers facilitate learning in an agriculture classroom.
5. Reproduce the three-circle model of agriculture education.
6. Provide an example of instruction in each of the three circles and
7. instruction that happens in more than one circle.
8. Deliver instruction in a classroom or laboratory setting.
9. Deliver instruction related to FFA
10. Deliver instruction related to SAEP

AXED 2996. Special Topics**1-4 Credits**

Specific subjects and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester. No more than 6 credits toward degree.

Learning Outcomes

1. Varies

B A-BUSINESS ADMINISTRATION (B A)

B A 104. Introduction to Business**3 Credits (3)**

Survey and integration of functions in business organizations within their social and economic environment. Community Colleges only.

B A 105. Special Topics**1-3 Credits**

Current topics in business and economics.

B A 202. Small Business Enterprise**3 Credits (3)**

Appraisal of business functions within the framework of a small business organization.

B A 291. Business Administration and Economics Internship and Cooperative Education I**1-3 Credits**

Introduction and applications of the principles of business administration and economics. Registration in one course allowed per co-op work phase; a minimum of 12 work weeks is required. Open only to students in the College of Business. Option of S/U or a grade. The amount of academic credit (1-3 cr.) will be determined by the academic experience, and not by the work experience.

BCHE-BIOCHEMISTRY (BCHE)

BCHE 140. Introduction to Biochemistry**1 Credit (1)**

A description of the nature of inquiry in biochemistry, especially with respect to the interaction of chemistry and biology. Both historical development and topics of current interest will be discussed. Graded S/U.

BCHE 241. Introduction to Research in Biochemistry**1-3 Credits**

Techniques and procedures of biochemical research. May be repeated for a maximum of 3 credits.

Prerequisites: 8 credits of chemistry and 3.0 GPA in chemistry.

BCIS-BUSINESS COMPUTER SYSTEMS (BCIS)

BCIS 1110. Introduction to Information Systems

3 Credits (3)

Examination of information systems and their impact on commerce, education, and personal activities. Utilization of productivity tools for communications, data analysis, information management and decision-making.

Learning Outcomes

1. Describe the social impact of information literacy and systems in relation to commerce, education, and personal activities.
2. Explain how to use the information resources legally, safely, and responsibly in relation to ethical, security, and privacy issues.
3. Evaluate bias, accuracy and relevance of information and its sources.
4. Use productivity tools for communications, data analysis, information management and decision-making.
5. Describe and use current information systems and technologies

BCT-BUILDING CONSTRUCTION TECH (BCT)

BCT 100. Building Trades I

8 Credits (2+12P)

Equipment and general safety. Human relations, building construction surveying, footings, foundation form work, framing, sheathing, insulation. Basic electrical wiring and plumbing. Classroom instruction, on- the-job training, and problem solving.

BCT 101. Introduction to Construction I

2 Credits (2+1P)

Basic safety, including personal protective equipment, how to perform basic construction tasks safely, and what to do if an accident occurs. Includes basic construction methods. May be repeated up to 2 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 102;BCT 103.

BCT 102. Introduction to Construction II

2 Credits (2+1P)

Introduction to power and hand tools, blueprints, and basic rigging hardware and techniques. May be repeated up to 2 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 101;BCT 103.

BCT 103. Introduction to Construction Laboratory

3 Credits (3)

Provides students the opportunity to practice skills they have acquired in BCT 101 and BCT 102. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCER) Carpentry Program. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 101; BCT 102.

BCT 104. Woodworking Skills I

3 Credits (1+4P)

Use and care of hand tools and elementary power tools, safety procedures, and supervised project construction.

BCT 105. Woodworking Skills II

3 Credits (1+4P)

Advanced woodworking skills to include use of advanced power tools, power tool safety, and supervised construction.

Prerequisite: BCT 104 or consent of instructor.

BCT 106. Woodworking Theory and Practice

3 Credits (2+2P)

History of wood manufacturing, industrial techniques, wood characteristics, stains and finishes. Design and construction of minor wood projects.

BCT 107. Painting I

4 Credits (2+4P)

Types and applications of paints and clear coatings. Use of fasteners, caulks, and sealants. Restricted to: Community Colleges only.

BCT 109. Plumbing I

3 Credits (2+3P)

Covers orientation to the trade. Students will learn about materials used in the plumbing industry and the different types of plumbing fixtures. It includes task-oriented projects in which the students apply many of the skills and knowledge that are presented through the National Center for Construction and Education Research (NCCER) Plumbing Program. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): BCT 101, BCT 102. Restricted to Community Colleges campuses only.

BCT 110. Blueprint Reading for Building Trades**4 Credits (2+4P)**

Same as DRFT 151, OEET 101, OEPB 110.

BCT 111. Small Equipment Maintenance and Repair**4 Credits (2+4P)**

Covers small engine theory, troubleshooting and repair, auto maintenance, hydraulic theory and repair lubricants, batteries and scheduled tool maintenance. Restricted to: Community Colleges only.

BCT 114. Basic Carpentry**3 Credits (1+4P)**

Covers orientation to the trade; wood building materials, fasteners, and adhesives; detailed description and explanations of hand-operated and power tools, including safety; framing basics including laying out and constructing of wood floors, walls and ceilings and includes roughing in of door and window openings. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 115; BCT 116.

BCT 115. Carpentry Level I**3 Credits (1+4P)**

Describes the various kinds of roofs and provides instructions for lay out of the different roofing systems. Describes the various types of windows, skylights, and exterior doors and provides instruction for installation. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 114; BCT 116.

BCT 116. Basic Carpentry Lab**2 Credits (2)**

Provides students the opportunity to practice skills they have acquired in BCT 114 and BCT 115. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCER) Carpentry Program. May be repeated up to 2 credits. Restricted to Community Colleges campuses only.

Corequisite(s): BCT 114; BCT 115.

BCT 117. Plumbing 1A**3 Credits (2+2P)**

This course will introduce students to the plumbing profession. Students will become familiar with the tasks and responsibilities of plumbing professionals in the construction industry and gain a basic knowledge of the plumbing field. Restricted to Community Colleges campuses only.

BCT 118. Math for Building Trades**3 Credits (3)**

Geometry, algebra, arithmetic, and basic trigonometry pertaining to mathematical applications in the building trades field. Same as OEET 118, DRFT 118, OEPB 118.

Prerequisite: CCDM 103 N.

BCT 123. Residential Wiring I**3 Credits (2+3P)**

Introduction to residential electrical wiring trade, electrical safety practices, basic electrical circuits and theory, reading and interpreting applicable construction prints/drawings, introduction to basic National Electric Code (NEC), and preparation for entry-level employment in residential electrical wiring. Restricted to Community Colleges campuses only.

BCT 130. Professional Development and Leadership**1 Credit (1)**

As members and/or officers of various student professional organizations, students gain experience in leadership, team building, and community service. Students competing or participating in Skills USA are required to register for the course. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: BCT majors. Graded: S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

BCT 150. Forklift Operation**1 Credit (1)**

Classroom instruction and hands-on practice to prepare students to operate a forklift safely in the workplace. Students will have the opportunity to earn a forklift operator's permit. Consent of Instructor required. Restricted to Community Colleges campuses only.

BCT 200. Building Trades II**8 Credits (2+12P)**

Continuation of BCT 100: roofing; exterior and interior finish; masonry; door, window, and cabinet installation.

BCT 206. Advanced Cabinetmaking**3 Credits (1+3P)**

Advanced cabinetmaking skills, to include expert use of hand and power tools, professional construction and finishing techniques.

Prerequisites: BCT 105, BCT 106, or consent of instructor.

BCT 209. Plumbing II**3 Credits (2+3P)**

Continuation of BCT 109. Provides students the opportunity to gain more practice in the skills and knowledge learned in Plumbing I. Students will install fixtures and run the various plumbing supply lines from Plumbing Level I. The course included hands on projects in which the students apply many of the competencies that have been presented through the National Center for Construction and Education Research (NCCER) Plumbing Program. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): BCT 109.

BCT 217. Building and the Environment**3 Credits (3)**

Introduction to LEED's, and Green Building Fundamentals, sustainability, sustainable design and green building evaluating cost implication of green building. Describes site development; managing site water runoff, improving a project's water use efficiency. Discusses renewable energy sources, and introduces student to generating power on-site using renewable energy sources, improving a building's indoor environment quality, improving the building industries' environmental performance and environmental aspects of building maintenance, re-use and conservation. Restricted to: Community Colleges only.

BCT 218. Plumbing 2**4 Credits (2+4P)**

This course builds on the skills and knowledge students have gained in previous BCT introduction to plumbing courses, focusing on installation of plumbing systems. Students will become familiar with the tasks and responsibilities of plumbing professionals in the construction industry and gain a basic knowledge of the plumbing field.

Prerequisite(s): BCT 117 and BCT 119.

BCT 219. Weatherization in Construction**3 Credits (2+2P)**

Introduction to industry weatherization standards and practices utilized in the construction of buildings for the purpose of energy conservation. Economic and environmental impacts of the use of energy in heating and cooling building will be examined.

Prerequisite(s): BCT 101, BCT 102 and BCT 103.

BCT 221. Cooperative Experience I**1-4 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and is supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U.

Prerequisite: consent of instructor.

BCT 223. Residential Wiring II**3 Credits (2+3P)**

Introduction to electrical raceways and fittings; electrical conductors and cables; basic electrical construction drawings, residential electrical services, and electrical test equipment. Restricted to Community Colleges campuses only.

Prerequisite(s): BCT 123.

BCT 255. Special Topics**1-6 Credits (1-6)**

Topics to be announced in the Schedule of Classes . May be repeated up to 12 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

BCT 290. Special Problems in Building Technology**1-4 Credits**

Individual studies in areas directly related to building technologies.

Prerequisite: consent of instructor.

BFIN-BUSINESS FINANCE

BFIN 2110. Introduction to Finance

3 Credits (3)

Introduces tools and techniques of financial management. Includes time value of money; financial planning, diversification and risk; debt and equity investment decisions; and financial statement analysis.

Prerequisite(s): OATS 106 or higher; OATS 120 or ACCT 2110; ECON 1110G or ECON 2110G.

Learning Outcomes

1. Explain the time value of money and its application in decision-making, including calculating present and future values of single payment and series of payments.
2. Identify the major sources of external long-term financing for corporations.
3. Explain risk-return tradeoff as it relates to diversification.
4. Differentiate the role of finance from other related disciplines such as accounting and economics.
5. Demonstrate knowledge of capital markets and securities (debt and equity).
6. Describe basic types of financial ratios and their uses.
7. Demonstrate the ability to prepare cash flows and make qualitative judgments on the relevance of the changes from one time frame to another.

BIOL-BIOLOGY (BIOL)

BIOL 1120G. Human Biology

3 Credits (3)

This course is an introduction to modern biological concepts with an emphasis on the relevance to humans and their relationships with the environment.

Learning Outcomes

1. Explain that biology is a scientific discipline based on observations and experiments.
2. Explain the process of scientific inquiry and explain how scientific knowledge is discovered and validated.
3. Describe the chemical basis of living organisms and how biomolecules contribute to the structure and function of cells.
4. Develop a basic familiarity with cells and cell organelles.
5. Describe the structure and function of DNA as well as how DNA is used in the production of proteins.
6. Describe the basic principles of genetics and heredity leading to human diversity.
7. Identify the major features of the systems in the human body, and understand the anatomy and physiology of them.
8. Describe the roles of the organ systems in maintaining homeostasis.
9. Explain the principles of evolution by means of natural selection explaining the diversity of life.
10. Describe how science and technology have impacted life in particular to society and the environment (e.g. medicine, forensic science, agriculture, ecology, sustainability).

BIOL 1120L. Human Biology Laboratory

1 Credit (3P)

This course introduces exercises, experiences, and activities exploring biological concepts and theories relevant to humans and their relationship to the environment in a laboratory setting.

Prerequisite(s)/Corequisite(s): BIOL 1120G.

Learning Outcomes

1. Understand general principles of cell structure and function.
2. Understand general principles of genetics.
3. Understand basic human anatomy and physiology.
4. Communicate scientific information effectively.
5. Demonstrate an understanding of the scientific method.
6. Knowledge of appropriate laboratory skills
7. Apply quantitative reasoning and scientific thinking to real world problems.

BIOL 1130G. Introductory Anatomy & Physiology (non-majors)**4 Credits (3+3P)**

This course introduces the anatomy (structure) and physiology (function) of the human body, which includes the study of basic chemistry, molecules, cells, tissues, organs, organ systems, and terminology related to these concepts. May be repeated up to 4 credits. Restricted to Community Colleges campuses

Learning Outcomes

1. (Lecture) Define and explain anatomy and physiology.
2. (Lecture) Use anatomic directional, regional, and sectional terminology related to the human body.
3. (Lecture) Explain and describe the basic chemical principles of the human body including the structure and function of carbohydrates, lipids, proteins and nucleic acids.
4. (Lecture) Develop a basic familiarity with cells and cell organelles that include cell division, DNA replication, and protein synthesis.
5. (Lecture) Describe the structure and function of the major tissues in the human body.
6. (Lecture) Identify and describe the basic anatomical features of the integumentary, skeletal, muscle, nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary and reproductive systems.
7. (Lecture) Describe the basic physiological roles of the integumentary, skeletal, muscle, nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary and reproductive systems.
8. (Lecture) Apply and describe the principles of homeostasis in the human body.
9. (Laboratory) Use and apply proper anatomic terms
10. 1 (Laboratory) Develop skills using the microscope correctly.
11. 1 (Laboratory) Identify basic tissue types.
12. 1 (Laboratory) Discuss and describe the basic anatomical features of the integumentary, skeletal, muscle, nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary and reproductive systems.
13. 1 (Laboratory) Demonstrate and describe physiological roles of the integumentary, skeletal, muscle, nervous, endocrine, cardiovascular, lymphatic, digestive, respiratory, urinary and reproductive systems.

BIOL 1190G. Contemporary Problems in Biology**4 Credits (3+3P)**

Fundamental concepts of biology will be presented using examples from relevant problems in ecology, medicine and genetics. For nonscience majors only. Community Colleges only.

Learning Outcomes

1. Identify the unity and diversity of living things
2. Identify the structure and function of cells and biological molecules
3. Recognize and demonstrate patterns of inheritance
4. Describe mechanisms of evolution
5. Describe the human body systems including immune response
6. Discuss population dynamics and ecological systems
7. Describe the process of scientific inquiry, solve problems scientifically, and communicate on a scientific level
8. Apply quantitative analysis and scientific thinking to scientific and real world problems

BIOL 1996. Topics in Biology**1-3 Credits (1-3)**

Introductory level coverage of biological topics. May be repeated up to 9 credits.

Learning Outcomes

1. Varies

BIOL 2110G. Principles of Biology: Cellular and Molecular Biology**3 Credits (3)**

This course introduces students to major topics in general biology. This course focuses on the principles of structure and function of living things at the molecular, cellular and organismic levels of organization. Major topics included are introduction to the scientific process, chemistry of cells, organization of cells, cellular respiration, photosynthesis, cell division, DNA replication, transcription, and translation. Must be taken with BIOL 2110L to meet general education requirements. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): a C- or better in MATH 1215 or higher and a C- or better in CHEM 1120G or CHEM 1215G or CHEM 1216.

Learning Outcomes

1. Apply the scientific method to develop and evaluate hypotheses and propose an experiment to test a scientific hypothesis related to cell biology and molecular biology.
2. Describe the distinguishing characteristics of various biological molecules (water, carbohydrates, lipids, proteins, and nucleic acids). (HED Area 3, Competency 3)
3. Compare and contrast the basic features of cells and how prokaryotic cells differ from eukaryotic cells. (HED Area 3, Competency 3)
4. Understand how organisms maintain homeostasis in a dynamic environment.
5. Describe how biological molecules are acquired and how they are subsequently used to meet the metabolic needs of organisms. (HED Area 3, Competency 3)
6. Describe membrane structure and function.
7. Describe and analyze the nature of bioenergetic transformations and metabolism within the cell.
8. Describe the processes of cellular respiration and photosynthesis.
9. Analyze with specific detail the processes of DNA replication, transcription, and translation.
10. 1Analyze with specific detail the types, mechanisms, and regulation of cellular division.
11. 1Assess important applications of cell and molecular biology to energy use, medicine, and other day-to-day processes. (HED Area 3, Competency 1,3,4,5)

BIOL 2110L. Principles of Biology: Cellular and Molecular Biology Laboratory**1 Credit (3P)**

This course introduces students to major topics in general biology. This course focuses on the principles of structure and function of living things at the molecular, cellular and organismic levels of organization. Major topics included are introduction to the scientific process, chemistry of cells, organization of cells, cellular respiration, photosynthesis, cell division, genetics, DNA replication, transcription, and translation. May be repeated up to 1 credits.

Prerequisite/Corequisite(s): BIOL 2110G; Prerequisite(s): MATH 1215 or higher, and a C- or better in CHEM 1120G or CHEM 1215G or CHEM 1216.

Learning Outcomes

1. Describe and apply the scientific method to generate testable hypotheses in evolution and ecology.
2. Design and conduct laboratory experiments using relevant laboratory equipment and methods.
3. Analyze and report data generated during laboratory activities and experiments.
4. Communicate scientific results from experiments in Mendelian genetics, evolution, ecology, and biodiversity.

BIOL 2210. Human Anatomy and Physiology I for the Health Sciences**4 Credits (3+3P)**

This course is the first of two that serve as an introduction to human anatomy and physiology for biology majors and allied health students. The course entails describing, explaining, and analyzing structure and function from the submicroscopic to the organismal level with emphasis on anatomic, directional, and sectional terminology, basic cellular structure and metabolism, tissue differentiation and characteristics, and organ system structure and function; Specifically the integumentary, skeletal, muscular, and nervous systems.

Prerequisite(s)/Corequisite(s): CHEM 1120G or CHEM 1215G. Restricted to: Community Colleges only.

Learning Outcomes

1. Describe and apply anatomical terminology.
2. Describe multi cellular organization.
3. Distinguish and describe major tissue types.
4. Describe the structure and function of the integumentary system.
5. Describe the structure and function of the skeletal system.
6. Describe the structure and function of the muscular system.
7. Describe the structure and function of the nervous system.
8. Describe the structure and function of the special senses.
9. Define homeostasis and describe specific examples for the integumentary, skeletal, muscular, and nervous systems.

BIOL 2221. Human Physiology**3 Credits (3)**

Physical and chemical operation of the organs and systems of the human body. Not open to students who have passed BIOL 354 or BIOL 381.

Prerequisite(s): Grade of at least C- in BIOL 2110G; BIOL 2110L; CHEM 1215G or CHEM 1120G.

Learning Outcomes

1. Understand the central physiological principle of homeostasis
2. Be able to explain why concentration gradients are essential to maintain homeostasis
3. Understand the regulation of homeostasis by neuronal / endocrine chemical messengers
4. Understand that changes in bodily function occur throughout the entire life span of the human animal
5. Incorporate the importance of evolutionary biology to your understanding of human disease
6. Teach a physiological concept to your classmates
7. Design experiments to test physiological concepts
8. Put in plain words how the laws of thermodynamics can explain human disease

BIOL 2225. Human Anatomy and Physiology II**4 Credits (3+3P)**

This course is the second of two that serve as an introduction to human anatomy and physiology for biology majors and allied health students. The course entails describing, explaining, and analyzing structure and function from the submicroscopic to the organismal level with emphasis on specific cellular, tissue, and organ structure and physiology, and organ system structure and function; specifically the endocrine, cardiovascular, respiratory, urinary, and reproductive systems. Additionally, an analysis of these concepts is included: fluid and electrolyte balance, pregnancy, growth and development from zygote to newborn, and heredity. Restricted to: Community Colleges only.

Prerequisite(s): BIOL 2210, CHEM 1120G or CHEM 1215G.

Learning Outcomes

1. Identify and describe the major anatomical features of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.
2. Analyze the physiological roles of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems in maintaining homeostasis in the human body.
3. Explain how fluid and electrolyte balance is maintained in the human body.
4. Compare and contrast the anatomy and physiology of male and female reproductive systems.
5. Describe pregnancy from conception to parturition including human growth and development from zygote to newborn.
6. Explain heredity and genetic control.

BIOL 2310. Microbiology**3 Credits (3P)**

Introduction to the basic principles of microbiology, microbial pathogenesis, host defenses and infectious diseases. The course will emphasize concepts related to the structure and function of microorganisms, including their mechanisms of metabolism and growth. Host parasite interactions will also be emphasized, including mechanisms of microbial pathogenesis and mechanisms of host defenses against infectious diseases. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEM 1120G or CHEM 1215G or CHEM 1225G.

Corequisite(s): BIOL 2310L.

Learning Outcomes

1. Describe and compare the structure and function of prokaryotic and eukaryotic cells.
2. Describe and compare the techniques used for staining of and microscopic observation of bacteria including morphology.
3. Describe the nutritional requirements for bacterial growth and the impact of environmental factors on bacterial growth (temperature, pH, oxygen, etc.).
4. Describe and compare the mechanisms of aerobic respiration, anaerobic respiration, and fermentative metabolism.
5. Describe the mechanism of bacterial growth by binary fission, and laboratory methods used for observing and measuring bacterial growth.
6. Describe the mechanisms of bacterial DNA replication, RNA transcription, and translation, and compare and contrast with eukaryotic cells.
7. Describe the structure and replication strategies of viruses.
8. Describe and contrast mechanisms of innate nonspecific immunity and adaptive specific immunity.
9. Describe immune hypersensitivity reactions, autoimmune diseases, and immunodeficiency diseases.
10. Differentiate between host microbe relationships, mechanisms of microbial pathogenesis, differentiate between communicable and noncommunicable diseases and describe mechanisms of direct and indirect transmission of communicable diseases.

BIOL 2310L. Microbiology Lab**1 Credit (3P)**

This course will emphasize both the theory and hands-on application of techniques used in a microbiology laboratory for the growth and identification of bacterial species. Students will learn microscopy skills and staining techniques for the observation of bacteria. Students will also learn aseptic techniques used for isolation of bacteria, inoculation of cultures, and interpretation of selective and differential growth media for the identification of bacterial species.

Prerequisite: BIOL 2310 or BIOL 2320 or concurrent enrollment.

Learning Outcomes

1. Demonstrate skills of microscopy.
2. Demonstrate skills of bacterial staining.
3. Demonstrate aseptic technique for inoculation of bacterial growth media.
4. Interpret results from selective and differential media.
5. Demonstrate appropriate use of diagnostic reagents.
6. Interpret results of diagnostic assays.
7. Identify unknown bacterial species through the use of a dichotomous key, inoculation and interpretation of laboratory assays, and application of the scientific method.

BIOL 2320. Public Health Microbiology**3 Credits (3)**

This course introduces microbiology on the health profession level. It incorporates cell structure, metabolism, growth, controls of growth, infectious epidemiology, etiology, pathogenicity, and relative virulence of pathogens. It will lead to students assessing a clinical infection scenario from the microbiological perspective that includes making diagnoses based on data from appropriate diagnostic tests, investigating appropriate treatment options, and making recommendations for prevention.

Prerequisite: BIOL 2110G and BIOL 2110L.

Learning Outcomes

1. Identify key physical features of various infectious agents and describe their structure and function in the pathogen
2. Describe the microbiological, serological, biochemical and genetic tests that are used to identify infectious agents in a laboratory setting and be able to interpret test results in order to identify the pathogen
3. Explain how structural and metabolic differences between infectious agents and human host can be exploited for chemotherapy
4. Explain the observed effect of a particular environmental change on the growth of a given microorganism, and the relationship between bacterial growth patterns and selected foodborne illnesses
5. Describe several mechanisms by which pathogens generate genetic diversity and the role genetic diversity plays in resistance to therapy and treatment failure
6. Explain the role of innate, and adaptive immunity in host defense
7. Describe general virulence strategies used by variety of pathogens, and different types of vaccines along with recommendations for vaccinations of specific populations
8. Demonstrate understanding of signs and symptoms of selected diseases, and be able to relate disease agents with environmental reservoirs and transmission

BIOL 2505. Pathophysiology**3 Credits (3)**

This course is designed to provide the conscientious student with a solid foundation for understanding the pathophysiological processes of the human organism. Successful completion of this course will promote the general student learning outcomes listed below. Corequisite/Prerequisites(s): AHS 154 or BIOL 2225. Restricted to: Community Colleges only.

Prerequisite(s): AHS 153 or BIOL 2210.

Learning Outcomes

1. To describe the general concepts of disease processes and factors associated with disease causation.
2. To identify the function of basic cellular structures, determining the process of cellular malfunctions.
3. To describe the response of the body to injury and immunologic challenge.
4. To discuss the etiology, pathogenesis, and treatment modalities of frequently occurring diseases.

BIOL 2511. Human Pathophysiology**3 Credits (3)**

The first in a two-course sequence that covers changes in body physiology that result from disease or injury. Includes a general introduction to pathophysiology as well as an overview of altered cellular and tissue biology, injury, inflammation, and neoplasia. Students will also explore deviation from fluid, hemodynamic, and endocrinologic balance. Topics related to the science of pathophysiology, including pathology, pathogenesis, etiology, epidemiology, and clinical manifestations, are also discussed throughout the course where relevant. Grade of C- or higher in microbiology is recommended. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of C- or higher in BIOL 2210 and BIOL 2225.

Learning Outcomes

1. The cellular adaptations occurring in atrophy, hypertrophy, hyperplasia, dysplasia, and metaplasia; the types and causes of cellular injury; and the types of necrosis.
2. The different compartments for body fluids; the factors that affect water movement; the processes that drive and affect capillary exchange; the mechanisms causing edema; the electrolytes in body compartments; the various electrolyte imbalances; the body mechanisms that maintain acid-base balance; and the various acid-base imbalances and how they are compensated for .
3. The interrelationships of DNA, RNA, and proteins; the various types of mutations; the various types of mutagens, the various types of numerical and structural chromosomal aberrations; the various genetic terms; the single-gene disorders discussed in class; the multifactorial disorders discussed in class.
4. The relationships between genes, environment, and multifactorial diseases; the criteria used to define multifactorial disease; the characteristics of multifactorial traits; and the various features of the threshold model.
5. The terms related to tumor/cancer biology, classification, and nomenclature; the various features of cancer biology, including the characteristics of cancer and the genetic basis of cancer; features related to cancer invasion and metastasis; and the clinical manifestations and treatments of cancer.
6. Features related to Innate and adaptive immunity; features related to the first, second, and third lines of defense; the mechanisms and manifestations of inflammation; components/mechanisms related to the complement, clotting, and kinin systems; mechanisms of wound healing; and features of dysfunctional wound healing.
7. Aspects/mechanisms of specific (adaptive) immunity, features related to the structure, function, and classification of immunoglobulins; features related to haptens, antigens, immunogens, and epitopes; the different types of antigens; features related to immunological memory; and features related to the different types of active and passive immunity.
8. Aspects related to allergy, autoimmunity, and alloimmunity; aspects/mechanisms/examples related to the four basic types of hypersensitivity reactions; mechanisms and examples related to autoimmunity; and aspects/mechanisms related to immunodeficiency.
9. The risk factors for infection; the six components of the chain of infection; general concepts, terms, and processes/mechanisms related to basic microbiology; and the mechanisms of microbial pathogenicity.
10. 1 General concepts, terms, and processes/mechanisms related to normal hormonal action; mechanisms of hormonal alterations; processes/mechanisms related to the pathophysiology of the various disorders discussed in class; and the clinical manifestations and treatment of the hormonal alterations discussed in class.

BIOL 2512. Human Pathophysiology I**3 Credits (3)**

The second in a two-course sequence that covers changes in body physiology that result from disease or injury. This course focuses on the pathophysiology of the nervous, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Topics related to the science of pathophysiology, including pathology, pathogenesis, etiology, epidemiology, and clinical manifestations, are also discussed throughout the course where relevant. Grade of C- or higher in microbiology is recommended. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of C- or higher in BIOL 2210, BIOL 2225, and BIOL 2511.

Learning Outcomes

1. " The different types of sensory modalities; the different dysfunctions of the general and special senses; the different pain theories discussed in class; the various aspects of the neuroanatomy and neuromodulation of pain; the various clinical descriptions of pain; the various aspects of temperature regulation; components of the pathogenesis of fever; the various disorders of temperature regulation; the various aspects of sleep disorders; the various components of visual dysfunction; and the various aspects of auditory, gustatory, and olfactory dysfunction.
2. The various alterations in cognitive systems; the various alterations in arousal; the outcomes of alterations in arousal; the various alterations in awareness; the various seizure disorders; the various data processing deficits; various alterations in cerebral hemodynamics; and alterations in neuromotor function.
3. The various disorders of the central and peripheral nervous systems; and the various disorders of the neuromuscular junction.
4. The components of normal blood; the process/stages of hematopoiesis; the various normal RBC laboratory values; the components and functions of the lymphatic system; the various types of imbalances of erythropoiesis; the various types of anemias and their causes; the various types of polycythemia and their causes; the processes related to hemostasis; the various alterations of white blood cells and their causes; and the various alterations of lymphoid and hemostatic function.
5. The various diseases of the veins; the various diseases of the arteries; the various aspects of atherosclerosis; features related to the pathogenesis and consequences of coronary artery disease; the disorders of the heart wall and their consequences; the various aspects of valvular dysfunction; aspects of the pathogenesis and manifestations of rheumatic disease; the causes, pathogenesis, and manifestations of infective endocarditis; the causes, manifestations, and pathophysiology of heart failure; and the various types of shock.
6. The various signs and symptoms of pulmonary disease; the various conditions caused by pulmonary disease/injury; the various disorders of the chest wall and pleura; and the causes, manifestations, and pathophysiology of selected pulmonary disorders.
7. The features and consequences of upper and lower urinary tract obstruction; the various types of urinary tract infection; the causes, pathogenesis, and clinical manifestations of glomerulonephritis; the various features of nephrotic and nephritic syndrome; and the various features (etiology, pathophysiology, and clinical manifestations) of both acute kidney injury and chronic kidney disease.
8. The various clinical manifestations of gastrointestinal dysfunction; the various aspects (etiology, pathophysiology, and clinical manifestations) of disorders of motility; the causes, manifestations, and pathophysiology of gastritis; features related to the causes, manifestations, and pathophysiology of peptic ulcer disease; features related to the etiology, pathogenesis and pathophysiology of selected malabsorption syndromes, inflammatory bowel diseases, diverticular disease of the colon, appendicitis, and irritable bowel syndrome; the various types of vascular insufficiency; the various disorders of nutrition and their causes and clinical manifestations; and the various disorders of the accessory organs of digestion.
9. The various features associated with alterations of sexual maturity (delayed puberty and precocious puberty); features related to the etiology, pathogenesis, and pathophysiology of the various disorders of the male reproductive system, including disorders of the urethra, disorders of the penis, disorders of the scrotum, disorders of the testes, disorders of the epididymis, disorders of the prostate gland, and disorders of the male breast; features related to the etiology, pathogenesis, and pathophysiology of male sexual dysfunction; features associated with abnormalities of reproductive tract development; the various hormonal and menstrual alterations and their causes and clinical manifestations; the various conditions related to infection, inflammation, and pelvic organ prolapse (uterine prolapse, cystocele, rectocele, and enterocele); conditions involving benign growths and cancer (endometriosis, cervical cancer, vaginal cancer, vulvar cancer, endometrial cancer, uterine sarcoma, and ovarian cancer); features related to the etiology, pathogenesis, and pathophysiology of female sexual dysfunction (disorders of desire, vaginismus, anorgasmia, and dyspareunia); features related to infertility; and features related to the etiology, pathogenesis, and pathophysiology of breast cancer."

BIOL 2610G. Principles of Biology: Biodiversity, Ecology, and Evolution**3 Credits (3)**

This course is an introduction to the dynamic processes of living things. Major topics include the mechanisms of evolution, biological diversity, Mendelian genetics, and ecology.

Prerequisite/Corequisite: grade of C- or better in MATH 1215 or higher, or a Math Placement Exam score adequate to enroll in mathematics courses beyond MATH 1215.

Learning Outcomes

1. Understand the scientific method and apply it to biological topics of genetics, evolution, ecology, and biodiversity. Apply quantitative reasoning and scientific thinking to real world problems. Identify and describe the basic principles of evolution. Analyze the relationships between the genetics of populations and evolution. Analyze the processes of speciation. Describe how the hierarchical classification scheme is used to categorize organisms. Describe how DNA research has modernized bio systematics. Compare and contrast the general characteristics of each of the living domains and kingdoms. Relate the structure of organisms to the way they function. 1Explain how the life histories of organisms are adapted for different environments. 1Relate the complexity of behavior to the overall complexity of an organism. 1Describe the ecological roles played by organisms in each kingdom. 1Compare basic ecological principles at the population and community levels of organization. 1Describe and compare energy relationships and the cycling of materials in ecosystems. 1Identify and describe the basic principles of Mendelian genetics.

BIOL 2610L. Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory**1 Credit (3P)**

This laboratory course is an introduction to the dynamic processes of living things. This course introduces students to the methods used in the study of Mendelian genetics, evolution, ecology, and biological diversity. Designed for students continuing in life sciences.

Prerequisite/Corequisite: BIOL 2610G; grade of C- or better in MATH 1215 or higher, or a Math Placement Exam score adequate to enroll in mathematics courses beyond MATH 1215.

Learning Outcomes

1. Describe and apply the scientific method to generate testable hypotheses in evolution and ecology. Design and conduct laboratory experiments using relevant laboratory equipment and methods. Analyze and report data generated during laboratory activities and experiments. Communicate scientific results from experiments in Mendelian genetics, evolution, ecology, and biodiversity.

BIOL 2996. Special Topics**1-3 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 6 credits. Community Colleges only.

Learning Outcomes

1. Varies

BLAW-BUSINESS LAW (BLAW)

BLAW 2110. Business Law I**3 Credits (3)**

Survey of the legal environment of business and common legal principles including: the sources of law, dispute resolution and the U.S. court systems, administrative law, tort law, contract law, agency and employment law, business structure and governance, ethics and corporate social responsibility. Explores sources of liability and presents strategies to minimize legal risk. Offered at all NMSU Community Colleges except Dona Ana Community College. Credit may not be earned in both BLAW 2110 and BLAW 317.

Learning Outcomes

1. Describe the sources of law.
2. Describe and explain dispute resolution and the court systems in the United States.
3. Describe the concepts of negligence, intentional torts and strict liability.
4. Describe and apply the essential aspects of contracts from creation, performance, breach and remedies, including basic contract law from Article 2 of the Uniform Commercial Code.
5. Explain the concept of ethics.

BLED-BILINGUAL EDUCATION

BLED 1110. Introduction n Bilingual Education/ESL

3 Credits

An overview of the American Education system with emphasis on organization, governance, law, demographics, and professional practice. Will include supervised experience in bilingual education/ESL elementary settings for prospective bilingual education/ESL teachers.

Learning Outcomes

1. Complete 24 hours field observations in a classroom.
2. Articulate the attributes of an education professional entering the field.
3. Construct an individualized map to teacher licensure in the State of New Mexico.
4. Differentiate and summarize the major educational philosophies and historical events that have influenced the progression of educational practice.

BLED 2110. Bilingual Methods

3 Credits (3)

This course provides a historical overview of bilingual and ESL education including an emphasis on present trends and practices. Discussions of the aspects of bilingualism at both an individual and a societal level are included.

Learning Outcomes

1. (Culture) Develops awareness in the learner of the value of cultural diversity.
2. (Culture) Prepares and assists students to interact successfully in cross cultural settings.
3. (Culture) Recognizes and accepts different patterns of child development within and between cultures in order to formulate realistic instructional strategies.
4. (Culture) Recognizes the similarities and differences between mainstream American and other cultures and the potential conflicts and opportunities they may create for students.
5. (Culture) Demonstrates knowledge of the effects of culture and socio-economic variables in learning styles.
6. (English Language Development) Demonstrates knowledge of the basic nature of language, language acquisition, language variation, language change, and the relation of language to society and culture.
7. (English Language Development) Demonstrates knowledge of the nature of bilingualism and the process of becoming bilingual.
8. (Instructional Methodology) Demonstrates knowledge of the historical, legal, theoretical, and sociological foundations of programs of instruction for second language learners.
9. (Instructional Methodology) Demonstrates knowledge of theories of first and second language acquisition.
10. 1(Instructional Methodology) Utilizes teaching methods appropriate to various age and language groups.

BMGT-BUSINESS MANAGEMENT (BMGT)

BMGT 112. Banks and Your Money

3 Credits (3)

Banking in today's economy: language and documents of banking, check processing, teller functions, deposit function, trust services, bank bookkeeping, loans, and investments. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

BMGT 126. Retail Management

3 Credits (3)

Phases of retailing, including types of retail outlets and basic problems of organizing and operating a retail store. Restricted to: Community Colleges only.

BMGT 132. Principles of Selling

3 Credits (3)

Analysis of customer behavior, persuasive communication, process of the sales interview. Restricted to: Community Colleges only.

BMGT 136. Forecasting Business Activity

3 Credits (3)

Course covers the important elements of forecasting all types of business activities including inventory control, revenue forecasts, staffing, and other industry specific activities using metrics and data analysis processes. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BUSA 1110.

BMGT 138. Advertising

3 Credits (3)

Psychological approach to non-personal consumer persuasion; applied techniques in media selection, layout mechanics, production methods, and campaign structures. Restricted to: Community Colleges only.

BMGT 140. Principles of Supervision I**3 Credits (3)**

Principles of supervision emphasizing planning, organization, rating of employees and procedures to develop good morale. Introduction to interpretation of case studies. Restricted to: Community Colleges only.

BMGT 150. Income Taxation**3 Credits (3)**

Federal income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates with particular reference to CLU, life insurance and annuities. Restricted to: Community Colleges only.

BMGT 155. Special Topics I**1-3 Credits (1-3)**

Introductory special topics of lower division level work that provides a variety of timely subjects and content material. May be repeated up to 9 credits. Restricted to Community Colleges campuses only.

BMGT 160. Self-Presentation and Etiquette**3 Credits (3)**

Introduction to business etiquette based on tradition, social expectations, and professional behavior standards. Restricted to: Community Colleges only.

BMGT 201. Work Readiness and Preparation**3 Credits (3)**

Instruction in methods of selection, seeking, acquiring and retaining employment. Addresses work success skills, business etiquette, employer expectation and workplace norms. Restricted to Community Colleges campuses only.

BMGT 205. Customer Service in Business**3 Credits (3)**

Establishes concepts of service quality in relationship to business success and maximization of returns to the organization. Explores techniques for delivering quality and service in a variety of business settings. Restricted to: Community Colleges only.

BMGT 208. Business Ethics**3 Credits (3)**

The course examines the underlying dimensions of ethics in business, investigating ethics in relationship to the organization, the stakeholders, and society. Exploration of ethical issues from a historical context, analyzing actual events through the lens of business decision making, including legal/political, sociocultural, economic, and environmental considerations will be undertaken. Restricted to Community Colleges campuses only.

BMGT 216. Business Math**3 Credits (3)**

Application of basic mathematical procedures to business situations, including percentage formula applications, markup, statement analysis, simple and compound interest, and annuities. Restricted to: Community Colleges only.

Prerequisite(s): CCDM 103 N or satisfactory math score on ACT.

BMGT 221. Internship I**1-3 Credits (1-3)**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: BMGT majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

BMGT 225. Introduction to Commercial Lending**3 Credits (3)**

Commercial lending overview, the lending process, portfolio management, and regulation and business development. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 112.

BMGT 232. Personal Finance**3 Credits (3)**

Budgeting, saving, credit, installment buying, insurance, buying vs. renting a home, income tax statement preparation, investment, and estate disposal through will and trust. Restricted to: Community Colleges only.

BMGT 236. Small Business Start-Up**3 Credits (3)**

Starting a small business is a complex endeavor that requires specialized knowledge. This course prepares students to take the first step in business ownership and operations. Restricted to Community Colleges campuses

Learning Outcomes

1. Identify the unique challenges of starting a small business.
2. Identify opportunities to start up a business and conduct a needs analysis.
3. Develop value proposition/market fit for proposed products and services.
4. Develop an appropriate business model.
5. Identify the availability of necessary resources.

BMGT 237. Managing Small Businesses**3 Credits (3)**

Managing a small business requires the owner/operator to be proficient in a number of skills and technical areas. This course provides small business owners/operators with the training and essential knowledge to manage a small business. Restricted to Community Colleges campuses

Learning Outcomes

1. Identify the strengths and weaknesses of small businesses
2. Define entrepreneurship and identifying its traits
3. Demonstrate a capability to explore and research business opportunities
4. Explain how to plan to start a new business, identifying legal structures, financing options, and organizing a management team
5. Identify and analyze financial statements
6. Review the importance of management information systems
7. Identify their own managerial leadership style
8. Review purchasing and inventories, taxation and insurance
9. Describe the process of writing a business plan

BMGT 240. Human Relations**3 Credits (3)**

Human interactions in business and industrial settings. Motivation and learning experiences as related to problems of the worker and supervisor. Practical applications of human behavior. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

BMGT 247. Customer Relationship Management**3 Credits (3)**

The course addresses the application of positive customer relationship practices and demonstrates the connection between managing excellent customer experiences and business success. Customer related decision making processes through the use of data based decision matrices are introduced. Restricted to Community Colleges campuses

Learning Outcomes

1. Recognize and explain the concept of customer service.
2. Describe the basic factors in Customer Relationship Management (CRM).
3. Explain how technological tools can support CRM processes.
4. Discuss the impact of CRM on the marketing processes.
5. Describe how effectively using CRM techniques impacts customer satisfaction.
6. Demonstrate the use of data to make effective CRM decisions.

BMGT 250. Diversity in the Workplace**3 Credits (3)**

Concepts of culture, diversity, prejudice, and discrimination within the domestic workforce/society. Restricted to Community Colleges campuses only.

Prerequisite(s): BUSA 1110.

BMGT 272. E-Commerce Operations**3 Credits (3)**

Includes the many forms of e-commerce and emerging technologies that will impact the business of tomorrow. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 105 or BCIS 1110.

BMGT 277. Entrepreneurship II - Small Business Management**3 Credits (3)**

This course is designed to acquaint the student with the opportunities encountered in the management and operations of a small business enterprise. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): ENTR 1110.

BMGT 280. Introduction to Human Resources**3 Credits (3)**

Personnel functions encompassing job analysis, recruitment, selection, training, appraisals, discipline, and terminations. Prerequisite(S): BUSA 1110 or B A 104. Restricted to Community Colleges campuses only.

BMGT 282. Introduction to International Business Management**3 Credits (3)**

Overview of the social, economic and cultural environment of international business transactions. Restricted to Community Colleges only.

Prerequisite(s): BUSA 1110.

BMGT 285. Introduction to Manufacturing Operations**3 Credits (3)**

Introduction to issues related to manufacturing, including an overview of the production function, product design and development, location, layout, forecasting, planning, purchasing, materials/inventory, and quality management. Restricted to Community Colleges campuses only.

Prerequisite(s): BUSA 1110 and (BMGT 140 or MGMT 2110).

BMGT 286. Introduction to Logistics**3 Credits (3)**

Overview on the planning, organizing, and controlling of transportation, inventory maintenance, order processing, purchasing, warehousing, materials, handling, packaging, customer service standards, and product scheduling. Restricted to: Community Colleges only.

BMGT 287. Introduction to Export/Import**3 Credits (3)**

Procedures and documentation for exporting and importing products. Emphasis on NAFTA regulations and other U.S. border operations crossings. Restricted to Community Colleges only.

Prerequisite(s): BUSA 1110.

BMGT 290. Applied Business Capstone**3 Credits (3)**

Refines skills and validates courses taken in BMGT program. Business simulations, case studies and projects used to test and improve business practices. Student must be within 25 credits of graduation. Restricted to: BMGT majors. Restricted to Community Colleges campuses only.

Prerequisite: BUSA 1110, and (BMGT 140 or MGMT 2110), and (BMGT 240 or SOCI 1110G or PSYC 1110G), and MKTG 2110.

Learning Outcomes

1. Plan, design, and create a real world project related to their field of study. Participate in job shadowing in positions related to their field of study.
Create a portfolio in preparation for career applications. Collaborate as a member of a team in their field of study. Identify and use ethical decision-making in working on individual projects, job shadowing, and a team.

BMGT 298. Independent Study**3 Credits (3)**

Individual studies directed by consenting faculty with prior approval of department chair. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Sophomore standing with 3.0 GPA.

BOT-BUSINESS OFFICE TECHNOLOGY (BOT)

BOT 298. Independent Study**1-3 Credits**

Individual studies directed by consenting faculty with prior approval of department head. May be repeated for a maximum of 3 credits.

Prerequisite: sophomore standing with 3.0 GPA.

BUSA-BUSINESS ADMINISTRATION (BUSA)

BUSA 1110. Intro to Business

3 Credits (3)

Fundamental concepts and terminology of business including areas such as management, marketing, accounting, economics, personnel, and finance; and the global environment in which they operate.

Learning Outcomes

1. Explain how business and entrepreneurship affect the quality of life and the world around us.
2. Explain the characteristics of the different forms of business ownership.
3. Perform basic stakeholder analysis concerning accountability, ethics and social responsibility of business.
4. Demonstrate knowledge of the various dimensions of the business environment including political and legal, socio-cultural, environmental, diversity, economic, technological, and global.
5. Describe the purpose and functions of finance, operations, marketing, management, accounting, and information systems.
6. Demonstrate basic skills such as use of common business terminology, information search skills, presentation and writing skills, and team skills.

C E-CIVIL ENGINEERING (C E)

C E 109. Computer Drafting Fundamentals

3 Credits (2+2P)

Same as DRFT 109, E T 109, SUR 109.

C E 151. Introduction to Civil Engineering

3 Credits (3)

Problem solving and use of computer software for civil engineering applications. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 1220G.

C E 198. Special Topics

1-3 Credits

May be repeated for a maximum of 6 credits.

Prerequisite: consent of department head.

C E 233. Mechanics-Statics

3 Credits (3)

Engineering mechanics using vector methods. May be repeated up to 3 credits.

Prerequisite(s): MATH 1521G or MATH 1521H, PHYS 1310G and cumulative GPA of 2.0.

C E 234. Mechanics-Dynamics

3 Credits (3)

Kinematics and dynamic behavior of solid bodies utilizing vector methods. May be repeated up to 3 credits. Crosslisted with: M E 234.

Prerequisite(s): C E 233, MATH 1521G or MATH 1521H, PHYS 1310G.

C E 256. Environmental Engineering and Science

3 Credits (3)

Principles in environmental engineering and science: physical chemical systems and biological processes as applied to pollution control. Crosslisted with: ENVS 2111

Prerequisite: CHEM 1215G and MATH 1511G or ENGR 190.

Learning Outcomes

1. To understand the nature of water quality parameters in the context of Civil Engineering and Environmental Science (Water Treatment/Wastewater Treatment/Environmental Science) To learn to apply engineering and scientific solutions to water quality problems To understand environmental regulations and their consequences on the design of pollution control systems

C E 256 L. Environmental Science Laboratory

1 Credit (1P)

Laboratory experiments associated with the material presented in C E 256. Same as ENVS 2111L.

Corequisite(s): C E 256.

C E 298. Special Topics

1-3 Credits

May be repeated for a maximum of 6 credits.

Prerequisite: consent of department head.

C S-COMPUTER SCIENCE (C S)

C S 111. Computer Science Principles

4 Credits (3+2P)

This course provides a broad and exciting introduction to the field of computer science and the impact that computation has today on every aspect of life. It focuses on exploring computing as a creative activity and investigates the key foundations of computing: abstraction, data, algorithms, and programming. It looks into how connectivity and the Internet have revolutionized computing and demonstrates the global impact that computing has achieved, and it reveals how a new student in computer science might become part of the computing future.

Prerequisite(s): MATH 1215 or higher.

C S 117. Introduction to Computer Animation

3 Credits (3)

Introductory course for learning to program with computer animation as well as learning basic concepts in computer science. Students create interactive animation projects such as computer games and learn to use software packages for creating animations in small virtual worlds using 3D models. Recommended for students considering a minor/major in computer science or simply interested in beginning computer animation or programming.

C S 151. C++ Programming

3 Credits (2+2P)

Introduction to object-oriented programming in the C++ language. The focus will be on preparing students to use C++ in their own areas. No prior programming experience is required. Taught with C S 451.

Prerequisite: MATH 1215 or higher.

Learning Outcomes

1. Use various data types and the corresponding operations. Write C++ programs that contain expressions, program control, functions, arrays, and input/output Explain basic object-oriented programming concepts. Demonstrate proficiency in using classes, inheritance, pointers, streams, and recursion

C S 152. Java Programming

3 Credits (2+2P)

Programming in the Java language. May be repeated up to 3 credits.

Prerequisite(s): MATH 1215 or higher.

C S 153. Python Programming I

3 Credits (3)

This course is an introduction to programming in the Python language, covering fundamental scripts, data types and variables, functions, and simple object creation and usage. The focus will be on preparing students to use Python in their own areas. No prior programming experience is required. Taught with C S 453.

Prerequisite: MATH 1215 or higher.

Learning Outcomes

1. Develop an algorithm to solve a problem Demonstrate the ability to use Python data types: int, float, strings, and lists; and the built-in functions associated with those data types Edit and debug programs using the Spyder IDE for Python Implement algorithms using the Python features of assignment, input, output, branches, loops, and functions Explain the fundamental concepts of object-oriented programming with Python Design and implement Python classes based on given attributes and behaviors Work with existing Python modules such as math, random, and os Write Python programs that input data from files and store results in files

C S 154. Python Programming II

3 Credits (3)

This course covers advanced Python programming, including classes, objects, and inheritance, embedded programming in domain applications, database interaction, and advanced data and text processing. The focus will be on preparing students to use Python in their own areas.

Prerequisite(s): C S 153 or C S 453.

C S 157. Topics in Software Programming and Applications

3 Credits (2+2P)

Current topics in computer programming and software applications. Topic announced in the Schedule of Classes. May be repeated if subtitle is different.

C S 158. R Programming I

3 Credits (3)

This course is an introduction to data processing in the R language, covering fundamental script configuration, data types and data collections, R control structures, and basic creation of graphs and data visualizations. This course will not focus on the statistical capabilities of R, though some basic statistical computations will be used.

Prerequisite(s): MATH 1220G.

C S 171G. Introduction to Computer Science**4 Credits (3+2P)**

Computers are now used widely in all area of modern life. This course provides understanding of the theoretical and practical foundations for how computers work, and provides practical application and programming experience in using computers to solve problems efficiently and effectively. The course covers broad aspects of the hardware, software, and mathematical basis of computers. Weekly labs stress using computers to investigate and report on data-intensive scientific problems. Practical experience in major software applications includes an introduction to programming, word processing, spreadsheets, databases, presentations, and Internet applications.

Prerequisite(s): MATH 1130G or MATH 1215 or higher.

C S 172. Computer Science I**4 Credits (3+2P)**

Computational problem solving; problem analysis; implementation of algorithms using Java. Object-oriented concepts, arrays, searching, sorting, and recursion. Taught with C S 460

Prerequisite: (A C or better in either MATH 1250G or MATH 1430G) OR (A C or better in MATH 1220G and a 1 or better in the CS Placement Test).

Learning Outcomes

1. Develop algorithms to solve problems Implement algorithms using the fundamental programming features of sequence, selection, iteration, and recursion
2. Apply an understanding of primitive and object data types
3. Design and implement classes based on given attributes and behaviors
4. Explain the fundamental concepts of object-oriented programming,

C S 209. Special Topics.**1-3 Credits**

May be repeated for a maximum of 12 credits.

C S 271. Object Oriented Programming**4 Credits (3+2P)**

Introduction to problem analysis and problem solving in the object-oriented paradigm. Practical introduction to implementing solutions in the C++ language. Pointers and dynamic memory allocation. Hands-on experience with useful development tools. Taught with C S 462.

Prerequisite: At least a C- in C S 172 or E E 112.

Learning Outcomes

1. Develop an algorithm to solve a problem. Implement algorithms using the C and C++ languages including imperative and object-oriented language features. Beyond what was learned in C S 172, E E 112, or E E 161 demonstrate a noticeable increase in understanding of problem analysis and program design. Demonstrate proficiency in using control structures including if statements (single selection), switch (multiple selection), and loops (repetition). Demonstrate proficiency in using arrays and functions Create UML class and relationship diagrams. Design a class to model a real-world person, place, thing, or event. Use editing and debugging software to create, debug, and test C and C++ programs. Understand the basic terminology used in object-oriented programming. 1 Create a make file to build an executable from a set of C or C++ source files.

C S 272. Introduction to Data Structures**4 Credits (3+2P)**

Design, implementation, use of fundamental abstract data types and their algorithms: lists, stacks, queues, dequeues, trees; imperative and declarative programming. Internal sorting; time and space efficiency of algorithms. Taught with C S 463.

Prerequisite: At least a C- in C S 172, or placement.

Learning Outcomes

1. Be able to implement and use lists Be able to implement and use stacks Be able to implement and use queues Be able to implement and use trees Be able to perform the run time analysis of basic algorithms using Big O notation Be able to implement, use, and analyze searching algorithms Be able to solve a problem recursively Take a problem statement from a user and convert it into a Java program that fulfills the user's needs Create object oriented Java classes that effectively separate and hide implementation details from client applications

C S 273. Machine Programming and Organization**4 Credits (3+2P)**

Computer structure, instruction execution, addressing techniques; programming in machine and assembly languages. Taught with C S 464.

Prerequisite: At least a C- in C S 172 or E E 112.

Learning Outcomes

1. Describe the architecture of a microcontroller, the interconnections between the components, and the basic units inside the CPU Use signed and unsigned numbers, the associated branching instructions, and the corresponding flags in the status register Explain immediate, direct, indirect addressing modes, their opcode and operands, and their utilities Map high-level programming language features to assembly instructions, including loops, conditionals, procedure calls, value and reference parameter passing, return values, and recursion Interface with I/O devices including LED and sensors via digital input and output, and analog-to-digital conversion Program timers/counters and interrupts to control real-time applications Design an assembly program

C S 278. Discrete Mathematics for Computer Science**4 Credits (3+2P)**

Discrete mathematics required for Computer Science, including the basics of logic, number theory, methods of proof, sequences, mathematical induction, set theory, counting, and functions. Taught with C S 465.

Prerequisite: At least C- in C S 172.

Learning Outcomes

1. Use logic to specify precise meaning of statements, demonstrate the equivalence of statements, and test the validity of arguments Construct and recognize valid proofs using different techniques including the principle of mathematical induction Use summations, formulas for the sum of arithmetic and geometric sequences Explain and apply the concepts of sets and functions Apply counting principles to determine the number of various combinatorial configurations

CCDE-DEVELOPMENTAL ENGLISH (CCDE)

CCDE 105 N. Effective Communication Skills**4 Credits (3+2P)**

Instruction and practice in basic communication, to include written and oral presentations. Develops thinking, writing, speaking, reading, and listening skills necessary for successful entry to college and university classes. Provides laboratory. RR applicable.

CCDE 110 N. General Composition**4 Credits (3+2P)**

Instruction and practice in preparation for college-level writing. Students will develop and write short essays. Provides laboratory. May be repeated up to 4 credits. Traditional Grading with RR. Restricted to Community Colleges campuses only.

CCDM-DEVELOPMENTAL MATHEMATICS (CCDM)

CCDM 100 N. Mathematics Preparation for College Success**1-4 Credits**

Mathematics skills course designed for college students with math skills insufficient for success in CCDM 103N. May be repeated for a maximum of 4 credits. RR applicable.

CCDM 103 N. Pre-Algebra**4 Credits (3+2P)**

Fundamental mathematics operations and arithmetic computations. Introduction to algebra and applied geometry. Provides laboratory and individualized instruction. RR applicable.

CCDM 105 N. Mathematics Preparation and Pre-Algebra**5 Credits (4+2P)**

A total immersion course that combines CCDM 100N and CCDM 103N using tutorials, manipulatives, and classroom instruction. Completion of this class is equivalent to the completion of CCDM 100N and CCDM 103N. Restricted to: Community Colleges only.

CCDM 107 N. Pre-Algebra Fast-Track**1 Credit (1)**

An intensive review of fundamental mathematics operations and arithmetic computations. A review of introductory concepts of algebra and applied geometry. Students must meet eligibility requirements (Math Placement Exam). Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): Math Placement Exam.

CCDM 108 N. Beginning Algebra Fast-Track**1 Credit (1)**

An intensive review of fundamental algebra topics including algebraic expressions, solving linear and quadratic equations, factoring, radicals, exponents. Students must meet eligibility requirements (math placement exam or completion of CCDM 107N). Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): Math Placement Exam; or passing score in CCDM 105 N or CCDM 103 N, or CCDM 107 N.

CCDM 112 N. Developmental Algebra I**4 Credits (3+2P)**

Fundamental algebra operations, algebraic expressions, solving linear equations, systems of equations and applications of linear equations. Introduction to exponents and polynomials. Provides laboratory instruction. Completion of CCDM 112N and CCDM 113N is equivalent to completion of CCDM 114N. Graded: Traditional with RR. Traditional Grading with RR. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of C or better in CCDM 103N or CCDM 105N or adequate placement score.

CCDM 113 N. Developmental Algebra II**4 Credits (3+2P)**

Fundamental algebra operations, polynomials, factoring, solving quadratics by factoring, rational expressions, exponents and radical expressions (continuation of CCDM 112N). Provides laboratory instruction. Completion of CCDM 112N and CCDM 113N is equivalent to completion of CCDM 114N.

Graded: Traditional with RR. Restricted to: Community Colleges only.

Prerequisite(s): Grade of C or better in CCDM 112N or consent of instructor.

CCDM 114 N. Algebra Skills**4 Credits (3+2P)**

Fundamental algebra operations: algebraic expressions, solving linear and quadratic equations, factoring, radicals, exponents. Provides laboratory and individualized instruction. Completion of CCDM 114N meets basic skills requirement. Graded: Traditional with RR. Traditional Grading with RR. Restricted to Community Colleges campuses only.

Prerequisite(s): C or better in CCDM 103N or CCDM 105N or adequate placement score.

CCDR-DEVELOPMENTAL READING (CCDR)

CCDR 103 N. Comprehensive Reading Development**4 Credits (3+2P)**

Provides integration of basic reading skills, including vocabulary development, text comprehension, and critical reading skills. Course earns institutional credit but will not count towards degree requirements. May be repeated up to 4 credits. Traditional Grading with RR. Restricted to Community Colleges campuses only.

Prerequisite(s): Appropriate placement score.

CCDR 105 N. Fundamentals of Academic Reading.**3 Credits (2+2P)**

Fundamentals of academic reading skills. Emphasis on vocabulary development and text comprehension through literature based instruction. Course earns institutional credit but will not count towards degree requirements. Graded: Traditional with RR. May be repeated up to 3 credits. Traditional Grading with RR. Restricted to Community Colleges campuses only.

Prerequisite(s): Appropriate placement score.

CCDR 110 N. Effective College Reading**3 Credits (2+2P)**

Provides a variety of strategies for effective reading and studying at the college level. Emphasis on reading across disciplines. Course earns institutional credit but will not count towards degree requirements. Graded: Traditional with RR. May be repeated up to 3 credits. Traditional Grading with RR. Restricted to Community Colleges campuses only.

Prerequisite(s): Appropriate placement score.

CCDS-DEVELOPMENTAL SKILLS (CCDS)

CCDS 109 N. Study Skills for Reading**1-3 Credits**

Individualized reading skill strategies necessary for success in college classroom. May be repeated for a maximum of 3 credits. Graded traditional or S/U.

CCDS 111 N. Study Skills for Math**1-3 Credits**

Individualized study skill strategies necessary for success in the math classroom. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

CCDS 113 N. Study Skills for English**1-3 Credits**

Individualized study skill strategies necessary for success in the composition classroom. May be repeated for a maximum of 3 credits.

CCDS 119 N. College Reading and Writing**4 Credits (4)**

Instruction and practice in preparation for college-level reading and writing. Students will develop and write essays, work on the writing process, and learn to read and analyze college-level texts. Traditional Grading with RR.

Prerequisite(s): Appropriate placement test score.

Learning Outcomes

1. Practice the reading and writing process through activities such as pre- reading/writing, annotating, drafting, summarizing, peer reviewing, discussing, revising, proofreading, journaling, researching, and citing.
2. Infer and interpret meanings in various texts through activities such as summarizing, annotating, journaling, reflecting, and textual analysis.

CEPY-COUNSELING & EDUCATIONAL PSYCHOLOGY

CEPY 1120G. Human Growth and Behavior

3 Credits (3)

Introduction to the principles of human growth and development throughout the life span.

Learning Outcomes

1. Students will demonstrate an understanding of the scientific study of processes of change and stability throughout the human lifespan (i.e. Human Development).
2. Students will demonstrate a familiarity with the generally recognized stages of human development from conception to death.
3. Students will be able to demonstrate understanding of the normal and exceptional patterns of human development.
4. Students will be able to demonstrate understanding of recent research development regarding the identified stages of human development as they relate to gender and multicultural issues

CEPY 1150. Career Excellence

1 Credit (1)

Professional career curriculum to assist students in developing an understanding and ability to articulate who they are as emerging professionals through personal assessment activities. The focus will be on providing students with tools and strategies for reflection, planning, and goal-setting. Course does not count toward CEP minor. Spring only course offering. Restricted to: College of Education Majors only majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Demonstrate an understanding of the relationship between academic and professional career success. Express a familiarity with professionalism and career culture and communicate a comprehension of various professional career skills. Apply material learned to other aspects to professional excellence. Develop a career life plan that will highlight goals, taking into account life circumstances. Become competent in appropriate professional communication.

CEPY 1160. Academic Excellence

1 Credit (1)

The course is designed to provide you students with a foundation in their personal academic process. The course will assist students in developing an understanding and ability to articulate who they are as beginning college students through personal assessment activities. The focus will be on providing students with tools and strategies for reflection, planning, and goal-setting. Topics discussed will include time management, study skills, test taking skills, stress management, motivational and academic discipline skills, interpersonal skills and college survival skills. We intend for this to be a supportive, respectful and collaborative environment where everyone can learn and grow. Fall only course offering. Restricted to: College of Education majors.

Learning Outcomes

1. Students will be able to demonstrate an understanding of the relationship between time management and academic success. Students will be able to express a familiarity with college culture. Students will be able to communicate a comprehension of study skills and test taking strategies. Students will be able to apply material learned to other aspects to enhance academic excellence. Students will be able to develop an academic life plan that will highlight goals, taking into account life circumstances. Become competent in appropriate academic communication.

CEPY 2110. Learning in the Classroom**3 Credits (3)**

This class introduces you to the basic principles of learning, including cognition, motivation, and assessment. You will examine the relationships between theory, research, and practice in learning, memory, child development, motivation, and educational assessment for the school setting. This course will provide the student with concepts and principles of educational psychology that will form a framework for thinking about learning and instruction and how theories of learning are connected to classroom situations

Learning Outcomes

1. Define learning and compare and contrast the factors that cognitive, behavioral, and humanistic theories believed to influence the learning process, giving specific examples of how these principles could be used in the classroom.
2. Observe and reflect upon the teaching learning processes in economically, socially, culturally and educationally diverse classroom populations in order to develop a current understanding of students and families in public and private school.
3. Discuss how theories of information processing and cognitive theories of learning can impact memory, study strategies, and how certain teaching techniques can help students learn.
4. Compare teacher-centered and student-centered approaches to learning, and to identify a positive learning environment.
5. Identify various methods to motivate students and create effective learning environments.
6. Use major concepts of child and adolescent development, human learning, and social and cultural influences in planning and implementing classroom instruction, strategies, and management.
7. Evaluate the best means of accommodating instruction to meet individual needs and differences.
8. Students will examine how learning style, cultural and social issues and learning disabilities impact the learner's effectiveness in the classroom setting.
9. Explain different types of assessment used to assess learning and provide examples of effective assessment practices.
10. 1Discuss the relationship between motivation and classroom management

CEPY 2120. The Preschool Child**3 Credits (3)**

Survey of psychological development from conception to age five.

Learning Outcomes

1. Demonstrate an understanding of major theories of early childhood development
2. Demonstrate an understanding of recognized stages of human development from prenatal to preschool years
3. Explore cultural influences that may create variability in human development
4. Apply major theories to themselves and reflect on their early childhood development.

CEPY 2130. Adolescence - School Setting**3 Credits (3)**

This course is designed to present the student with an introduction to the area of adolescent development with an emphasis on the positive aspects of this life stage. Students will be encouraged to be reflective on the topics presented in class that will include issues on diversity, culture, health, and well-being, emerging adulthood and suggestions for improving the lives of adolescents.

Learning Outcomes

1. Students will become knowledgeable about the historical background of adolescent development.
2. Students will become knowledgeable about the major theories related to adolescence.
3. Students will evaluate different developmental theories and their fit across cultures as you reflect on your personal experiences through discussions and videos you will watch.
4. Students will identify key developmental milestones, conflicts, and concepts of each chapter presented by utilizing critical thinking skills as you complete summary questions.
5. Students will define relevant terms, ideas, and concepts in the study of adolescent development through quizzes and homework assignments.

CEPY 2140. Explorations of Counseling & Community Psychology**3 Credits (3)**

An introduction and exploration of various career options and functions within the mental health disciplines to aid in professional development. Emphasis will be placed on depth and scope of the choices available including research, teaching, community work, public policy, and clinical work and prevention (e.g. counseling, psychotherapy, assessment, consultation). May be repeated up to 6 credits.

Learning Outcomes

1. Acquire knowledge of historical and contemporary issues which affect the provision of mental health services by members of diverse mental health disciplines including clinical, counseling, school, and community psychologists, clinical mental health counselors, and others.
2. Acquire knowledge pertaining to education and training requirements for various disciplines.
3. Acquire survey-level knowledge of psychological assessment, measurement, and treatment.
4. Acquire survey-level knowledge of various inquiry approaches applicable to research pertaining to mental health and well-being—both at the individual and community level.
5. Understand the mental health recovery model and explore the lived experiences of individuals with mental health problems in contemporary society.
6. Understand the principles of sensitivity and respect for diverse populations as integral to professional practice in diverse mental health disciplines and settings, including practice in educational and community settings.

CEPY 2140H. Exploration of CCP**3 Credits (3)**

An exploration of careers, activities, & techniques in counseling, school, and community psychology. Taught with CEPY 2140 with differentiated instruction and/or independent project to be determined. Restricted to Las Cruces campus only.

Learning Outcomes

1. Demonstrating knowledge of the basic functions of careers in counseling, community and school psychology.
2. Establishing a familiarity with the educational requirements necessary for a career in counseling, community, and school psychology.
3. Acknowledging and enhancing sensitivity and respect for diverse populations in various counseling areas; including educational and community settings.
4. Beginning to develop the interpersonal skills needed to succeed in the counseling, community and school psychology professions
5. .

CHEF-CULINARY ARTS (CHEF)

CHEF 101. Culinary Arts Kitchen Orientation**3 Credits (3)**

Provides students with basic information and skills necessary for success in the Culinary Arts program. Students learn basic kitchen routines, safety and sanitation, professional conduct and deportment, standard kitchen calculations, knife handling, and are introduced to the laboratories for initial cooking experiences. Restricted to Community Colleges campuses only.

CHEF 125. Introductory Cake Decorating**1 Credit (2P)**

Introduction to the professional cake decorating techniques used by pastry chefs. Basic skills of piping a variety of icings into different patterns are taught. Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of instructor.

CHEF 126. Intermediate Cake Decorating**1 Credit (2P)**

Introduction to more advanced professional cake decorating techniques used by pastry chefs. Fondant work and more complex decorating schemes are taught. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEF 125.

CHEF 127. Chocolate Work**1 Credit (2P)**

Introduction to working with chocolate utilizing a variety of methods. Tempering, forming, molding, and other professional techniques will be taught. Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of Instructor.

CHEF 128. Advanced Chocolate Work**1 Credit (2P)**

More advanced treatments of chocolate are explored and professional techniques for the chocolatier are developed. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEF 127.

CHEF 129. Wedding Cake Design and Construction**1 Credit (2P)**

Basic skills in designing wedding (or other specialty event) cakes. Includes shaping, icing selection, decorating scheme, presentation, transportation, and remote set up. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEF 125 and CHEF 126.

CHEF 155. Special Topics**1-3 Credits (1-3)**

Specific subjects to be announced in the Schedule of Classes. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CHEF 165. Math for Kitchen Operations**3 Credits (3)**

Fundamental mathematical concepts and computations, including measurement, recipe scaling and conversions, metric unit conversion, ingredient yield calculations, ratios and cost extensions are covered. Examples of basic mathematical calculations use kitchen and food service functions, as well as situations to demonstrate principles.

CHEF 211. Food Production Management I**3 Credits (2+2P)**

Introduction to kitchen design, workflow, and commercial equipment. Techniques, methods, and application of basic food production principles. Practical experience in cooking processes from a managerial viewpoint. Crosslisted with: HOST 211. Restricted to Community Colleges only.

CHEF 212. Food Production Management II**3 Credits (2+2P)**

Selection and use of ingredients. Demonstration and application of classical and modern cooking and preparation techniques. Management techniques for kitchen personnel. Recipe design and analysis. Crosslisted with: HOST 212. Restricted to Community Colleges only.

Prerequisite(s): CHEF 211 or consent of instructor.

CHEF 213. Bakery Management I**3 Credits (2+2P)**

Fundamentals of baking from a supervisory/management perspective. Exposure to commercial equipment and processes. Introduction to commercial alternatives to scratch-preparation methods. Crosslisted with: HOST 213. Restricted to Community Colleges only.

CHEF 214. Bakery Management II**3 Credits (2+2P)**

Advanced techniques and management of bakery operations are explored. Students learn classical forms and techniques. Modern methods of preparing traditional pastry and baked goods are introduced. Crosslisted with: HOST218. Restricted to Community Colleges only.

Prerequisite(s): CHEF 213 or consent of instructor.

CHEF 233. Culinary Arts Fundamentals I**4 Credits (1+9P)**

Introduction to the basics of culinary arts, including ingredients recognition, cooking methods and techniques, knife usage, preparation of basic stocks, mother sauces, starches and vegetables. Students will participate in laboratory work designed to create an understanding of the professional role of the culinarian. Preparation and production of food products integral to service to guests is incorporated in the course. May be repeated up to 4 credits. Consent of Instructor required. Restricted to: CHEF, HOST, HSMG, HOCH majors. Restricted to Community Colleges campuses only.

CHEF 234. Culinary Arts Fundamentals II**4 Credits (1+9P)**

Continuation of introductory course focusing on meat cookery, daughter sauces, cold food preparation, poultry and seafood. Safe use of equipment is emphasized while experiencing differing methods of preparation and cooking. Preparation and production of food products integral to service of guests is incorporated in this course. May be repeated up to 4 credits. Restricted to: HOST,HSMG,CHEF majors. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEF 233 with a grade of "C-" or better.

CHEF 235. Advanced Culinary Arts I**4 Credits (1+9P)**

Exploration and experience in preparation techniques beyond the basic level. Nutritional components of food are discussed, as in the application of good nutrition practices in recipe design. Students are encouraged to use creative methods to expand the individual's culinary expressions. Prepares food products for service to guests in both bulk feeding and individual service settings. Plans, prepares, serves and critiques meals provided for students, faculty and staff. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): CHEF 234 with a grade of "C" or better if course has been previously taken. Restricted to: CHEF majors. Restricted to Community Colleges campuses only.

CHEF 236. Advanced Culinary Arts II**4 Credits (1+9P)**

Advanced techniques and experimental use of food combinations to enhance the student's repertoire of skills and abilities. Utilizes knowledge to develop recipes for unique products. Plans, prepares, serves and critiques meals provided for students, faculty and staff. Restricted to: CHEF majors. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEF 235 with a grade of "C" or better.

CHEF 237. Banquet/Catering Production**3 Credits (1+6P)**

Planning and implementation of the culinary aspects of catered functions. Development of time schedules, work assignments and service plans for catered events and banquet functions. Production of food items in appropriate quantities for catered events. Costing and control functions are covered. May be repeated up to 6 credits. Restricted to: CHEF, HOST majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of "C" or above in CHEF 233.

CHEF 240. Baking Fundamentals I**4 Credits (1+9P)**

Introduction to baking techniques, measurement and use of ingredients; equipment use and chemical reactions inherent in the baking process. Production of simple desserts and baked goods. Introduction to working with bread doughs. Restricted to: HOST, CHEF majors. Restricted to Community Colleges campuses only.

Corequisite(s): CHEF 233.

CHEF 241. Baking Fundamentals II**4 Credits (1+9P)**

More advanced baking and bread making techniques are covered in this course with emphasis on the more advanced elements of quantity production. Students work with a variety of products and ingredients. Restricted to: HOST, CHEF majors. Restricted to Community Colleges campuses only.

Prerequisite(s): grade of "C" or above in CHEF 240.

CHEF 242. Intermediate Baking I**4 Credits (1+9P)**

More advanced baking and pastry techniques are covered in this course with emphasis on the basic elements of patisserie production. Focus is on preparing students to work in a pastry kitchen. Restricted to: HOST, CHEF majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of "C" or above in CHEF 241.

CHEF 243. Intermediate Baking II**4 Credits (1+9P)**

Continuation of work with basic elements of patisserie products including laminated doughs and filled products. Students prepare creams, custards, fillings and are introduced to cake assembly procedures. Restricted to: CULI majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of "C" or above in CHEF 242.

CHEF 255. Special Topics**3 Credits (3)**

Specific subjects to be announced in the Schedule of Classes. May be repeated up to 6 credits. Restricted to: CULI, HOST, HSMG majors. Restricted to Community Colleges campuses only.

CHEF 256. International Cuisine**3 Credits (1+6P)**

Exploration into a variety of international cuisines is undertaken, including the cultural and historical backgrounds of the foods being prepared. Students work on developing themed menus and production plans for meals utilizing a single international cuisine. May be repeated up to 6 credits. Restricted to: CHEF, HOST majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of "C" or above in CHEF 233.

CHEF 257. Garde Manger**3 Credits (1+6P)**

Traditional garde manger skills are taught, including plated salads, cold foods, entremets, pates, forcemeat, terrines, charcuterie and chaud froid work. The art and craft of food design, preparation and service are emphasized. May be repeated up to 3 credits. Restricted to: CHEF, HOST majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of "C" or above in CHEF 233.

CHEF 260. Nutrition for Chefs**3 Credits (3)**

Aspects of basic human nutritional requirements are covered as are the applications of the standards to the cooking and baking. Meeting the USDA nutrient guidelines while preparing good tasting food is discussed, calorie, fat and sodium reduction techniques are explored.

CHEM-CHEMISTRY (CHEM)

CHEM 1111. Basic Chemistry**3 Credits (3)**

For students whose preparatory science or math training has been deficient. Does not meet the chemistry requirement in any curriculum.

Prerequisite: Enhanced ACT composite score of at least 18 or a grade of C- or better in CCDM 114 N.

Learning Outcomes

1. The goals and objectives for CHEM 1111 are to equip students with the necessary problem solving skills to be successful in CHEM 1215G/1225G

CHEM 1120G. Introduction to Chemistry Lecture and Laboratory (non majors)**4 Credits (3+3P)**

This course covers qualitative and quantitative areas of non-organic general chemistry for non-science majors and some health professions. Students will learn and apply principles pertaining, but not limited to, atomic and molecular structure, the periodic table, acids and bases, mass relationships, and solutions. The laboratory component introduces students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment.

Prerequisite: CCDM 114N or A S 103 or MATH 1215 or higher.

Learning Outcomes

1. (Lecture) Use the different systems of measurements and perform conversions within the same system of measurement and between different systems of measurements
2. (Lecture) Identify elements from their name or symbol, use the periodic table to describe reactivity patterns of elements and to predict compound formation.
3. (Lecture) Describe the basic structure of an atom using subatomic particles, and apply these concepts to nuclear reactions.
4. (Lecture) Describe ion formation and the difference between covalent and ionic compounds. Name and write formulas for ionic and simple molecular compounds.
5. (Lecture) Write and balance chemical reactions. Use balanced reactions in stoichiometric calculations.
6. (Lecture) Describe the differences between the solid, liquid and gas phases. Use the gas laws in calculations, and apply these laws to everyday situations.
7. (Lecture) Explain different types of energy, and how energy is released or absorbed in a reaction
8. (Lecture) Describe acid and base behavior.
9. (Lecture) Explain the intermolecular attractive forces that determine physical properties; apply this knowledge to qualitatively evaluate these forces and predict the physical properties that result.
10. 1(Lecture) Explain the intermolecular attractive forces that determine physical properties; apply this knowledge to qualitatively evaluate these forces and predict the physical properties that result
11. 1(Laboratory) Practice concepts associated with laboratory safety, including the possible consequences of not adhering to appropriate safety guidelines.
12. 1(Laboratory) Demonstrate the computational skills needed to perform appropriate laboratory-
13. related calculations to include, but not be limited to determining the number of significant figures in numerical value, solving problems using values represented in exponential notation, solving dimensional analysis problems, and manipulating mathematical formulas as needed to determine the value of a variable.
14. 1(Laboratory) Perform laboratory observations (both qualitative and quantitative) using sensory experience and appropriate measurement instrumentation (both analog and digital).
15. 1(Laboratory) Record quantitatively measured values to the correct number of significant figures and assign the correct units.
16. 1(Laboratory) Master basic laboratory techniques including, but not limited to weighing samples (liquid and solid), determining sample volumes, measuring the temperature of samples, heating and cooling a sample or reaction mixture, decantation, filtration, and titration.
17. 1(Laboratory) Draw appropriate conclusions based on data and analyses.
18. 1Present experimental results in laboratory reports of appropriate length, style and depth, or through other modes as required.
19. 1Determine chemical formulas and classify different types of reactions.
20. 1Relate laboratory experimental observations, operations, calculations, and findings to theoretical concepts presented in the complementary lecture course.

CHEM 1121. General Supplemental Instruction I**1 Credit (1)**

Collaborative workshop for students in General Chemistry I. Course does not count toward departmental degree requirements. May be repeated for a maximum of 2 credits.

Corequisite(s): CHEM 1215G.

CHEM 1122. General Supplemental Instruction II**1 Credit (1)**

Collaborative workshop for students in General Chemistry II. Course does not count toward departmental degree requirements. May be repeated for a maximum of 2 credits.

Corequisite(s): CHEM 1225G.

CHEM 1123. Principles of Supplemental Instruction III**1 Credit (1)**

Collaborative workshop for students in CHEM 1120G, Principles and Applications of Chemistry. Course does not count toward departmental degree requirements. May be repeated for maximum of 2 credits.

Corequisite(s): CHEM 1120G.

CHEM 1215G. General Chemistry I Lecture and Laboratory for STEM Majors**4 Credits (3+3P)**

This course covers descriptive and theoretical chemistry.

Prerequisite: (1) grade of C- or better in MATH 1215 or higher, or a Mathematics Placement Exam Score adequate to enroll in mathematics courses beyond MATH 1215.

Learning Outcomes

1. Use dimensional analysis, the SI system of units and appropriate significant figures to solve quantitative calculations in science. Understand the differences between physical and chemical changes to matter. Classify types of matter. Understand the scientific method in the context of scientific discoveries. Explain the structure of atoms, isotopes and ions in terms of subatomic particles. Analyze how periodic properties (e.g. electronegativity, atomic and ionic radii, ionization energy, electron affinity, metallic character) and reactivity of elements results from electron configurations of atoms. Understand the creation of different types of compounds (ionic and molecular), comparing and contrasting their structures, naming schemes and formulas. Apply knowledge of electronic structure to determine molecular spatial arrangement and polarity. Understand bulk pure substances, their properties and their states of matter by understanding and identifying intermolecular forces. Apply kinetic molecular theory to relate atomic level behavior to macroscopic properties. Introduce the mole and apply the mole concept to amounts on a macroscopic and a microscopic level. Understand mixtures, solubility by considering intermolecular forces and expressing concentration in molarity. Identify different reaction types. Apply the law of conservation of mass to reactions. Perform stoichiometry on balanced reactions. Laboratory Student Learning Outcomes Demonstrate and apply concepts associated with laboratory safety, including the possible consequences of not adhering to appropriate safety guidelines. Demonstrate the computational skills needed to perform appropriate laboratory related calculations to include, but not be limited to determining the number of significant figures in numerical value with the correct units, solving problems using values represented in exponential notation, solving dimensional analysis problems, and manipulating mathematical formulas as needed to determine the value of a variable. Perform laboratory observations (both qualitative and quantitative) using sensory experience and appropriate measurement instrumentation (both analog and digital). Prepare solutions with an acceptable accuracy to a known concentration using appropriate glassware. Master basic laboratory techniques including, but not limited to weighing samples (liquid and solid), determining sample volumes, measuring the temperature of samples, heating and cooling a sample or reaction mixture, decantation, filtration, and titration. Draw conclusions based on data and analyses from laboratory experiments. Relate laboratory experimental observations, operations, calculations, and findings to theoretical concepts presented in the complementary lecture course.

CHEM 1216. General Chemistry I Lecture and Laboratory for CHEM Majors**4 Credits (3+3P)**

As the first of a two-semester sequence, this course teaches fundamental concepts in chemistry, including the electronic structure of atoms, chemical periodicity, nature of chemical bonds, molecular structure, the three phases of matter, etc. Designed for majors in chemical and other physical sciences, including engineering. May be appropriate for the life science major. It is assumed that the students are familiar with college algebra, chemical nomenclature, stoichiometry, and scientific measurements. The laboratory component is designed to complement the theory and concepts presented in lecture, and will introduce students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment.

Prerequisite(s): Eligible to take MATH 1250G and an ACT composite score of 22 or higher.

Learning Outcomes

1. Apply the mole concept to amounts at a microscopic level and use this to perform stoichiometric calculations for reactions in solution, gases and thermochemistry. Calculate solution concentrations in various units. Apply the gas laws and kinetic molecular theory to relate atomic level behavior to macroscopic properties. Explain the electronic structure of atoms, isotopes and ions in terms of its subatomic particles. Analyze how periodic properties (e.g. electronegativity, atomic and ionic radii, ionization energy, electron affinity, metallic character) and reactivity of elements results from electronic configurations of atoms. Understand the nature of chemical bonds (ionic and covalent). Apply knowledge of electronic structure to determine molecular structure and polarity. Understand the formation of different phases of matter and the underlying fundamental intermolecular interactions. Describe physical states and changes, and distinguish these from chemical changes. Describe the energy conversions that occur in chemical reactions and state changes, relating heat of reaction to thermodynamic properties such as enthalpy and internal energy; apply these principles to measure and calculate energy changes in reaction. 1 Apply principles of general chemistry to specific real-world problems in environment, engineering and health-related fields.

CHEM 1225G. General Chemistry II Lecture and Laboratory for STEM Majors**4 Credits (3+3P)**

This course is intended to serve as a continuation of general chemistry principles for students enrolled in science, engineering, and certain preprofessional programs. The course includes, but is not limited to a theoretical and quantitative coverage of solutions and their properties, kinetics, chemical equilibrium, acids and bases, entropy and free energy, electrochemistry, and nuclear chemistry. Additional topics may include (as time permits) organic, polymer, atmospheric, and biochemistry. The laboratory component is designed to complement the theory and concepts presented in lecture, and will introduce students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment.

Prerequisite(s): C- or better in CHEM 1215G.

Learning Outcomes

1. Explain the intermolecular attractive forces that determine physical properties and phase transitions, and apply this knowledge to qualitatively evaluate these forces from structure and to predict the physical properties that result. Calculate solution concentrations in various units, explain the effects of temperature, pressure and structure on solubility, and describe the colligative properties of solutions, and determine solution concentrations using colligative property values and vice versa. Describe the dynamic nature of chemical equilibrium, and apply LeChatelier's Principle to predict the effect of concentration, pressure and temperature changes on equilibrium mixtures as well as describe the equilibrium constant and use it to determine whether equilibrium has been established, and calculate equilibrium constants from equilibrium concentrations and vice versa. Describe the different models of acids and base behavior and the molecular basis for acid strength, as well as apply equilibrium principles to aqueous solutions, including acid/base and solubility reactions, and calculate pH and species concentrations in buffered and unbuffered solutions. Explain titration curves as well as calculate concentrations of reactants. Explain and calculate the thermodynamic functions, enthalpy, entropy and Gibbs free energy, for a chemical system, and relate these functions to equilibrium constants. Student Learning Outcomes – Laboratory Demonstrate and apply concepts associated with laboratory safety, including the possible consequences of not adhering to appropriate safety guidelines. Demonstrate the computational skills needed to perform appropriate laboratory related calculations to include, but not be limited to determining the number of significant figures in numerical value with the correct units, solving problems using values represented in exponential notation, solving dimensional analysis problems, and manipulating mathematical formulas as needed to determine the value of a variable. Perform laboratory observations (both qualitative and quantitative) using sensory experience and appropriate measurement instrumentation (both analog and digital). Prepare solutions with an acceptable accuracy to a known concentration using appropriate glassware. Perform basic laboratory operations related to, but not limited to, colligative properties of solutions, chemical equilibria, acid/base titrations, electrochemistry. Draw conclusions based on data and analyses from laboratory experiments. Relate laboratory experimental observations, operations, calculations, and findings to theoretical concepts presented in the complementary lecture course.

CHEM 1226. General Chemistry II Lecture and Laboratory for CHEM Majors**4 Credits (3+3P)**

As the second of a two-semester sequence, this course teaches fundamental concepts in chemistry, including solutions, equilibria, electrochemistry, thermodynamics and kinetics. Designed for majors in chemical and other physical sciences, including engineering. May be appropriate for the life science major. It is assumed that the students are familiar with college algebra, chemical nomenclature, stoichiometry, and scientific measurements. The laboratory component is designed to complement the theory and concepts presented in lecture, and will introduce students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment.

Prerequisite(s): C- or better in CHEM 1216.

Learning Outcomes

1. Describe the colligative properties of solutions and explain them using intermolecular forces. Determine solution concentrations using colligative property values and vice versa. Explain rates of reactions, rate laws, and half-life; determine the rate, rate law and rate constant of a reaction and calculate concentration as a function of time and vice versa. Understand the principle of catalysis. Explain the collision model of reaction dynamics, including activation energy, catalysts and temperature; Derive a rate law from a reaction mechanism and evaluate the consistency of a mechanism with a given rate law. Describe the dynamic nature of chemical equilibrium and its relation to reaction rates; apply Le Chatelier's Principle to predict the effect of concentration, pressure and temperature changes on equilibrium mixtures. Describe the equilibrium constant and use it to determine whether equilibrium has been established; calculate equilibrium constants from equilibrium concentrations (including pressures) and vice versa. Describe the different models of acids and base behavior, and the molecular basis for acid strength.

CHEM 2111. Explorations in Chemistry**1 Credit (1)**

The major intent of this course is to deepen your interest in chemistry and make you aware of research and career opportunities in the field. During this semester we hope to discuss both old and new developments in chemistry that impact our lives. We also want to build our communication skills that are so necessary in our profession. Graded S/U.

CHEM 2115. Survey of Organic Chemistry and Laboratory**4 Credits (3+3P)**

This course is a one -semester survey of organic and biological chemicals. Students will be introduced to nomenclature, molecular structure, properties, and reactions of hydrocarbons, alcohols, carbonyls, organic acids and bases, carbohydrates, lipids, and proteins. The handling of organic chemicals, simple organic reactions, tests for functional groups, and synthesis will be learned in the laboratory component of this course. May be repeated up to 4 credits.

Prerequisite(s): CHEM 1225G.

Learning Outcomes

1. Identify common organic functional groups.
2. Translate between the IUPAC names and structures of simple organic molecules.
3. Predict the products of certain organic chemical reactions from reagents and conditions presented.
4. Predict physical and chemical behavior of organic molecules based on structure.
5. Synthesize several classes of organic compounds in the laboratory that were previously studied in the lecture component of this course.
6. Recognize and name the four basic bioorganic units and certain of their derivatives and macromolecules.
7. Construct 3 dimensional models of organic compounds.
8. Understand and apply safety principles associated with Organic Chemistry laboratory operations and activities.
9. Present experimental results in laboratory reports of appropriate length, style and depth, or through other modes as required.
10. 1Draw/recognize stereochemistry and explain its relevance to bioorganic molecules.

CHEM 2120. Integrated Organic Chemistry and Biochemistry**3 Credits (3)**

This course is a one- semester introduction to Organic Chemistry and Biochemistry designed for students in health and environmental occupations. The course surveys organic compounds in terms of structure, physical, and chemical properties, followed by coverage of the chemistry of specific classes of organic compounds in the biological environment. Students will apply course concepts to everyday organic and biological chemistry problems in preparation for careers in health and environmental fields.

Prerequisite: CHEM 1120G or CHEM 1215G.

Learning Outcomes

1. Identify and name basic organic compounds.
2. Construct/draw organic compounds from the names.
3. Predict the products of certain organic chemical reactions from reagents and conditions presented.
4. Recognize and name the four basic bioorganic units and certain of their derivatives and macromolecules.
5. Compare and contrast the function and location of the four bioorganic units and their macromolecules and cofactors.
6. Draw/recognize stereochemistry and explain its relevance to bioorganic molecules.
7. Discuss the pathways and functions of some of the cellular metabolic processes.
8. Recognize and describe metabolic cellular processes and macromolecular structure with respect to health and/or disease state

CHEM 2226. General Chemistry III**3 Credits (2+3P)**

Quantitative aspects of general chemistry: solid state structure, equilibrium, thermodynamics, and kinetics. Required of chemical science majors who have taken CHEM 1215G/1225G.

Prerequisite: CHEM 1225G.

Learning Outcomes

1. describe the process of scientific inquiry
2. solve problems scientifically
3. communicate scientific information
4. apply quantitative analysis to scientific problems
5. apply scientific thinking to real world problems

CHEM 2991. Introduction to Research**1-3 Credits (3+9P)**

Techniques and procedures of chemical research. May be repeated for a maximum of 3 credits.

Prerequisites: 8 credits of chemistry and a 3.0 GPA in chemistry.

Learning Outcomes

1. Varies

CHEM 2996. Special Topics in Chemistry**1-6 Credits (1-6)**

Specific subjects in Chemistry. These subjects will be announced in the 'Schedule of Classes'. It may be repeated under different topics for a maximum of 12 credits.

Learning Outcomes

1. Varies

CHIN-CHINESE (CHIN)

CHIN 1110. Mandarin Chinese I**4 Credits (4)**

This is the first semester of a two-semester sequence in first year modern standard Chinese ("Mandarin"). This course is recommended for students who have had little or no experience in the Chinese language. A beginning Mandarin Chinese course is designed to introduce the Mandarin sound system ("pinyin"), basic vocabulary, Chinese characters (either in Simplified or Traditional characters), and basic grammatical concepts and structures. In order to help beginners develop their communicative competence in the four basic skills, the 5Cs (Communication, Cultures, Comparisons, Connections, and Communities) will be integrated consistently into the content and exercises in the course.

Learning Outcomes

1. Approach a novice-mid proficiency (ACTFL) in speaking, listening, reading, writing, as well as to develop their cultural awareness
2. Demonstrate knowledge of the phonetic system in Mandarin Chinese
3. Pronounce Chinese pinyin in correct tones
4. Demonstrate the mastery of the most commonly used characters (approximately 400-500)
5. Understand basic Chinese grammatical concepts
6. Use basic Mandarin vocabulary, introductory phrases and sentences in both oral and written forms
7. Understand greetings in China, countries and nationalities, Chinese family values, hobbies, and being someone's guest in China
8. Apply the language to greet each other, identify countries and nationalities, talk about his/her family, discuss important dates, talk about hobbies, and visit a friend in China
9. Develop basic reading and writing skills in Chinese
10. Develop initial understanding of Chinese culture, compare aspects of different cultures, make connections to their daily life, and build links among communities

CHIN 1120. Mandarin Chinese II**4 Credits (4)**

This is the second semester of a two-semester sequence in first year modern standard Chinese ("Mandarin"). This course is designed for students who have taken 1st Semester Mandarin Chinese, and focuses on enhancing pronunciation and expanding the vocabulary and grammar dealing with daily activities. In order to help beginners develop their communicative competence in the four basic skills, the 5Cs (Communication, Cultures, Comparisons, Connections, and Communities) will be integrated consistently into the content and exercises in the course.

Prerequisite(s): C or better in CHIN 1110.

Learning Outcomes

1. Maintain a novice-mid and approach a novice-high proficiency (ACTFL) in speaking, listening, reading and writing, as well as to enhance their cultural awareness
2. Demonstrate continued mastery of the four tones used in Mandarin Chinese
3. Demonstrate continued mastery of the most commonly used characters (approximately 500-600)
4. Apply basic grammatical concepts and structures, and begin exploring intermediate grammatical concepts
5. Demonstrate continued growth in vocabulary and expressions necessary for conversation in and about real life situations
6. Understand basic phone calls, discussion of studies, school life, shopping and transportation
7. Apply the language to make simple phone calls, discuss studies, talk about school life, go shopping and use transportation
8. Continue developing basic reading and writing skills in Chinese
9. Develop further understanding of Chinese culture, compare aspects of different cultures, make connections to their daily life, and build links among communities

CHIN 2110. Mandarin Chinese III**3 Credits (3)**

This is the first semester of a two-semester sequence in second year modern standard Chinese ("Mandarin"). This course is designed for students who have taken 1st and 2nd Semester Mandarin Chinese (or equivalence), and have a basic foundation on Chinese phonetics, characters, and grammars. In order to help students develop their communicative competence in the four basic skills, the 5Cs (Communication, Cultures, Comparisons, Connections, and Communities) will be integrated consistently into the content and exercises in the course. Restricted to Las Cruces campus only.

Prerequisite(s): C or better in CHIN 1120.

Learning Outcomes

1. Maintain a novice-high and approach an intermediate-low proficiency (ACTFL) in speaking, listening, reading and writing, as well as to enhance their cultural understanding
2. Pronounce the four tones used in Mandarin Chinese comfortably
3. Demonstrate continued mastery of the most commonly used characters (approximately 600-800)
4. Apply intermediate grammatical concepts and structures
5. Demonstrate continued growth in vocabulary and expressions in a variety for conversation in and about real life situations
6. Understand topics including but not limited to simple weather reports, dining, directions, birthday party stories, and seeing a doctor
7. Apply the language to talk about weather, order food, ask and give directions, describe birthday parties, and see a doctor (these are suggested topics, no intention to limit the topic range)
8. Continue developing paragraph-length reading and writing skills in Chinese
9. Deepen understanding of Chinese culture, compare aspects of different cultures, make further connections to their daily life, and build stronger links among communities

CHIN 2120. Mandarin Chinese IV**3 Credits (3)**

This is the second semester of a two-semester sequence in second year modern standard Chinese ("Mandarin"). This course is designed for students who have taken 1st, 2nd, and 3rd Semester Mandarin Chinese (or equivalence), and have a good foundation on Chinese phonetics, characters, and grammars. In order to help students develop their communicative competence in the four basic skills, the 5Cs (Communication, Cultures, Comparisons, Connections, and Communities) will be integrated consistently into the content and exercises in the course. Restricted to Las Cruces campus only.

Prerequisite(s): C or better in CHIN 2110.

Learning Outcomes

1. Maintain an intermediate-low and approach an intermediate-mid proficiency (ACTFL) in speaking, listening, reading and writing, as well as to strengthen their cultural understanding
2. Pronounce the four tones used in Mandarin Chinese fluently
3. Demonstrate continued mastery of the most commonly used characters (approximately 800-1000)
4. Apply more intermediate grammatical concepts and structures
5. Demonstrate continued growth in vocabulary and expressions in a variety for conversation in and about real life situations as well as simple academic settings
6. Demonstrate language skills that would help them travel or live in China
7. Understand topics including but not limited to dating, renting an apartment, sports, traveling, conversations at an airport
8. Apply the language to extend/decline invitations, rent an apartment, talk about sports, travel, check in and arrive at an airport (these are suggested topics, no intention to limit the topic range)
9. Continue developing multiple-paragraph-length reading and writing skills in Chinese
10. Deepen understanding of Chinese culture, compare aspects of different cultures, make further connections to their daily life, and build stronger links among communities

CHME-CHEMICAL & MATERIALS ENGR (CHME)

CHME 101. Introduction to Chemical Engineering Calculations**2 Credits (2)**

Introduction to the discipline of chemical engineering, including: an overview of the curriculum; career opportunities; units and conversions; process variables; basic data treatments; and computing techniques including computer programming and use of spreadsheets.

Prerequisite(s)/Corequisite(s): MATH 1250G.

CHME 102. Material Balances**2 Credits (2)**

Perform material balances in single- and multi-phase, reacting and non-reacting systems under isothermal conditions.

Prerequisite(s)/Corequisite(s): CHEM 1215G or CHEM 1265. Prerequisite(s): MATH 1250G, CHME 101.

CHME 201. Energy Balances & Basic Thermodynamics**3 Credits (3)**

Chemical Engineering energy balances; combined energy and material balances including those with chemical reaction, purge and recycle; thermochemistry; application to unit operations. Introduction to the first and second laws of thermodynamics and their applications. May be repeated up to 3 credits.

Prerequisite(s): CHME 102, CHEM 1216 or CHEM 1215G, and MATH 1521G or MATH 1521H.

CHME 294. Communicating in Chemical Engineering**2 Credits (2)**

Students will master the fundamentals of communicating as an engineer, with focus on both written and oral communication, both independently and collaboratively, including development of the skills of gathering information and making decisions.

Corequisite(s): ENGL 1110G, COMM 1115G.

CHSS - COMM HEALTH/SOC SRVCS (CHSS)

CHSS 1110. Intro to Health & Community Services**3 Credits (3)**

This course offers a holistic and multidisciplinary approach towards health promotion, wellness and a healthy lifestyle. Emphasis is placed on the major problems/issues that have the greatest significance to personal and community health. Topics to be discussed include: nutrition, fitness, stress management, sexuality, drug education and others.

Learning Outcomes

1. Understand basic foundations of community health –history, framework and present progress: Identify key historical advances, people and events in public health; Understand Healthy People 2020 goals and objectives; Understand the levels of prevention (primary, secondary, tertiary) of public health
2. Identify organizations that help shape community health and their role in promoting health: Governmental; Quasi-Governmental; Nongovernmental; Identify local resources/agencies focused on health and human services
3. Conduct research in public health: Identify major sources for public health research; Governmental websites; Journals; Interpret and evaluate public health resources for academic use; Write a basic journal article critique
4. Understand the history and function of the school health program: Identify components of a coordinated school health program; Identify and overcome barriers common to CSHP; Apply the CSHP to contemporary issues in child/adolescent health

CHSS 2510. Service Learning**1-4 Credits (1-4)**

Service Learning Experience in Human and Community Service: Exploration of contemporary social, civil, economic and ethical problems that require student participation in collaborative efforts within the community

Prerequisite(s)/Corequisite(s): PHLS 1110G, CHSS 1110, and PHLS 2120. Prerequisite(s): PHLS 2110. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Understand the importance of service learning in community building and civic participation.
2. Students should have completed at least 90 hours of service learning experience with a community agency of their choice.
3. Compile and submit a list of detailed daily service learning activities including contact individuals, meetings attended, presentations, specific tasks accomplished or contributions to agency or community, new skills learned, trainings, and number of hours spent on each activity.
4. Design a service learning project incorporating the key elements of Public Health, and addressing a need in the community.
5. Provide an oral presentation and write a personal reflection of the service learning experience in class.
6. Practice critical thinking, decision making skills, and civic responsibility in promoting better health and general well-being

CHSS 2511. Leadership/Mentorship Training for the CHSS Ambassadors Program**1 Credit (1)**

Leadership development for volunteers serving as CHSS ambassadors. Focus on public relations and CHSS undergraduate degree programs. Graded S/U.

Prerequisite: consent of instructor.

Learning Outcomes

1. Compare and contrast different theories of leadership.
2. Demonstrate skillful communication in a leadership role.
3. Work with a team to develop and manage large-scale events.

CJUS-CRIMINAL JUSTICE

CJUS 1110G. Introduction to Criminal Justice

3 Credits (3)

This course provides an overall exploration of the historical development and structure of the United States criminal justice system, with emphasis on how the varied components of the justice system intertwine to protect and preserve individual rights. The course covers critical analysis of criminal justice processes and the ethical, legal, and political factors affecting the exercise of discretion by criminal justice professionals.

Learning Outcomes

1. Describe the history, structure and function of the criminal justice system in the United States.
2. Discuss the role of law enforcement, court systems, corrections, and security in maintaining social order.
3. Identify and describe crime causation theories, various measures of crime and their reliability and victimization theories.
4. Relate fundamental principles, concepts and terminology used in criminal justice to current events.
5. Apply basic analytical and critical thinking skills in evaluating criminal justice issues, policies, trends and disparities.

CJUS 1120. Criminal Law

3 Credits (3)

This course covers basic principles of substantive criminal law including elements of crimes against persons, property, public order, public morality, defenses to crimes, and parties to crime. May be repeated up to 3 credits.

Learning Outcomes

1. Explain the concepts of substantive criminal liability in the United States, including actus reas, mens rea, causation, concurrence, and parties to crime.
2. Define the differences between criminal law and civil law in the United States.
3. Demonstrate basic knowledge of legal terminology as it relates to criminal law.
4. Identify the elements of crimes against persons, property, public order and the administration of justice, public morality, and the inchoate crimes.
5. Describe the various defenses to crimes.

CJUS 1996. Special Topics in Criminal Justice

1-3 Credits

Specific subjects to be announced in the Schedule of Classes. May be repeated under different topics for a maximum of 6 credits.

Learning Outcomes

1. Varies

CJUS 2120. Criminal Courts and Procedure

3 Credits (3)

This course covers the structures and functions of American trial and appellate courts, including the roles of attorneys, judges, and other court personnel, the formal and informal process of applying constitutional law, rules of evidence, case law and an understanding of the logic used by the courts.

Learning Outcomes

1. Explain the application of the Constitutional Amendments that apply to criminal justice.
2. Explain and describe the dual court system in the U.S. and how courts enforce the rule of law.
3. Identify and list the duties and requirements of the courtroom workgroup.
4. Describe courtroom procedures, rules of the court, and due process of law.
5. Articulate basic knowledge of the U.S. criminal court system.
6. Define legal terms.
7. Explain the use of discretion in criminal procedure.
8. Differentiate the role of courts of limited jurisdiction, courts of general jurisdiction, and the appellate courts in the processing of criminal cases.

CJUS 2140. Criminal Investigations**3 Credits (3)**

This course introduces criminal investigations with in the various local, state, and federal law enforcement agencies. Emphasis is given to the theory, techniques, aids, technology, collection, and preservation procedures which insure the evidentiary integrity. Courtroom evidentiary procedures and techniques will be introduced. Community Colleges only. (Note: students completing CJUS 2140 may not take CJUS 321.)

Learning Outcomes

1. Identify developments in investigation technology.
2. Identify common types of criminal investigations and their key components.
3. Apply proper crime scene investigative protocols.
4. Explain proper evidentiary gathering and handing procedures, and utilize various interviewing techniques.
5. Identify and compare different law enforcement agencies and the role they play in criminal investigations.
6. Describe proper collection, evidence preservation, documentation, and court presentation.
7. Develop effective search authorization.

CJUS 2150. Corrections System**3 Credits (3)**

This course introduces the corrections system in the United States, including the processing of an offender in the system and the responsibilities and duties of correctional professionals. The course covers the historical development, theory, and practice, as well as the institutional and community-based alternatives available in the corrections process.

Learning Outcomes

1. Describe the purposes of the corrections system and the issues facing the corrections system.
2. Explain the components of the corrections system and describe their functions.
3. Compare and contrast the different forms of correction practices.
4. Explain the goals of corrections, the different factors affecting the sentencing process, the legal rights of prisoners, and the issues concerning prison violence.
5. Explain the impact of reentry into society.
6. Identify the issues concerning capital punishment.
7. Describe the effectiveness of various correction programs on offenders.

CJUS 2160. Field Experience in Criminal Justice**3-6 Credits**

This course is designed to provide actual experience working for a criminal justice agency and the opportunity to apply criminal justice concepts and theory to a field situation. Students already working in an agency will complete an approved learning project while on the job.

Prerequisites: CJUS 1110G, prior arrangement and consent of instructor and a GPA of 2.0 or better in major.

Learning Outcomes

1. Obtain practical experience by observing, researching, and working in a criminal justice agency.
2. Apply the knowledge of principles, theories, and methods that were learned in the classroom to situation in which field experience will be devoted
3. Instill an understanding for general and specific problems that criminal justice agencies encounter on a daily basis.
4. Develop a professional work ethic and attitudes, including reliability, professional responsibility, and the ability to work cooperatively with others.

CJUS 2220. The American Law Enforcement System**3 Credits (3)**

This course covers the historical and philosophical foundations of law and order, with an in-depth examination of the various local, state, ad federal law enforcement agencies and how they interact within the criminal justice system.

Learning Outcomes

1. Discuss, evaluate, and analyze the role of police in the democratic society today, and the historical development of modern day law enforcement
2. Define and explain the different types of community policing and the valid reasons behind their application within a community
3. List and discuss the ways to overcome the barriers to change within a police organization, good recruitment, screening, and retention of employees
4. Analyze and discuss the history of and the different types of police patrol, as well as the use of force and deadly force, and methods used for controlling police behavior
5. Describe and discuss the different types of police behavior, potential oversight, and remedy and their limitations
6. List and discuss the benefits of higher and continued education, along with the minimum educational requirements for police officers
7. Evaluate and discuss the reasons for police stress and the methods of dealing with stressors
8. Interpret current court cases, both state and federal, that affect police procedures

COMM-COMMUNICATION (COMM)

COMM 1115G. Introduction to Communication

3 Credits (3)

This survey course introduces the principles of communication in the areas of interpersonal, intercultural, small group, organizational, public speaking, and mass and social media.

Learning Outcomes

1. Describe basic communication terms, forms and concepts.
2. Identify basic communication research methods and theories.
3. Explain the significance of ethics and diversity in communication processes.
4. Apply various concepts and skills in multiple communication contexts

COMM 1130G. Public Speaking

3 Credits (3)

This course introduces the theory and fundamental principles of public speaking, emphasizing audience analysis, reasoning, the use of evidence, and effective delivery. Students will study principles of communication theory and rhetoric and apply them in the analysis, preparation and presentation of speeches, including informative, persuasive, and impromptu speeches.

Learning Outcomes

1. Demonstrate effective speech preparation.
2. Demonstrate effective speech delivery through use of language, nonverbal elements and the creation of presentation aids.
3. Analyze a potential audience and tailor a speech to that audience.
4. Evaluate presentations according to specific criteria.
5. Explain common propaganda techniques and logical fallacies, and identify them in the speeches of others.
6. Recognize diversity and ethical considerations in public speaking.

COMM 2110. Communication Theory

3 Credits (3)

This course provides an exploration of major theories, concepts and methods of research in the study of human communication.

Learning Outcomes

1. Identify, explain, and illustrate key concepts and principles of the major traditions of communication theory.
2. Analyze practical problems and situations using theories.
3. Integrate research correctly and ethically from credible sources to support the primary purpose of communication.

COMM 2111. Introduction to the Communication Major

1 Credit (1)

This is a one-credit course for new Communication Studies majors. It helps them get acquainted with the department, the department head (professor for this course, the professors, other students, and the department student organizations. It also deals with degree mapping and career mapping and any problems the students are having in their first year. Finally, the students learn about the the Communication Studies discipline and various communication careers they can pursue with their degree. The class meets one day each week for one hour. Restricted to: Communication Studies majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. To give you some knowledge about your major and this department.
2. To help you learn more about the study of human communication in general and we approach it in our various courses.
3. To make you comfortable with the department, its professors and graduate students, as well as staff.
4. To assist you in finding important resources for earning your degree in Communication Studies with a high GPA.
5. To engage you and your concerns in earning your degree.
6. To advise you in ways that match your goals with the department goals.

COMM 2996. Special Topics

1-3 Credits

Specific subjects and credits to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Learning Outcomes

1. Varies

COMM 2997. Independent Study**1-3 Credits**

Individualized, self-paced projects for students with a special interest in communication topics. May be repeated for a maximum of 6 credits.

Prerequisites: COMM 1115G and sophomore standing.

Learning Outcomes

1. Varies

CSEC - CYBERSECURITY (CSEC)

CSEC 110. Principles of Cybersecurity**3 Credits (3)**

Course covers contemporary trends in cybersecurity including understanding characteristics of security vulnerabilities as they relate to hardware, software, data, procedures, and user actions. Restricted to Community Colleges campuses

Learning Outcomes

1. Explain the importance of cybersecurity in the global economy.
2. Explain why cybersecurity is a growing profession.
3. Explain how hackers use unsuspecting individuals to propagate risk
4. Explain why cybersecurity is critical to industry and public safety
5. Explain approach to cybersecurity.
6. Explain the characteristics of cyber warfare.
7. Explain trends in the cyber threat landscape.
8. Explain the framework of enterprise security solutions.

CSEC 275. Introductory to Cryptography**3 Credits (3)**

Introduction to the foundation of cryptography, principles behind cryptographic design, and cryptographic applications. Topics include encryption techniques, common cryptographic protocols and security functions.

Prerequisite(s)/Corequisite(s): MATH 1215 or above. Restricted to Las Cruces campus only.

Learning Outcomes

1. Describe the operations and benefits of cryptography
2. Able to understand necessary cryptography encoding
3. Able to use standard tools for penetration testing and compliance
4. Describe the basic need for cryptography and why it is essential for security.

CSEC 280. Introduction to Cyber Defense**3 Credits (3)**

Introduction to the foundation of cryptography, principles behind cryptographic design, and cryptographic applications. Topics include encryption techniques, common cryptographic protocols and security functions.

Prerequisite(s)/Corequisite(s): MATH 1215. Restricted to Las Cruces campus only.

CSEC 283. Ethical Hacking and Penetration Testing**3 Credits (3)**

Introduces students to the tools and software used in ethical hacking and penetration testing as well as introducing them to some of the vulnerabilities and exploits that exist within the cybersecurity field.

Prerequisite: E T 153 and E T 156.

Prerequisite/Corequisite: E T 283.

Learning Outcomes

1. Identify and describe common threats and vulnerabilities. Describe/demonstrate how to secure a network. Identify and demonstrate common tools used in ethical hacking/penetration testing. Identify and describe legal/ethical issues pertaining to ethical hacking.

CSEC 285. Introduction to Managing Information Security**3 Credits (3)**

Managerial aspects of information security and assurance including access control models, information security governance, accountability metrics, legal responsibilities, and information security program assessment.

Prerequisite(s)/Corequisite(s): CTEC 290 or OECS 269. Restricted to Las Cruces campus only.

CSEC 286. Information Security Certification Preparation**4 Credits (4)**

Covers the examination objectives and detailed preparation to prepare students to take the CompTia Security+ exam.

Prerequisite: E T 153, E T 156, and E T 283.

Learning Outcomes

1. Identify and describe common threats and vulnerabilities. Identify and demonstrate common security devices/programs. Describe/demonstrate how to secure a network.

CTEC - CYBER TECHNOLOGY

CTEC 105. Introduction to Information Technology**3 Credits (3)**

Examination of information systems and their impact on commerce, education, and personal activities. Utilization of productivity tools for communication, data analysis, information management, and decision-making. Restricted to Community Colleges campuses only.

CTEC 110. Software Applications for Technicians**1-3 Credits (1-3)**

Introduction to software applications for communication, information management, and data analysis. Students will utilize presentation, word processing, spreadsheet, database, and utility software to simulate real-world activities experienced by help desk technicians. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 115. TOPICS IN IT**1-3 Credits (1-3)**

Topics to be announced in the Schedule of Classes. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 120. IT Infrastructure Support I**1-3 Credits (1-3)**

Introduction to most common types of PC configurations, installations, and failures. This course will explore troubleshooting skills for maintaining and repairing common hardware and software related problems. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

CTEC 122. IT Infrastructure Support II**1-3 Credits (1-3)**

Continuation of CTEC 120. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CTEC 120 or OECS 185.

CTEC 127. Introduction to Internet of Things**1-3 Credits (1-3)**

Exploration of the importance of IoT in society, components of typical IoT devices and future trends. IoT design considerations, constraints, interfacing and key components of networking will also be covered. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 130. Linux Workstation**1-3 Credits (1-3)**

Installation, configuration, and maintenance of the Linux operating system. Covers file organization, user management, and system security. Addresses general procedures for working with and modifying the operating system. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 135. Windows Workstation**1-3 Credits (1-3)**

Installation, configuration, and maintenance of the Windows operating system. Covers file organization, user management, and system security. Addresses general procedures for working with and modifying the operating system. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 140. Introduction to Database Design**1-3 Credits (1-3)**

Introduction to basic relational database concepts including terminology, tables, queries, forms, and reports. The course teaches data modeling concepts, building Entity Relationship Diagrams (ERDs), mapping ERDs, and use of data management system applications. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 145. Introduction to Database Management**1-3 Credits (1-3)**

Use of SQL to analyze complex business scenarios as well as to design and create, and manage databases. Course includes exposure to Application Express (APEX) to provide practical, hands-on activities. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CTEC 140 or OECS 220.

CTEC 150. Mobile Application Programming**1-3 Credits (1-3)**

Introduction to elements of mobile application coding including concepts, design strategies, and tools needed to create, test, and deploy applications for mobile devices. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 152. JAVA Programming**1-3 Credits (1-3)**

Introduction to concepts of programming in the Java language. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging code. This is a hands-on course that does not require students to have prior programming experience. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 154. C++ Programming**1-3 Credits (1-3)**

Introduction to concepts of programming in the C++ language. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging code. This is a hands-on course that does not require students to have prior programming experience. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 156. Python Programming**1-3 Credits (1-3)**

Introduction to concepts of programming in the Python language. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging code. This is a hands-on course that does not require students to have prior programming experience. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 158. Visual Basic Programming**1-3 Credits (1-3)**

Introduction to concepts of programming in the Visual Basic language. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging code. This is a hands-on course that does not require students to have prior programming experience. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 180. Introduction to Networking**3-4 Credits (3-4)**

This course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. Course includes the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations to build simple LANs, perform basic configurations for routers and switches. May be repeated up to 8 credits. Restricted to Las Cruces campus only.

CTEC 185. Routing and Switching Essentials**3-4 Credits (3-4)**

This course covers the architecture, components, and operations of routers and switches in a small network. Students learn how to configure routers and switches for basic functionality. Course demonstrates how to configure and troubleshoot routers and switches to resolve common issues with RIPv1, RIPng, single area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. May be repeated up to 8 credits.

Prerequisite(s)/Corequisite(s): CTEC 180 or OECS 261. Restricted to Las Cruces campus only.

CTEC 220. Internship**1-3 Credits (1-3)**

Work experience, directly related to a student's field of study, that provides an opportunity to explore career options while experiencing hands-on application, knowledge, and theory learned in the classroom. May be repeated up to 6 credits. Consent of Instructor required. Graded: S/U Grading (S/U, Audit). Restricted to Las Cruces campus only.

Prerequisite(s): (CTEC 120 or OECS 185) AND (CTEC 130 or OECS 204), AND (CTEC 180 or OECS 261).

CTEC 230. Introduction to Linux Server Administration**1-3 Credits (1-3)**

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Linux Server(s). It provides in-depth, hands-on training for IT professionals responsible for the planning, implementation, management, and support of Linux Server operating system(s). May be repeated up to 6 credits.

Prerequisite(s)/Corequisite(s): CTEC 130 or OECS 204. Restricted to Community Colleges campuses only.

CTEC 235. Introduction to Windows Server Administration**3 Credits (3)**

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Window Server(s). It provides in-depth, hands-on training for IT professionals responsible for the planning, implementation, management, and support of Windows Server operating system(s).

Prerequisite(s)/Corequisite(s): CTEC 135 or OECS 207. Restricted to Las Cruces campus only.

CTEC 240. Fundamentals of Database Management**3 Credits (3)**

Exploration of database management using SQL and PL/SQL to extend and automate SQL in administering database systems. Students will create and work with projects which challenge them to enhance the SQL of a database solution for a business or organization. May be repeated up to 6 credits.

Restricted to Las Cruces campus only.

Prerequisite(s): CTEC 145.

CTEC 245. Fundamentals of Cloud Based Data Systems**1-3 Credits (1-3)**

Introduction to the techniques and tools required to develop database driven web applications. The course teaches students how to design, develop, and deploy efficient and responsive, database-driven web applications using Oracle Application Express. May be repeated up to 6 credits.

Prerequisite(s)/Corequisite(s): CTEC 240. Restricted to Community Colleges campuses only.

CTEC 255. Special Topics**1-3 Credits (1-3)**

Topics to be announced in the Schedule of Classes. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

CTEC 280. Scaling Networks**3-4 Credits (3-4)**

This course covers the architecture, components, and operations of routers and switches in WLANs and complex networks. Students learn how to configure routers and switches for advanced functionality and to resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. May be repeated up to 8 credits.

Prerequisite(s)/Corequisite(s): CTEC 185 or OECS 262. Restricted to Las Cruces campus only.

Learning Outcomes

1. Configure and troubleshoot DHCP and DNS operations for IPv4 and IPv6
2. Describe the operations and benefits of the Spanning Tree Protocol (STP)
3. Configure and troubleshoot STP operations
4. Describe the operations and benefits of link aggregation and Cisco VLAN Trunk Protocol (VTP)
5. Configure and troubleshoot basic operations of routers in a complex routed network for IPv4 and IPv6
6. Configure and troubleshoot advanced operations of routers and implement RIP, OSPF, and EIGRP routing protocols for IPv4 and IPv6
7. Manage Cisco IOS® Software licensing and configuration files

CTEC 285. Connecting Networks**3-4 Credits (3-4)**

This course covers WAN technologies and network services required by converged applications in a complex network. Students learn about selection criteria of network devices, VLANs and WAN technologies to meet network requirements to resolve common issues with data link protocols. May be repeated up to 8 credits.

Prerequisite(s)/Corequisite(s): CTEC 280 or OECS 263. Restricted to Las Cruces campus only.

CTEC 290. Network Security**3-4 Credits (3-4)**

Fundamentals of design and implementation of network security solutions that will reduce the risk of system vulnerability. Topics include: threats, attacks, vulnerabilities, tools, architecture, design, access management, risk management, and cryptography. May be repeated up to 8 credits.

Prerequisite(s)/Corequisite(s): (CTEC 120 or OECS 185), AND (CTEC 180 or OECS 261). Restricted to Las Cruces campus only.

CTEC 299. Independent Study**1-4 Credits (1-4)**

Specific subject to be determined based upon student need. May be repeated up to 8 credits. Restricted to Community Colleges campuses only.

CTFM-CLTHNG/TXTLS/FSHN MRCHDSG (CTFM)

CTFM 1110. Fundamentals of Fashion

3 Credits (3)

Survey of the fashion business from fiber to end product.

Learning Outcomes

1. Describe the roles and functions of industry jobs and sectors involved in the designing, production, marketing, and distribution of fashion brands within the global context.
2. Describe the business strategies of industry sectors involved in the designing, production, marketing, and distribution of fashion brands within the global context.
3. Describe the interrelationships among line planning, line development, and line presentation at manufacturing and retail levels.
4. Provide examples of the fashion industry's environmental and social impact.
5. Learn about all career tracks involved in the fashion industry and the global fashion supply chain.
6. Synthesize industry-relevant information on current issues in the fashion industry.

CTFM 2120. Fashion Illustration

3 Credits (1+4P)

This course explores aspects of fashion illustration, from drawing basic fashion figures to producing finished professional illustrations in color. This course provides the opportunity for students to integrate their fashion design development with computer-aided systems. The emphasis is on fashion innovation and concept design exploration enhanced by computer applications. May be repeated up to 3 credits.. Prerequisites: ARTS 1145G and CTFM 1110

Learning Outcomes

1. To learn Adobe Illustrator and Adobe Photoshop as drawing and design tools for electronic design and rendering.
2. To understand and utilize the computer as a tool for fashion design.
3. To understand methods of design input, including scanning, digitizing and resizing.
4. To develop customer profiles
5. To Understand Concept Style

CTFM 2130. Concepts in Apparel Construction

3 Credits (1+4P)

Students are introduced to professional standard sewing techniques and apparel construction. The techniques learned are applied to produce finished garments. Restricted to: FCSE,CTFM majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Define sewing construction terminology, equipment and sewing machine parts.
2. Learn to select suitable patterns and fabrics for garments.
3. Learn to alter commercial patterns for different body types.
4. Identify fabric types, finishes, and labeling.
5. Perform standard operating procedures on sewing machines.
6. Perform clothing construction techniques for various garments.
7. Apply knowledge of industry sewing methods to recognition of garment workmanship.

CTFM 2990. Fashion Practicum

1-3 Credits (1-3)

Applied field experience in the related areas of apparel design, fashion merchandising, and textile science. May be repeated up to 3 credits. Restricted to: CTFM majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Gain hands-on knowledge of the fashion industry.
2. Demonstrate the ability to analyze the practices of management, as observed in the industry.
3. Demonstrate an attitude that is appropriate for a prospective manager in the industry.
4. Demonstrate the understanding of, and the ability to use research and problem solving methods to develop, analyze, and present a critical incident analysis.

DANC-DANCE (DANC)

DANC 1110G. Dance Appreciation

3 Credits (3)

This course introduces the student to the diverse elements that make up the world of dance, including a broad historic overview, roles of the dancer, choreographer and audience, and the evolution of the major genres. Students will learn the fundamentals of dance technique, dance history, and a variety of dance aesthetics. Restricted to: Main campus only.

Learning Outcomes

1. Explain a range of ideas about the place of dance in our society.
2. Identify and apply critical analysis while looking at significant dance works in a range of styles.
3. Identify dance as an aesthetic and social practice and compare/contrast dances across a range of historical periods and locations.
4. Recognize dance as an embodied historical and cultural artifact, as well as a mode of nonverbal expression, within the human experience across historical periods and cultures.
5. Use dance to consider contemporary issues and modes of thought.

DANC 1130. Ballet I

1 Credit (1)

This course is the beginning level of ballet technique. Students learn the basic fundamentals and performance skills of ballet techniques, which may include flexibility, strength, body alignment, coordination, range of motion, vocabulary, and musicality. May be repeated for a maximum of 2 credits.

Learning Outcomes

1. Apply fundamental movements of ballet techniques.
2. Enhance flexibility, strength, body alignment, coordination, balance, kinesthetic awareness, range of motion, and musicality.
3. Employ basic theories of classical ballet placement and proper alignment.
4. Develop basic ballet terminology, variations in timing and changes of facing, and barre and center combinations.

DANC 1131. Introduction to Ballroom Dance

1 Credit (1)

Introduction to ballroom dance for non dance majors. Students will learn basic ballroom technique and partnering work. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. learn to dance Figures 1-7 in 3 American Style Ballroom dances
2. develop rhythmic accuracy in movement
3. develop the skills to adapt to a variety of dance partners
4. develop adequate social and recreational dance skills
5. develop proper carriage, poise, and grace that pertain to Ballroom dance
6. learn to recognize Ballroom music and its application for the appropriate dances
7. understand different possibilities for dance variations and their applications to a variety of Ballroom dances
8. understand and appreciate the process of creating original patterns and variations
9. expand his/her knowledge of dance forms through attending two (2) NMSU Dance Department performances and writing a critique on one of the performances
10. 1enjoy the process

DANC 1135. Introduction to Argentine Tango**1 Credit (1)**

Introduction to skills and techniques of Argentine Tango.

Learning Outcomes

1. Learn to dance figures from Argentine Tango.
2. Develop a "style."
3. Gain deeper understanding of the Elements of Dance Technique
4. Develop rhythmic accuracy in movement, ability to dance on time discover phrasing
5. Further lead follow skills that will enable you to dance at more advanced levels
6. Learn practice performance dance skills
7. Understand and appreciate the process of creating original amalgamations
8. Expand your knowledge of other dance forms by attending required (2) NMSU Dance Department performances and writing a critique of one (1) performance
9. Enjoy the process!

DANC 1140. Flamenco I**1 Credit (1)**

This course introduces the student to the art of flamenco and its cultural features and significance. Students will learn the fundamentals of this art form and introductory techniques and skills, which may include handwork, footwork, postures, and specific dances. May be repeated for a maximum of 2 credits.

Learning Outcomes

1. Demonstrate a basic level of competency in the principles of alignment, anatomy, coordination, mobility, stability, and stamina.
2. Demonstrate fundamental flamenco techniques relative to spatial awareness, rhythm, phrasing, and sequencing.
3. Demonstrate competency with basic flamenco movement vocabulary.
4. Perform a variety of flamenco dances, poses, steps, hand movements, and combinations.

DANC 1150. Modern Dance I**1 Credit (1)**

Modern Dance techniques and styles. Students are introduced to proper warm-up techniques, body alignment, control and flexibility. Students work with various rhythms and combinations of movements. The course emphasizes dance technique and creative experience. The history, terminology and philosophy of Modern Dance are also discussed. May be repeated for a maximum of 2 credits.

Learning Outcomes

1. Use a more developed sense of muscle control and strength, stretch and balance, coordination.
2. Demonstrate and verbalize an increased awareness of Modern Dance techniques
3. Execute dance phrases, combining several movements and in more than one rhythm.
4. Demonstrate an increased awareness of musicality while dancing and use Modern Dance Techniques creatively.

DANC 1155. Introduction to Hip-Hop Dance**1 Credit (1)**

This course provides an atmosphere of safety and encouragement in which students can express creativity and individuality through hip-hop dance. No previous dance experience required. May be repeated up to 4 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Demonstrate appropriate strength, stamina, balance, body alignment, and flexibility
2. Demonstrate creativity, independent thinking and self-motivation as these pertain to hip-hop dance
3. Apply appropriate integration of cognitive and kinesthetic skills
4. Execute safe and creative hip-hop dance movements

DANC 1185. Beginning Country Western Dance**1 Credit (1)**

Beginning Country Western dance, including Country Western two-step, nightclub two-step, polka, and Country Western line dance. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Learn to dance figures in Country Western Dances.
2. Develop a "style."
3. Gain deeper understanding of the Elements of Dance Technique
4. Develop rhythmic accuracy in movement, ability to dance on time discover phrasing
5. Further lead follow skills that will enable you to dance at more advanced levels
6. Learn practice performance dance skills
7. Understand and appreciate the process of creating original amalgamations
8. Expand your knowledge of other dance forms by attending required (2) NMSU Dance Department performances and writing a critique of one (1) performance
9. Enjoy the process!

DANC 1220. Introduction Latin Social Dance**1 Credit (1)**

Introduction to Latin social dance for non dance majors. Students will learn basic Latin dance technique and partnering work. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Learn to dance 4 of the American Rhythm Style dances.
2. Develop rhythmic accuracy in movement.
3. Develop the skills to adapt to a variety of dance partners.
4. Develop adequate social and recreational dance skills.
5. Develop Cuban Motion, hip swing, proper carriage, poise, and grace that pertain to Rhythm dance.
6. Learn to recognize Latin/Swing music and its application for the appropriate dances.
7. Understand different possibilities for dance variations and their applications to a variety of Latin dances.
8. Understand and appreciate the process of creating original patterns and variations.
9. Expand his/her knowledge of dance forms through attending two (2) NMSU Dance Department performances and writing a critique on ONE performance.

DANC 1235. Intro to West Coast Sw**1 Credit (1)**

Students will learn to dance the smooth style of Swing. The West Coast Swing may be danced to ANY style of music that has a beat (Country, R&B, Hip Hop, Disco, House). Also featured is the Hustle (fast paced and exhilarating). May be repeated up to 4 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Learn to dance figures from both West Coast Swing and Hustle
2. Develop a "style" in both West Coast Swing and Hustle.
3. Gain deeper understanding of the Elements of Dance Technique
4. Develop rhythmic accuracy in movement, ability to dance on time discover phrasing
5. Further lead follow skills that will enable you to dance at more advanced levels
6. Learn practice performance dance skills
7. Understand and appreciate the process of creating original amalgamations
8. Expand your knowledge of other dance forms by attending required (2) NMSU Dance Department performances and writing a critique of one (1) performance
9. Enjoy the process!

DANC 1460. Dance for Musical Theater I**1 Credit (1)**

This course provides students with an understanding of the Tap and Jazz Dance technique for use in Musical Theater and other performance genres at the beginning level. This course is designed for students to gain knowledge and understanding of Tap and Jazz Dance as art forms. May be repeated up to 2 credits.

Learning Outcomes

1. An understanding of traditional styles of dance used for musical theater.
2. An understanding of anatomy, kinesiology, and development of movement principles
3. Improvement of muscular strength, flexibility, and elasticity
4. An understanding of motion awareness and movement vocabulary

DANC 2114. Dance Sport I**1 Credit (1)**

Performance-based, team formation dance in a variety of Latin and ballroom dances. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Learning Outcomes

1. Practice a variety of Ballroom and Latin dances to be expressed socially, competitively and on stage Adapt and communicate with a variety of dance partners Learn skills for successful partnership Practice advanced level technique in all styles of DanceSport Develop awareness of "what is good dancing" Create original choreography for both stage and competition Self-assess -learn to be your own best teacher Self-coach -learn to coach self through four stages of development Develop musicality skills, including rhythmic accuracy and timing 1 Work as a team to make sure that no one is left behind while furthering your leadership abilities 1 Promote DanceSport in the community and in the world as a healthy and fun lifestyle alternative 1 Develop valuable life skills such as enrollment, registration teamwork 1 Enhance cognitive thinking as described by Robert J. Sternberg's triarchic theory of intelligence 1 Learn to act and perform as a "professional" dancer 1 Produce creative spring dance concert

DANC 2130. Ballet II**2 Credits (2)**

Intermediate level of ballet technique; Introduction of more advanced Ballet vocabulary at barre/center work; increase flexibility, strength, body alignment, and coordination for practice of steps/combinations with variations in timing and changes of facing. Restricted to Las Cruces campus only.

Learning Outcomes

1. A successful student will be able to understand and execute with accuracy all the steps presented on the take home quizzes and are encouraged and expected to attend at least two semesters of each level in order to advance to the next level of ballet technique

DANC 2130L. Ballet Technique II Lab**1 Credit (1)**

This course is designed for the acquisition of intermediate level ballet technique and skill development. May be repeated up to 2 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Learning Outcomes

1. An increased level of technical proficiency in ballet
2. A greater understanding and knowledge of ballet vocabulary
3. Increased flexibility and range of motion
4. Increased strength
5. Increased awareness of body alignment

DANC 2140. Flamenco II**2 Credits (2)**

The structure of flamenco through choreographies that represent the basic flamenco dance forms: Fandangos de Huelva, Alegrias, Solea "por" Bulerias, and Tientos/Tangos. The course will also cover intermediate flamenco technique including footwork, palmas as (hand claps), braceo (movement of the arms), and floreo (movement of the hands). May be repeated up to 8 credits.

Prerequisite: DANC 1140.

Learning Outcomes

1. Demonstrate the ability to dance a short Fandangos de Huelva Demonstrate the ability to dance a short Alegrias or So lea por Bulerias Demonstrate the ability to dance a short Tientos /Tangos Demonstrate an intermediate level of Pal mas, Brazeo, Floreo, Taconeo

DANC 2140L. Flamenco Dance II Lab**1 Credit (1)**

This course is designed for the acquisition of intermediate level Flamenco dance technique and skill development. May be repeated up to 2 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): DANC 1140 or instructor permission.

Learning Outcomes

1. Intermediate to advanced understanding of musical structures, enabling the identify of 12-count from 8 count rhythms.
2. An ability to present the styles of Sevillanas and Tangos as well as other Flamenco Spanish folk dances popular in Spain today.
3. An ability to utilize and present the arm work (brazeo), hand work (floreo) and hand clapping (palmas) from the various styles (palos) being explored.
4. An ability to build the footwork (taconeo), marking (marcaje) and turns (vueltas) that dancers create in response to the song (cante) and guitar tones.
5. An introductory ability to use castanets as the rhythmic accompaniment of their dance performance.

DANC 2142. Classical Spanish II**2 Credits (1+3P)**

The study of theory, techniques, and practice of Classical Spanish at the intermediate level. Includes historical and cultural contexts of this art form. May be repeated up to 8 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): DANC 1140.

Learning Outcomes

1. Knowledge of basic Classical Spanish vocabulary
2. Understanding of the basic differences between Classical Spanish dance and Ballet techniques
3. Increased coordination and rhythmic accuracy
4. Knowledge of the onomatopoeia of castanets
5. Ability to perform a Classical Spanish Dance piece with castanets

DANC 2142L. Spanish Dance II Lab**1 Credit (1P)**

This course is designed for the acquisition of intermediate level Spanish dance technique and skill development. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Knowledge of basic Classical Spanish vocabulary
2. Understanding of the basic differences between Classical Spanish dance and Ballet techniques
3. Increased coordination and rhythmic accuracy
4. Knowledge of the onomatopoeia of castanets
5. Ability to perform a Classical Spanish Dance piece with castanets

DANC 2150. Modern Dance II**2 Credits (2)**

Modern II is designed to further the student's abilities in modern dance technique, to enhance efficient use of weight and momentum, to release held patterns in the body's mechanics, to enrich spatial awareness, and to begin work on performance techniques.

Learning Outcomes

1. Improve accuracy in alignment and shape Improve precision in space, in timing and rhythm, and in focus/intent Learn combinations and movement dynamics quickly Begin to integrate performance techniques while working in the classroom setting Use a concentrated attitude and an open, creative mind to approach the work in an artistic manner unique to your abilities Listen, see and apply all the information given within one class period and over the semester Self-awareness and mindfulness: how much space do you take in the class and why? How aware are you of those around you, and those you are dancing with? Release of weight to create controlled momentum Locating center and moving from there

DANC 2150L. Modern Dance Technique II Lab**1 Credit (1P)**

This course is designed for the acquisition of intermediate level modern dance technique and skill development. May be repeated up to 2 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Learning Outcomes

1. Replication of movement phrases
2. Understanding of the anatomy and kinesiology principles of movement
3. Movement initiation and movement motivation
4. Static and dynamic balance
5. Modern dance movement vocabulary
6. Temporal, spatial, effort and motion awareness
7. Artistic expression by way of movement intent, imagery, and interpretation

DANC 2155. Hip Hop Dance Ensemble I**1 Credit (1)**

Performance-based instruction for students pursuing a career in hip hop dance. Instruction includes dance repertory and choreography for stage, commercial/industry, and competitive dance areas. May be repeated up to 4 credits. Consent of Instructor required.

Learning Outcomes

1. The artistry of the dancer
2. The art and interpretation of the choreography
3. An understanding of various hip-hop isolations, footwork, and basic movements dance movement vocabulary
4. Increased awareness of stage presence and projection for different avenues of hip hop such as stage, commercial, and competition
5. An understanding of behind the scene workings of a dance performance
6. How to critically reflect

DANC 2157. Intermediate Hip-Hop Dance**2 Credits (2)**

This course is for students who have experience in Hip-Hop dance. The movement material will cover West coast and Southern styles with the inclusion of the history and evolution of Hip-Hop dance. May be repeated up to 8 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. How he/she has developed his/her hip-hop personality
2. How she/he has improved confidence through this style of dance
3. How he/she has integrated core initiation with other body parts
4. How she/he uses space, time, effort and relationship to express movement ideas
5. How he/she has improved muscular control and strength
6. How she/he has physically embodied Hip-Hop movement vocabulary

DANC 2250. Contemporary Dance Ensemble I**1 Credit (1)**

Performance-based instruction for students pursuing a career in contemporary dance. Instruction includes contemporary dance repertory and choreography for stage, outdoor arenas, and site-specific areas. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Learning Outcomes

1. (Performance) An understanding of the artistry of the dancer
2. (Performance) An understanding of the art and interpretation of choreography
3. (Performance) An improvement of movement performance skill
4. (Performance) An understanding of various dance movement vocabulary
5. (Performance) An increased awareness of stage presence and projection
6. (Performance) An understanding of technical stage production
7. (Production) An understanding of costume design and construction
8. (Production) An understanding of behind the scene workings of a dance performance

DANC 2251. Spanish Dance Ensembles I**1 Credit (1)**

Performance-based instruction for students pursuing a career in dance with an emphasis in Spanish Dance. Instruction includes dance repertory and choreography for stage, outdoor arenas, and site-specific areas. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Learning Outcomes

1. An understanding of the artistry of the dancer
2. An understanding of the art and interpretation of choreography
3. An improvement of movement performance skill
4. An understanding of various dance movement vocabulary
5. An increased awareness of stage presence and projection
6. An understanding of technical stage production
7. An understanding of behind the scene workings of a dance performance
8. An understanding of the marketing and promotional aspects of performance
9. An understanding of costume design and construction

DANC 2265. Principles of Choreography I**3 Credits (3)**

Solo dance choreography technique. The course must be passed with a grade of C- or higher. Offered only in Fall semester during even years.

Learning Outcomes

1. ability to create original choreographic material for solo work (289) or group work (389), understanding of how to create a movement theme/motif, and ability to take improvisational material and turn it into choreography

DANC 2270. Improvisation I**2 Credits (2)**

Development of movement improvisational skills with complex examination of improvisational structures. Offered only in Fall semester during odd years.

Learning Outcomes

1. An understanding of the movement potential of the body An understanding of the principles of motion An awareness and skill of movement motivation An improvement of static and dynamic balance An understanding of temporal, spatial, effort and motion awareness An understanding of group dynamics An awareness of other media that can motivate movement

DANC 2310. Bronze American Rhythm**2 Credits (2)**

Bronze level American Rhythm patterns, techniques, and partnering with emphasis on elements of dance. May be repeated up to 6 credits.

Learning Outcomes

1. Learn to dance the Bronze DIVIDA Manual in American Rhythm
2. Develop Bronze level dance technique
3. Gain deeper understanding of the Elements of Dance
4. Develop rhythmic accuracy in movement, ability to dance on time discover phrasing
5. Further develop lead follow skills that will enable you to dance at more advanced levels

DANC 2311. Bronze American Smooth**2 Credits (2)**

Bronze level American Smooth patterns, technique, and partnering with an emphasis on the elements of dance. May be repeated up to 4 credits.

Learning Outcomes

1. Learn to dance the Bronze DIVIDA Manual in International Latin
2. Develop Bronze level dance technique
3. Gain deeper understanding of the Elements of Dance
4. Develop rhythmic accuracy in movement, ability to dance on time discover phrasing
5. further develop lead follow skills that will enable you to dance at more advanced levels

DANC 2320. Bronze International Latin**2 Credits (2)**

This is the style of Latin dance that is danced around the globe and is featured in the World DanceSport Championships. Students will learn the Bronze Level figures and techniques in four (4) International Style dances: Rumba, Cha Cha, Samba & Jive. May be repeated up to 8 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Learn to dance the Bronze DIVIDA Material for the International Latin Syllabus Develop Bronze level dance technique Gain deeper understanding of the Elements of Dance Develop Smooth accuracy in movement, ability to dance on time discover phrasing Further develop lead follow skills that will enable you to dance more advanced levels

DANC 2321. Bronze International Standard**2 Credits (2)**

This is the style of Ballroom dance that is performed around the globe and is featured in the World DanceSport Championships. Learn the Bronze Level figures and techniques in five (5) International Style dances: Waltz, Tango, Viennese Waltz, Foxtrot & Quickstep. Students will focus on understanding technical elements of dance, memorizing and performing routines. May be repeated up to 4 credits.

Learning Outcomes

1. Learn to dance the Bronze DIVIDA Manual in International Standard Develop Bronze level dance technique Gain deeper understanding of the Elements of Dance Develop Smooth accuracy in movement, ability to dance on time discover phrasing Further develop lead follow skills that will enable you to dance at more advanced levels

DANC 2460. Dance for Musical Theater II**2 Credits (2)**

This course provides students with an understanding of the Tap and Jazz Dance technique for use in Musical Theater and other performance genres at the intermediate level. This course is designed for students to gain knowledge and understanding of Tap and Jazz Dance as art forms. May be repeated up to 4 credits. Consent of Instructor required.

Prerequisite(s): DANC 1460 or consent of instructor.

Learning Outcomes

1. An understanding of traditional styles of dance used for musical theater.
2. An understanding of anatomy, kinesiology, and development of movement principles
3. Improvement of muscular strength, flexibility, and elasticity
4. An understanding of motion awareness and movement vocabulary

DAS-DENTAL ASSISTING (DAS)

DAS 101. Introduction to Dental Assisting**2 Credits (2)**

An introduction to the duties and responsibilities of a dental assistant. Includes brief lessons on head and neck anatomy, chair side assisting, sterilization techniques, dental office emergencies, and dental office management. Restricted to: Community Colleges only.

DAS 111. Bio-Dental Science**4 Credits (3+3P)**

An introduction to biomedical and dental sciences with emphasis on head and neck anatomy and tooth morphology. Includes microbiology, general anatomy and physiology, histology and embryology of the oral cavity, pathology and pharmacology as they relate to dentistry.

Corequisite(s): DAS 113, DAS 115, and DAS 117.

Prerequisite(s)/Corequisite(s): PSYC 1110G, PHLS 1110G, and NUTR 2110. Prerequisite(s): ENGL 1110G, BIOL 1130, and (COMM 1130G or COMM 1115G). Restricted to: OEDA majors. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

DAS 113. Dental Assisting I**4 Credits (2+6P)**

Introduction to chair side assisting procedures, instrumentation, infection control, equipment safety and maintenance, dental office emergencies, and management of pain and anxieties.

Corequisite(s): DAS 111, DAS 115, and DAS 117.

Prerequisite(s)/Corequisite(s): PSYC 1110G, PHLS 1110G, and NUTR 2110. Prerequisite(s): ENGL 1110G, BIOL 1130, and (COMM 1130G or COMM 1115G). Restricted to: OEDA majors. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

DAS 115. Dental Radiology**3 Credits (2+3P)**

Radiation physics, hygiene, and safety theories. Emphasis on the fundamentals of oral radiographic techniques and interpretation of radiographs. Includes exposure of intra-oral radiographs, quality assurance, radiographic interpretation, patient selection criteria, and other ancillary radiographic techniques.

Corequisite(s): DAS 111, DAS 113, and DAS 117.

Prerequisite(s)/Corequisite(s): PSYC 1110G, PHLS 1110G, and NUTR 2110. Prerequisite(s): ENGL 1110G, BIOL 1130, and (COMM 1130G or COMM 1115G). Restricted to: OEDA majors. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

DAS 117. Dental Materials**3 Credits (2+3P)**

Composition, chemical and physical properties, manipulation and uses of dental materials. Laboratory experiences include the application and manipulation of various materials used in dentistry.

Corequisite(s): DAS 111, DAS 113, and DAS 115.

Prerequisite(s)/Corequisite(s): PSYC 1110G, PHLS 1110G, and NUTR 2110. Prerequisite(s): ENGL 1110G, BIOL 1130, and (COMM 1130G or COMM 1115G). Restricted to: OEDA majors. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

DAS 123. Dental Assisting Practicum**6 Credits (1+15P)**

This course is the clinical component of the program that combines general practice and experiences in the work place. Seminar topics focus on the practicum experiences and critique of performance. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

Prerequisite(s): DAS 111, DAS 113, DAS 115, and DAS 117.

Corequisite(s): DAS 125, DAS 127, and DAS 129.

DAS 125. Professional Concepts**3 Credits (3)**

Emphasis on the development of professionalism for the dental office. Includes oral communication, psychology, patient relations, problem-solving skills, stress management, and employability in addition to dental jurisprudence and ethics. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

Prerequisite(s): DAS 111, DAS 113, DAS 115, and DAS 117.

Corequisite(s): DAS 123, DAS 127, and DAS 129.

DAS 127. Dental Office Management**2 Credits (2)**

This capstone course is an introduction to business office procedures, including telephone management, appointment control, accounts payable, completion of third party reimbursement forms, inventory control data entry for charges and payments, management recall, basic dental computer software and operating basic business equipment. Restricted to: OEDA majors. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

Prerequisite(s): DAS 111, DAS 113, DAS 115, and DAS 117.

Corequisite(s): DAS 123, DAS 125, and DAS 129.

DAS 129. Preventive Dentistry**2 Credits (2)**

Prevention of dental diseases, oral hygiene instruction, fluoride, community dental health, and nutrition. Development, implementation and evaluation of a community dental health project. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

Prerequisite(s): DAS 111, DAS 113, DAS 115, and DAS 117.

Corequisite(s): DAS 123, DAS 125, and DAS 127.

DAS 130. Dental Assisting II**4 Credits (2+6P)**

Continuation of chair side assisting skills and techniques with a major emphasis on four-handed dentistry. This capstone course includes specialties within dentistry and expanded chair side functions. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

Prerequisite(s): DAS 111, DAS 113, DAS 115, DAS 117, DAS 123, DAS 125, DAS 127, and DAS 129.

DAS 131. Dental Office Management I**3 Credits (3)**

Introduction to the field of dental office management with emphasis placed on professional verbal and written communication skills utilized within the dental office. Content includes dental terminology, charting, and back office experience as they relate to dental reception and management.

Prerequisite(s)/Corequisite(s): DAS 101, AHS 120, and AHS 202. Prerequisite(s): ENGL 1110G. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

DAS 133. Dental Office Management II**3 Credits (3)**

Places emphasis on computer programs specifically designed for dental office management (Dentrix, Sof Dent, etc.) Expanded course content on oral communication and telephone skills, appointment scheduling, patient relations, stress management solutions, and comprehensive critical thinking/ problem solving skills.

Prerequisite(s)/Corequisite(s): AHS 202. Prerequisite(s): ENGL 1110G, DAS 101, and AHS 120. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

DAS 155. Special Topics**1-6 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

DHYG - DENTAL HYGIENE/HYGIENIST (DHYG)

DHYG 110. Preclinical Dental Hygiene**3 Credits (3)**

Basic scientific principles and current theory, prevention of disease transmission, ethical and professional treatment of patients, clinical learning preparation, and introduction to comprehensive patient care. Offered concurrently with DHYG 112 to provide dental hygiene students with introductory knowledge, skills and attitudes to function in the clinical setting. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 112. Preclinical Dental Hygiene Lab**3 Credits (12P)**

Clinical application to basic theories and procedures used in dental hygiene practice. Techniques of instrumentation used in performing diagnostic, preventive and therapeutic services utilized when providing comprehensive patient care. Student will practice these techniques on manikins and student partners in the clinic. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 114. Oral Histology and Embryology**2 Credits (2)**

Introduction and description of general histology and embryology with emphasis on the microscopic structures of enamel, dentin, pulp, cementum, periodontal ligament, bone, oral mucosa, epithelial attachment and development of orofacial structures. May be repeated up to 2 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 116. Head and Neck Anatomy**3 Credits (3)**

Comprehensive study of the anatomy of the head and neck regions, including skeletal, nervous, circulatory, lymphatic, and muscular systems. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 117. Dental Anatomy**2 Credits (2+1P)**

A detailed study of nomenclature, morphologic characteristics, and physiologic relationships of human primary and permanent teeth as related to the clinical practice of dental hygiene. Laboratory activities develop observation and dexterity skills. May be repeated up to 2 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 118. Dental Radiology**3 Credits (3+4P)**

Study of radiation physics, hygiene and safety theories. Fundamentals of oral radiographic techniques and interpretation of radiographs. Includes exposure of intra-oral radiographs, quality assurance, radiographic interpretation, patient selection criteria, ancillary radiographic techniques and application to dental hygiene treatment. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 120. Dental Hygiene Theory I**3 Credits (3)**

Continuation of the theoretical basis for dental hygiene clinical practice. Emphasis on emergency care, planning dental hygiene care, health promotion and disease prevention, oral rehabilitation and care of appliances, modifications of dental hygiene care through the life-span, and an introduction to medically comprised patients. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 122. Clinical Dental Hygiene I**3 Credits (16P)**

Application of dental hygiene procedures on a variety of clinical patients under direct supervision of faculty. Emphasis on patient assessment and diagnosis, treatment procedures, appointment planning and prevention techniques. Theory is simultaneously related to practical experience. Offered concurrently with DHYG 120. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 124. General and Oral Pathology**3 Credits (3)**

Introduction to general pathology with focused study of diseases and disorders of the oral cavity and their interrelationship with body systems; developmental anomalies of the teeth and jaws; manifestations of disease in the oral cavity, head and neck. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 126. Periodontology**3 Credits (3)**

Study of normal and diseased periodontium to include the structural, functional and environmental factors. Emphasis on etiology, pathology, evaluation of disease, treatment modalities, and therapeutic and preventative periodontics relative to the hygienist's role as a co-therapist in a contemporary practice setting. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 132. Clinical Dental Hygiene II**2 Credits (2)**

Continuation of clinical skills, patient assessment and diagnosis, treatment and appointment planning, preventive techniques and application of dental hygiene procedures at an intermediate level under the direct supervision of faculty. Clinical-based instruction helps students synthesize new knowledge, apply previous knowledge, and gain experience managing the workflow. Theory is simultaneously related to practical experience. May be repeated up to 2 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

Prerequisite(s): "C" or above in DHYG 120, DHYG 122, DHYG 124, DHYG 126, DHYG 134.

Corequisite(s): DHYG 218.

DHYG 134. Dental Materials**3 Credits (2+2P)**

Study of the composition, chemical and physical properties, manipulations, and uses of dental materials. Emphasis on materials and procedures for which the dental hygienist is directly responsible. Laboratory experiences include application and manipulation of various materials used in dentistry. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 210. Dental Hygiene Theory III**2 Credits (2)**

Advanced theory of dental hygiene and information on periodontal therapies relative to the hygienist's role as a co-therapist in clinical practice.

Continuation of the study of dental hygiene care for medically comprised patients and an introduction to special needs patients. May be repeated up to 2 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 212. Clinical Dental Hygiene III**4 Credits (16P)**

Continuation of clinical skills, patient assessment and diagnosis, treatment and appointment planning, preventive techniques and applications of dental hygiene procedures at the intermediate to competent level under supervision of faculty. Emphasis on dental hygiene treatment for the medically compromised and periodontally involved patients. Theory is simultaneously related to practical experience. Offered concurrently with DHYG 210. May be repeated up to 4 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 214. Dental Pharmacology**3 Credits (3)**

Study of the pharmacologic aspects of drugs and drug groups with which the dentist and dental hygienist are directly and indirectly concerned. Emphasis is placed on nomenclature, origin, physical and chemical properties, preparation, modes of administration and effects of drugs upon the body systems. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 215. Medical and Dental Emergencies**2 Credits (2)**

This course provides an overview of medical and dental emergencies encountered most frequently in the dental setting. It also provides the student with knowledge and techniques on how to address those emergencies should they occur. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 217. Research Methodology**2 Credits (2)**

This course provides an introduction to the principles and application of research methods in social, behavioral and medical research. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 218. Pain and Anxiety Management**2 Credits (2)**

Study of the application of various physical, chemical, and psychological modalities to the prevention and treatment of preoperative and postoperative patient anxiety and pain. Emphasis on administration of local anesthesia and nitrous oxide. May be repeated up to 2 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 219. Pain and Anxiety Management Clinical**1 Credit (4P)**

Clinical application of concepts learned in DHYG 218. Emphasis on the administration and techniques of local anesthesia and monitoring nitrous oxide. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

Prerequisite(s): DHYG 218.

DHYG 220. Dental Hygiene Theory IV**3 Credits (3)**

Theoretical preparation for advanced clinical practice. In-depth study of dental hygiene care for patients with special needs. Case Study presentations and a Board Review are utilized to demonstrate the synthesis of comprehensive dental hygiene knowledge, skills and attitudes. The most current dental and dental hygiene technology will be reviewed as it related to clinical practice. May be repeated up to 3 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 222. Clinical Dental Hygiene IV**4 Credits (16P)**

Clinical sessions combine basic and advanced dental hygiene skills with time management techniques essential for private practice. Comprehensive patient care to include assessment, dental hygiene diagnosis, treatment planning, implementation and evaluation of dental care, nonsurgical periodontal therapy, adjunct clinical procedures, ultrasonic instrumentation, patient management, sealants, and comprehensive programs for control of oral diseases will be emphasized. Theory is simultaneously related to practical experience. Students are encouraged to develop independent decision-making with minimal faculty supervision. May be repeated up to 4 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 224. Principles of Practice**2 Credits (2)**

Examination of the dental hygienist's role in both traditional and non-traditional employment settings. Career planning, resume preparation and interviewing are practices. An understanding of the law, professional ethics of dental hygiene and the need for lifelong learning are emphasized. Future roles of the dental hygienist and emerging issues in dental hygiene will be explored. May be repeated up to 2 credits. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 225. Dental Public Health Education**3 Credits (3)**

Study of principles and concepts of community public health and dental health education. Emphasis on dental epidemiology and statistical methods, community assessment, educational planning, implementation, and evaluation, scientific review of literature, and classroom presentation. Restricted to: DHYG majors. Restricted to Community Colleges campuses only.

DHYG 255. Special Topics in Dental Hygiene**1-6 Credits (1-6)**

Study of special topics related to the advanced practice of dental hygiene. May include educational methodology as well as applications in clinical practice, research, or community service. Consent of instructor required. Restricted to: Community Colleges only. Restricted to DHYG majors.

DMS-DIAGNOSTIC MED SONOGRAPHY (DMS)

DMS 100. Introduction to Clinical Practicum**1 Credit (1)**

Introduction to working in the medical environment. Includes preparation for clinical internship and observation hours in the ultrasound department. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 101. Introduction Sonography/Patient Care**2 Credits (2)**

Introduction to the careers in sonography, terminology, medical ethics, scanning planes, applications of ultrasound, professional standards and patient care. May be repeated up to 2 credits. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 116. Vascular Technology I**2 Credits (2)**

Review of basic ultrasound physics and principles, peripheral vascular anatomy, hemodynamics, Doppler evaluation, peripheral vascular scanning techniques, physiologic testing and the carotid arteries and the peripheral vascular system. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 116 L. Vascular Technology I Lab**1 Credit (2P)**

Includes protocol development, scanning techniques, recognition of anatomical relationships and the normal ultrasound appearance of the carotid arteries and peripheral vasculature utilizing real-time sonographic equipment including Doppler. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 130. Pelvic Sonography**1 Credit (1)**

Includes the anatomy, sectional anatomy and normal physiology of the pelvic structures; including the uterus, ovaries, prostate, pelvic muscles, lower GI, appendix and vessels as well as scanning techniques, sonographic appearance and Doppler evaluation of the pelvis. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 130 L. Pelvic Sonography Lab**1 Credit (2P)**

Includes protocol development, scanning techniques, recognition of anatomical relationships and the normal ultrasound appearance of the pelvic structures including the uterus, ovaries, prostate, lower gastrointestinal system, appendix and pelvic muscles utilizing real-time sonographic equipment including Doppler. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 140. Abdominal Sonography**3 Credits (3)**

Includes the anatomy, sectional anatomy and normal physiology of prevertebral vessels, liver, biliary system, pancreas, upper gastrointestinal system, kidneys, adrenals, and spleen as well as scanning techniques, sonographic appearance and Doppler evaluation of the deep abdominal organs. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 140 L. Abdominal Sonography Lab**1 Credit (4P)**

Includes protocol development, scanning techniques, recognition of anatomical relationships and the normal ultrasound appearance of prevertebral vessels, liver, biliary system, pancreas, upper gastrointestinal system, kidneys and spleen utilizing real-time sonographic equipment including Doppler. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 150. Sonographic Principles and Instrumentation I**1 Credit (1)**

Includes the fundamental properties and mathematical relationships between variables of wave parameters, acoustic variables, attenuation, pulsed wave operation, transducers, system operation, Doppler, and artifacts utilizing real-time sonographic equipment. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 160. 1st Trimester Obstetric Sonography**1 Credit (1)**

Includes the embryology, anatomy, sectional anatomy, normal physiology, biometrics, assessment, and sonographic appearance of the 1st trimester fetus, placenta, uterus and adnexa as well as scanning techniques according to recognized protocols. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 165. 2nd/3rd Trimester Obstetric Sonography**1 Credit (1)**

Includes the anatomy, sectional anatomy, normal physiology, biometrics, assessment, and sonographic appearance of the 2nd and 3rd trimester fetus, placenta, uterus, and adnexa as well as scanning techniques according to recognized protocols. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 170. Clinical Practicum I**2 Credits (8-10P)**

Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the developmental level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continued observation, assistance and performance of patient care and sonographic duties under direct supervision. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 180. Clinical Practicum II**5 Credits (30P)**

Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the beginner level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continue observation, assistance and performance of patient care and sonographic duties under direct supervision. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 201. Applied Sonographic Procedures**1 Credit (8P)**

Advances scanning skills, system optimization, anatomic recognition of abdominal and pelvic structures utilizing real-time sonographic equipment including Doppler. Includes sonographic evaluation of the first trimester pregnancy and normal fetus. Restricted to: DMS majors. Restricted to Las Cruces campus only.

DMS 216. Vascular Technology II**2 Credits (2)**

Includes the pathology and pathophysiology of the vascular system, scanning techniques, clinical presentation, ultrasound appearance and Doppler evaluation seen with pathological conditions of the carotid arteries, deep and peripheral vascular systems. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 216 L. Vascular Technology II Lab**1 Credit (2P)**

Includes progressive development of skills following recognized protocols, scanning techniques, recognition of anatomical relationships with differentiation of normal and abnormal ultrasound appearance of the carotid arteries, deep and peripheral vascular systems utilizing real-time sonographic equipment including Doppler. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 226. Sonographic Case Studies I**1 Credit (1)**

Includes integration of didactic knowledge, clinical presentation, laboratory values, sonographic appearance and related medical imaging of a variety of pathological conditions through a variety of case analysis and presentations. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 227. Sonographic Case Studies II**1 Credit (1)**

Continuation of DMS 226, integration of didactic knowledge, clinical presentation, laboratory values, sonographic appearance and related medical imaging of a variety of pathological conditions through a variety of case analysis and presentations. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 230. Gynecologic Pathology**2 Credits (2)**

Includes the pathology and pathophysiology of the female reproductive system, scanning techniques, clinical presentation, ultrasound appearance and Doppler evaluation seen with pathological conditions of the uterus, ovaries, and adnexa. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 240. Abdominal Pathology I**2 Credits (2)**

Includes the pathology and pathophysiology of abdominal structures of the prevertebral vessels, liver, biliary system, pancreas, spleen and gastrointestinal system; scanning techniques, ultrasound appearance, clinical presentation and Doppler evaluation seen with pathological conditions. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 245. Abdominal Pathology II**2 Credits (2)**

Includes the pathology and pathophysiology of abdominal structures of the genitourinary system, spleen, retroperitoneum, adrenal glands, abdominal wall and prostate; scanning techniques, ultrasound appearance, clinical presentation and Doppler evaluation seen with pathological conditions. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 248. Pediatric Sonography**2 Credits (2)**

Includes the anatomy of the brain, skull, spine, hips, and normal developmental changes as well as pathology and pathophysiology of specific conditions that affect the premature infant, newborn and pediatric population across a variety of body systems. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 250. Sonographic Principles and Instrumentation II**3 Credits (3)**

Includes properties of sound and its use in diagnostic imaging, artifacts, system operation, Doppler, basic hemodynamics, image optimization, bio effects, quality assurance, and new technologies in ultrasound imaging. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 255. Vascular Physics**2 Credits (2)**

Includes a review of sound properties and its use in diagnostic imaging, artifacts, system operation, Doppler, image optimization, bio effects, quality assurance, and in-depth application of fluid properties and hemodynamics in vascular ultrasound imaging. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 260. High Risk Obstetric Sonography**3 Credits (3)**

Includes congenital malformations of the developing fetus, high risk pregnancies, multiple gestation, maternal conditions and invasive procedures. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 270. Clinical Practicum III**5 Credits (20P)**

Continued development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at an intermediate level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continued observation, assistance and performance of patient care and sonographic duties under limited supervision. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 280. Clinical Practicum IV**5 Credits (20P)**

Application of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at a proficient level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continued observation, assistance and performance of patient care and sonographic duties under limited supervision. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 290. Small Parts & Superficial Structures**2 Credits (2)**

Includes anatomy, pathology and pathophysiology, protocol development, scanning techniques, recognition of anatomical structures and the normal and pathological ultrasound appearance of the breast, thyroid, neck, scrotum, non-cardiac chest and musculoskeletal ultrasound. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 291. Registry Preparation: OB/GYN**1 Credit (1)**

Registry preparation mock examinations over materials covered in Obstetric and Gynecological ultrasound. Students must pass this course with a 74% or better OR pass national certification in OB/GYN Sonography. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 292. Registry Preparation: Abdomen**1 Credit (1)**

Registry preparation mock examinations over materials covered in abdominal ultrasound including small parts and superficial structures. Students must pass this course with a 74% or better OR pass ARDMS national certification exam in Abdominal Sonography. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DMS 293. Registry Preparation: Vascular**1 Credit (1)**

Registry preparation mock examinations over materials covered in vascular ultrasound. Students must pass this course with a 74% or better OR pass national certification in Vascular Technology. Restricted to: DMS majors. Restricted to Community Colleges campuses only.

DRFT-DRAFTING (DRFT)

DRFT 100. Introduction to Architecture, Engineering, & Construction**3 Credits (3)**

Introduction to and exploration of careers in the fields of architecture, engineering, and construction. Specific fields to include: architecture, civil engineering, mechanical engineering, structural engineering, engineering technology, residential construction, commercial construction, geographical information systems (GIS), surveying, sustainable design, and green building. Crosslisted with: ARCH 1310. Restricted to Community Colleges campuses

Learning Outcomes

1. Prepare accurate written technical documents, Produce drawing documents that are technically sound, Develop and practice productive work skills, and Upgrade technical knowledge and skills to keep pace with real-world changes DRFT 100 Course Competencies Describe different career options in architecture, engineering, and construction, Define the roles of different design professionals and support staff, Explain related educational and professional licensing requirements, Articulate employer expectations, Explore related courses and programs of study at DACC and NMSU, and Develop good workplace skills and professional, productive work habits.

DRFT 101. Introduction to Drafting and Design Technologies**1 Credit (1)**

Professional and student organizations associated with the Drafting and Design Technologies program, degree requirements, employment skills and work habits, and university and college policies and procedures will be explored. Students will be introduced to the current learning management system and career-readiness certification. Restricted to Community Colleges only.

DRFT 105. Technical Drawing for Industry**3 Credits (2+2P)**

Technical sketching, basic CAD, and interpretation of drawings with visualization, speed and accuracy highly emphasized. Areas of focus include various trades such as machine parts, welding, heating and cooling, and general building sketches/plan interpretation.

DRFT 108. Drafting Concepts/Descriptive Geometry**2 Credits (1+2P)**

Basic manual drafting skills, sketching, terminology and visualization. Graphical solutions utilizing applied concepts of space, planar, linear and point analyses. Metric and S.I. units introduced.

DRFT 109. Computer Drafting Fundamentals**3 Credits (2+2P)**

Introduction to principles and fundamentals of drafting using both manual drawing techniques and computer-aided drafting (CAD) applications. May be repeated up to 3 credits. Crosslisted with: E T 109 and C E 109. Restricted to Community Colleges campuses only.

DRFT 112. Drafting Concepts/Computer Drafting Fundamentals I**4 Credits (2+4P)**

Basic drafting skills, terminology, and visualization. Introduction to principles and fundamentals of computer-aided drafting. Same as E T 106.

Prerequisites: OECS 207, OECS 125 or consent of instructor.

DRFT 113. Drafting Concepts/Computer Drafting Fundamentals II**4 Credits (2+4P)**

Drafting for mechanical/industrial applications; machine part detailing, assemblies in orthographic, isometric, auxiliary, oblique, and sectional views. Two-dimensional AutoCAD with introduction to 3-D AutoCAD. Same as E T 216. Restricted to: Community Colleges only.

Prerequisite: DRFT 112.

DRFT 114. Introduction to Solid Modeling**3 Credits (2+2P)**

2D mechanical drafting and 3D mechanical solid modeling utilizing the latest version of AutoCAD software. Industry dimensioning and annotation standards will be emphasized. 2D multi-view working drawings, 3D solid models, and basic 3D model assemblies will be introduced. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 109.

DRFT 115. General Construction Safety**3 Credits (3)**

Overview of general construction safety related to building, highway and road construction, and surveying field work for entry-level individuals. Students will also have the opportunity to earn a 10-hour construction industry OSHA card. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 124. Introduction to Geometric Dimensioning and Tolerancing**3 Credits (2+2P)**

Introduction to geometric dimensioning and tolerancing (GD&T) for the mechanical CAD drafting, solid modeling, mechanical engineering technology, mechanical engineering, and manufacturing industries. Related industry standard finishes and fasteners will also be introduced and explored.

Prerequisite(s)/Corequisite(s): DRFT 114. Restricted to Community Colleges campuses only.

DRFT 130. General Building Codes**3 Credits (2+2P)**

Interpretation of the Building Code, local zoning codes, A.D.A. Standards and the Model Energy Code to study construction and design requirements and perform basic plan checking. Restricted to: Community Colleges only.

DRFT 135. Electronics Drafting I**3 Credits (2+2P)**

Drafting as it relates to device symbols; wiring, cabling, harness diagrams and assembly drawings; integrated circuits and printed circuit boards; schematic, flow and logic diagrams; industrial controls and electric power fields. Drawings produced using various CAD software packages.

Prerequisites: DRFT 108 and DRFT 109.

DRFT 143. Civil Drafting Fundamentals**3 Credits (2+2P)**

Introduction to drafting in the field of Civil Engineering. Drawings, projects, and terminologies related to topographic, contour drawings, plan and profiles, and street/highway layout. Crosslisted with: E T 143. Restricted to Community Colleges only.

Prerequisite(s): DRFT 109.

DRFT 151. Construction Principles and Print Reading**3 Credits (2+2P)**

Introduction to construction materials, methods, and basic cost estimating and print reading applicable in today's residential, commercial, and public works industry. Instruction by print reading and interpretation, field trips, and actual job-site visits and progress evaluation.

DRFT 153. Survey Drafting Applications**3 Credits (2+2P)**

Introduction to drafting in the field of survey engineering. Drawings, projects and terminologies related to Point Data, topography, land/boundary surveys, legal descriptions and plat surveys. Using the current Autodesk software. Crosslisted with: SUR 143. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

DRFT 160. Construction Take-Offs and Estimating**3 Credits (2+2P)**

Computing and compiling materials and labor estimates from working drawings using various techniques common in general building construction and in accordance with standard specifications and estimating formats. Use of spreadsheets and estimating software introduced.

Prerequisite: DRFT 151.

DRFT 163. Civil Infrastructure Detailing**3 Credits (2+2P)**

Infrastructure detailing related to civil engineering projects including: ponding, roadway, sewer, and storm-water structures; concrete foundations; and related utility details. Restricted to Community Colleges campuses

Prerequisite(s): DRFT 109.

Learning Outcomes

1. I. Prepare accurate written technical documents, Produce drawing documents that are technically sound, Develop and practice productive work skills, and Upgrade technical knowledge and skills to keep pace with real-world changes DRFT 163 Course Competencies I. Create applicable details utilizing AutoCAD and other software packages, Interpret local design standards, applicable codes, and industry practices, Apply local design standards, Apply applicable codes, Follow standards industry practices, Design applicable details within given parameters, and Develop good workplace skills and professional, productive work habits.

DRFT 164. Intermediate Mechanical Drafting/Solid Modeling**3 Credits (2+2P)**

Intermediate 3D mechanical parametric solid modeling and assembly creation utilizing the latest version of Autodesk Inventor software. The creation of 2D working drawings from 3D solid models will be emphasized. Geometric Dimensioning and Tolerancing (GD&T), basic material properties, and industry standard fastening and manufacturing methods will be introduced.

Prerequisite(s)/Corequisite(s): DRFT 114. Restricted to Community Colleges campuses only.

DRFT 165. Introduction to Building Information Modeling**3 Credits (2+2P)**

Introduction to Building Information Modeling (BIM) in the development of virtual 3D building models, construction documents, renderings and basic animations related to architectural, structural, and mechanical/electrical/plumbing building components. Utilizes the latest BIM technologies in the integration one, parametric BIM. Restricted to Community Colleges campuses only.

DRFT 180. Residential Drafting**3 Credits (2+2P)**

Basic residential drafting including, floor plans, foundation plans, sections, roof plans, exterior and interior elevations, and site plans. Applicable residential building and zoning codes, construction methods and materials, adaptable residential design, and drawing and sheet layout for architectural drafting will be introduced. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 109.

DRFT 181. Commercial Drafting**3 Credits (2+2P)**

Drafting principles, plan coordination, and code analysis applicable in the development of working drawings for commercial, public, and industrial building projects. Students will utilize National Cad Standards, ADA Standards, and will be introduced to modern office practice. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): DRFT 109.

DRFT 190. Finding and Maintaining Employment**2 Credits (2)**

Techniques in self-evaluations, resume writing, application completion, job interviewing, and job retention. Exposure to work ethics, employee attitudes, and employer expectations.

DRFT 204. Geographic Information Systems Technology**3 Credits (2+2P)**

The use of digital information for which various digitized data creation methods are captured. Users will capture, store, analyze and manage spatially referenced data in a modeled mapping procedure. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 214. Advanced Solid Modeling**3 Credits (2+2P)**

Advanced 3D mechanical parametric solid modeling and assembly creation utilizing the latest version of Solidworks software. The creation of 2D working drawings from 3D solid models and the creation of 3D models for machining/manufacturing will be emphasized. Geometric Dimensioning and Tolerancing (GD&T), material properties, and industry standard fastening and manufacturing methods will be further explored.

Prerequisite(s)/Corequisite(s): DRFT 114. Restricted to Community Colleges campuses only.

DRFT 222. Introduction to Geomatics**3 Credits (2+3P)**

Theory and practice of geomatics as applied to plane surveying in the areas of linear measurements, angle measurements, area determination, differential and trigonometric leveling, and topographic mapping. Crosslisted with: SUR 222.

Prerequisite: MATH 1250G or MATH 1430G.

Learning Outcomes

1. Various

DRFT 230. Building Systems Drafting**3 Credits (2+2P)**

Development of working drawings for electrical, plumbing, and HVAC systems, for residential and commercial building through the applications of both 2D Drafting and 3D Building Information Modeling (BIM) techniques. Basics of project setup, National CAD Standards, ADA Standards, modern office practice, code analysis, as well as Sustainability and LEED for new construction. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 180 or DRFT 181.

DRFT 231. Construction Methods and Equipment**3 Credits (2+2P)**

Introduction to methods and equipment utilized in the construction industry including, common construction equipment, equipment utilization, equipment operating costs, site and earthwork, applicable specifications and testing, and related planning and safety considerations. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 151.

DRFT 240. Structural Systems Drafting**3 Credits (2+2P)**

Study of foundations, wall systems, floor systems and roof systems in residential, commercial and industrial design/construction. Produce structural drawings including foundation plans, wall and building sections, floor and roof framing plans, shop drawings and details; schedules, materials lists and specifications. Use of various software. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): DRFT 180 or DRFT 181. Restricted to Community Colleges campuses only.

DRFT 242. Roadway Development Drafting**3 Credits (2+2P)**

Advanced civil/survey technology and drafting related to roadway development. Emphasis is on relevant terminology, codes/standards, and the production of complex working drawings such as topographical/grading, drainage, master utilities, roadway P P/details/etc., according to agency standards. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 143.

DRFT 243. Land Development Drafting**3 Credits (2+2P)**

Advanced civil/survey technology and drafting related to land development. Emphasis is on relevant terminology codes/standards, and the production of complex working drawings such as subdivision plats, local utility and drainage plans, construction details roadway P P, etc., according to local development/ agency standards.

Prerequisite: DRFT 143 and DRFT 153.

DRFT 250. Principles of Detailing and Design**3 Credits (2+2P)**

Advanced practice in construction documentation in the development and coordination of working drawings & specifications. In particular, will utilize Architectural Graphic Standards, National CAD Standards, and ADA standards to develop detail drawings related to Architectural, Civil, Structural and Building Mechanical systems. Will also be introduced to basic principles, factors, and process of building design such as space planning, site analysis, and basic architectural programming. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): DRFT 180 or DRFT 181. Restricted to Community Colleges campuses only.

DRFT 254. Spatial Data Processing**3 Credits (2+2P)**

Utilizes the tools and technologies of GIS, processing volumes of geodata identifying a numerical, coded or listed map. Involves the analysis of spatial data from various diverse applications and place in a descriptive mapping process. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 204.

DRFT 255. Independent Study**1-3 Credits (1-3)**

Instructor-approved projects in drafting or related topics specific to the student's individual areas of interest and relevant to the drafting and graphics technology curriculum. Consent of instructor required. May be repeated for a maximum of 6 credits.

DRFT 258. Introduction to Infracworks**3 Credits (2+2P)**

Introduction to the utilization of Infracworks software for the conceptualization, optimization, and visualization of infrastructure projects in the context of the built and natural environment. Restricted to Community Colleges campuses

Prerequisite(s): DRFT 143.

Learning Outcomes

1. Prepare accurate written technical documents, Produce drawing documents that are technically sound, Develop and practice productive work skills, and Upgrade technical knowledge and skills to keep pace with real-world changes DRFT 253 Course Competencies I. Navigate within a 3D drawing/ modeling space, Connect drawings to data sources, Stylize data sources, Create models elements, Analyze models, Collaborate on a project with others, Communicate design, and Develop good workplace skills and professional, productive work habits.

DRFT 261. Construction Scheduling and Project Management**3 Credits (2+2P)**

Introduction to construction scheduling and project management. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 161.

DRFT 265. Advanced Building Information Modeling Applications**3 Credits (2+2P)**

Advanced applications of Building Information Modeling (BIM) including the creation of, and practice in collaborative work sets, data and design analyses, energy modeling and analysis, preliminary LEED analysis, construction take-offs & estimation, and construction animation, through use of various BIM and related software. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 165.

DRFT 274. GIS Theory and Analysis**3 Credits (2+2P)**

Analyzes the hypothesis in which location and spatial data sufficiently quantifies the appropriate statistical methodology. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 254.

DRFT 276. Computer Rendering and Animation I**3 Credits (2+2P)**

Introduction to technical applications of computer generated renderings and animations for the architecture and engineering fields. 3D models, photo-realistic renderings, and basic animation movie files will be produced utilizing industry standard modeling and animation software.

DRFT 278. Advanced CAD Applications**3 Credits (2+2P)**

Introduction to advanced CAD commands, applications, usage techniques, and user customization. the latest version of the National CAD Standards will also be explored. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

DRFT 288. Portfolio Development**3 Credits (2+2P)**

Production of a portfolio consisting of previously produced student work related to the student's individualized degree option. Process shall include the compilation and organization of working and presentation drawings, construction documents, BIM Models, and renderings/animations. Students will learn the basics of design layout and online portfolio documentation. Job search and resume preparation activities will also be required. Production of new material and content may also be required. This course is designed as a last semester course in the Drafting & Design curricula. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of Instructor.

DRFT 290. Special Topics**1-4 Credits (1-4)**

Topics subtitled in the Schedule of Classes. May be repeated for a maximum of 12 credits.

DRFT 291. Cooperative Experience**1-6 Credits (1-6)**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student meets with advisor weekly. Graded S/U.

Prerequisite: consent of instructor.

DRFT 295. Professional Development and Leadership DAGA**1 Credit (1)**

Students gain experience in leadership, team building, performing community service, and membership and/or leadership in a student organization. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

E E-ELECTRICAL ENGINEERING (E E)

E E 200. Linear Algebra, Probability and Statistics Applications**4 Credits (3+3P)**

The theory of linear algebra (vectors and matrices) and probability (random variables and random processes) with application to electrical engineering. Computer programming to solve problems in linear algebra and probability.

Prerequisite: C- or better in ENGR 140 and (MATH 1521G or MATH 1521H or ENGR 190).

Learning Outcomes

1. Perform vector and matrix operations, including matrix inversion, eigen analysis, finding basis and dimension of vector spaces and rank of a matrix, and solving a set of linear equations. Calculate probabilities using probability mass, density, and cumulative distribution functions for single and multiple, discrete and continuous random variables, and relate them to electrical engineering applications. Perform simple parameter estimation, such as finding sample mean and variance, and relate to confidence intervals. Describe random processes in the context of signal processing and communications systems problems. Use MATLAB to solve problems involving linear algebra and probability, including designing and performing simple numerical experiments.

E E 240. Multivariate and Vector Calculus Applications**3 Credits (3)**

Vector algebra, cylindrical and spherical coordinates, partial derivatives, multiple integrals. Calculus of vector functions through electrostatic applications. Divergence, gradient, curl, divergence theorem, Stokes's theorem, Coulomb's Law, Gauss's Law, electric field, electric potential. Applications in Matlab.

Prerequisite: C- or better in (MATH 1521G or MATH 1521H or ENGR 190) and ENGR 140.

Learning Outcomes

1. Students will demonstrate conceptual understanding of the fundamental principles and theories in vector calculus Students will analyze and solve problems using vector calculus in three coordinate systems

E T-ENGINEERING TECHNOLOGY (E T)

E T 101. Introduction to Engineering Technology and Geomatics**1 Credit (1)**

An introduction to geomatics and the various engineering technology disciplines, the engineering approach to problem solving, and the design process. Projects emphasize the importance of teamwork, written & oral communication skills, as well as ethical responsibilities.

Learning Outcomes

1. Various

E T 104. Soldering Techniques**1 Credit (3P)**

Fundamentals of soldering, desoldering, and quality inspection of printed circuit boards.

E T 109. Computer Drafting Fundamentals**3 Credits (3+2P)**

Crosslisted with: DRFT 109, C E 109 and SUR 109

E T 110. Introduction to 3-D Modeling (Solid Works)**3 Credits (2+3P)**

Introduction to SolidWorks, a 3-D modeling software. The foundation for designing mechanical parts and assemblies.

E T 120. Computation Software**2-3 Credits (2-3)**

The use of spreadsheet software in the field of engineering technology.

E T 125. Introduction to Renewable Energy**3 Credits (3)**

Renewable energy systems, including topics in thermal-solar photovoltaic, wind, geothermal systems, and other current topics. Theory, practical applications, safety considerations and the economics of alternative renewable energy systems compared to conventional systems.

E T 143. Civil/Survey Drafting I**3 Credits (2+2P)**

Introduction to drafting in the field of Civil Engineering. Drawings, projects, and terminologies related to topographic mapping, contour drawings, plan, and profiles as street/highway layout.

Prerequisite(s): DRFT 109.

Learning Outcomes

1. Students will develop a basic knowledge of AutoCad Civil 3D software as they relate to the civil drafting process. Students will become familiar with a basic understanding of computers, drafting and trigonometry is required. Use of long-term projects will be utilized to simulate real-world work environments to aid the understanding and applying vocabulary on surveying drafting plans An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology

E T 153. Fundamentals of Networking Communications**3 Credits (3)**

Introduction to networking basics, including computer hardware and software, electricity, networking terminology, protocols, LANs, WANs, OSI model, IP addressing, and design and documentation of basic network and structure cabling.

Learning Outcomes

1. Students will identify network types/protocols utilizing the OSI reference model and compute numbering system network problems. Students will explain issues related to managing and documenting network environments. Students will list, compare, and discuss industry standards for addressing computers on a network. Students will list and distinguish between computer networking historical milestones. Students will identify, compare, and evaluate networking data transport techniques. Students will identify and compare network transmission media and build/evaluate network cabling. Students will discuss IT industry certifications and summarize current technology trends.

E T 154. Construction Methods and Communications**3 Credits (3)**

Blueprint reading, specifications, and introduction to materials used in construction.

E T 155. Network Operating Systems I**3 Credits (3+1P)**

Introduction to a computer network operating system. May not be used as part of an E T degree program on main campus. Restricted to: Community Colleges only.

Prerequisite(s): E T 120 or E T 122.

E T 156. Introduction to Information Security**2 Credits (2)**

This course introduces information security terminology, historical evolution of digital security, types of PC and network system vulnerabilities and types of information loss. In addition, methods of information protection and integrity, intrusion detection, and recovery of data are introduced.

Prerequisite(s)/Corequisite(s): E T 120. Restricted to Community Colleges campuses only.

E T 160. Windows Fundamentals for IET**3 Credits (3)**

Fundamental review of the Windows operating system including installation and upgrades as well as managing applications, files, folders, devices and maintenance.

E T 182. Digital Logic**2 Credits (1+2P)**

The use of truth tables, Boolean equations, and diagrams to define, simplify, and implement logic-valued functions.

Learning Outcomes

1. Demonstrate ability to convert numerical values to commonly-used digital representations and their use for arithmetic and logical functions. Demonstrate understanding of Boolean logic functions and truth tables. Demonstrate ability to simplify logic expressions. Demonstrate understanding of sequential logic functions, and the ability to integrate with combinational logic to produce a simple state machine. Familiarity with common integrated circuit issues, such as logic voltage levels, propagation delay, and fan-out.

E T 183. Applied DC Circuits**3 Credits (2+2P)**

Application of Ohm's law, Kirchhoff's laws, Thevenin's, and Norton's theorems to the analysis of DC passive circuits. Embedded Lab.

Prerequisite(s)/Corequisite(s): MATH 1220G.

E T 183 L. Applied DC Circuits Lab**1 Credit (2P)**

DC applied circuits lab.

Corequisite(s): E T 183.

E T 184. Applied AC Circuits**3 Credits (2+2P)**

Application of circuit laws and theorems to analysis of AC passive circuits. Resonant circuit, polyphase circuit and magnetic circuit topics are introduced. Embedded Lab.

Prerequisite(s)/Corequisite(s): MATH 1250G. Prerequisite(s): E T 183.

E T 190. Applied Circuits**4 Credits (3+2P)**

Application of Ohm's law, Kirchhoff's laws, and Thevenin's theorems to the analysis of AC and DC passive circuits. Electronic circuit topics are introduced. Embedded lab.

Prerequisite/Corequisite: MATH 1250G or MATH 1430G.

Learning Outcomes

1. Analyze and design DC circuits, including ideal op-amps, using concepts of voltage, current, power, Kirchhoff's laws, and network theorems. Design simple systems involving dc circuits. Work and learn in teams.

E T 191. Applied Circuits Laboratory**1 Credit (2P)**

Applied Circuits Lab

E T 200. Special Topics**1-3 Credits**

Directed study or project. May be repeated for a maximum of 6 credits.

Prerequisite: consent of department head.

E T 203. Computational Foundations**3 Credits (3)**

Fundamental concepts of various proof techniques. These concepts will be applied to the use of computer algorithms, programming languages and other engineering and technology applications.

Prerequisite(s): MATH 1250G and E T 262.

E T 210. Intermediate 3-D Modeling (Solid Works)**3 Credits (3)**

Intermediate 3-D modeling. Applied modeling of techniques to prepare for SolidWorks certification (CSWA).

Prerequisite(s): E T 110.

E T 217. Manufacturing Processes**3 Credits (3)**

Introduction to manufacturing and processing, including: casting, forming, and machining. Emphasis on creating products with the appropriate techniques. Crosslisted with: I E 217.

Prerequisite: E T 110 and MATH 1220G.

Learning Outcomes

1. Various

E T 217 L. Manufacturing Processes Lab**1 Credit (3P)**

Hands-on laboratory in machine shop to apply topics from E T 217, including: casting, forming, and machining.

Corequisite: E T 217.

Learning Outcomes

1. Various

E T 220. Internship**1-6 Credits**

Internship requiring an approved number of hours of varied and progressive experience in the field of study. The scope and other requirements of the internship are stated in an individualized syllabus and through a memorandum of understanding between the faculty mentor and the industry partner.

May be repeated up to 6 credits. Consent of Instructor required.

Prerequisite(s): E T 283.

E T 230. Introduction to Servo Systems**1 Credit (2P)**

Introduction to Servo Systems. Topics include uses of servos in the industry, servo types, loop gains and frequency response, software control systems, damping, feedback, encoders, synchros and resolvers. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 246.

E T 240. Applied Statics**3 Credits (3)**

Fundamental topics of applied statics, including force system analysis, equilibrium, free body diagrams, methods of joints and sections, distributed loads, friction, centroids, area moments, and shear and moment diagrams.

Prerequisite(s)/Corequisite(s): MATH 1430G or MATH 1511G. Prerequisite(s): PHYS 1230G or PHYS 1310G.

E T 241. Applied Dynamics**3 Credits (3)**

The foundation for understanding particles and bodies in motion and the forces involved, including: projectile motion, Newton's Laws of Motion, conservation of energy, and impulse and momentum.

Prerequisite: E T 240.

Prerequisite/Corequisite: (MATH 1440 or MATH 1521G or MATH 1521H).

Learning Outcomes

1. Various

E T 246. Electronic Devices I**4 Credits (3+3P)**

Solid-state devices including diodes, bipolar-transistors, and field effect transistors. Use of these devices in rectifier circuits, small signal and power amplifiers.

Prerequisite: E T 190 or E T 184 or ENGR 120.

Learning Outcomes

1. Various

E T 253. Networking Operating Systems II**3 Credits (3+1P)**

Introduction to a computer network operating system. May not be used as part of an E T degree program on main campus. Restricted to Community Colleges campuses only.

Prerequisite: E T 120 and E T 153.

Learning Outcomes

1. Identify Linux utilities and terminology. Use the Linux filesystem. Install, administer, and manage a Linux system. Utilize Linux user/group management. Install software packages. Apply data management skills.

E T 254. Concrete Technology**3 Credits (2+2P)**

Fundamentals of aggregates, Portland cement, and asphalt used in design and construction.

E T 255. Linux System Administration**3 Credits (3)**

Operating systems applications and interfacing with an introduction to systems administration. Topics include Shell Programming, Programming Tools, Database Management, System Backups, Security, Setup and Maintenance of Linux Servers.

Learning Outcomes

1. Describe the key features of the Linux operating system. Plan the Linux Filesystem to match system requirements. Design BASH scripts to optimize common Linux operations. Interpret Linux performance data to solve hardware and software issues. Students will demonstrate the Core Linux System Administration. Students will be able to link the use of shell commands to managing Linux server daemons and software. Students will apply these concepts to build application servers running Linux, Apache, MySQL, and PHP (LAMP); Tomcat, CUPS print servers; and create backup solutions. Students will apply problem analysis, object-oriented structured logic, and development concepts. Students will demonstrate an understanding of theory and hands-on experience administering a Linux Based server.

E T 256. Networking Operating Systems III**3 Credits (3+1P)**

Introduction to a computer network operating system. May not be used as part of an E T degree program on main campus. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 253.

E T 262. Software Technology I**3 Credits (2+2P)**

An introduction to computer programming concepts as applied to engineering technology. Includes basic logic design, algorithm development, debugging and documentation. History and use of computers and their impact on society.

Prerequisite/Corequisite: (E T 182 or ENGR 130) or (MATH 1250G or MATH 1430G).

Learning Outcomes

1. Set up and use a rich programming environment for programming with C Analyze existing code Employ effective use of basic programming and basic troubleshooting Write, debug and test code given software requirements Apply testing and documentation best practices Transfer programming knowledge and apply coding knowledge

E T 272. Electronic Devices II**4 Credits (3+3P)**

Operational amplifiers, positive and negative feedback, computer aided circuit analysis. In addition circuits include integrator, differentiators and phase shift networks.

Prerequisite: E T 246.

Prerequisite/Corequisite: MATH 1430G or MATH 1435 or MATH 1511G.

Learning Outcomes

1. Various

E T 273. Advanced Networking Communications**4 Credits (2+4P)**

Explores advanced networking communications to include Wireless Networking, Virtualization and Cloud Computing, Subnets and VLANs, Network Risk Management, Network Security Design, Network Performance, and WANS. The course covers the examination objectives and detailed preparation for students to take the CompTIA Network+ exam.

Prerequisite: E T 153.

Learning Outcomes

1. Identify, describe, and apply wireless transmission characteristics and standards. Explain the benefits of cloud virtualization and cloud computing. Explain the purpose of network segmentation and describe how VLANs work and how they are used. Identify basic concepts of network risk management and configure devices for increased security. Identify network design security features and discuss options in network access control. Use tools to evaluate network performance and discuss best practices for incident response and disaster recovery. Explain characteristics of WAN technology and troubleshoot connection methods.

E T 276. Electronic Communications**3 Credits (2+2P)**

Antennas, transmission devices, A-M and F-M transmission and detection, pulse systems, microwave systems.

Prerequisite(s): E T 246.

E T 277. Computer Networking I for IET**3 Credits (2+2P)**

Computer network design and applications for LAN, TCP/IP networks, routing and switching technologies, VLANs, and the OSI layers from physical to transport.

Prerequisite(s): E T 182.

E T 280. Web Design and Multimedia**3 Credits (3)**

Introduction to front-end web development including webpage design, structure, layout, positioning, responsiveness, and foundational layers of how the web works. Video, audio, and other digital presentation tools are covered.

Learning Outcomes

1. Create multiple frontend development micro-components. Create single and multi-page websites. Use flexbox, grid, and media queries and different design patterns. Employ effective use of web development and basic troubleshooting. Build small web site projects.

E T 282. Digital Electronics**4 Credits (3+3P)**

Applications of digital integrated circuits, multiplexers, counters, arithmetic circuits, and microprocessors.

Prerequisite(s)/Corequisite(s): (E T 190 or E T 184). Prerequisite(s): E T 182.

E T 283. Hardware PC Maintenance**3 Credits (3+1P)**

Installing, configuring, troubleshooting, and maintaining personal computer hardware components.

Prerequisite(s): E T 120 or E T 122.

E T 284. Software PC Maintenance**3 Credits (3+1P)**

Installing, configuring, troubleshooting, and maintaining personal computer operating systems.

Prerequisite(s): E T 120 or E T 122.

E T 285. Advanced Information Security**3 Credits (3)**

The course covers detailed analysis of network security, including security operations and policy adherence; internal and external vulnerabilities; methods of identifying, controlling and managing system access, and the protection of system information.

Prerequisite(s)/Corequisite(s): E T 283. Prerequisite(s): E T 156.

E T 286. Information Security Certification Preparation**4 Credits (4)**

The course covers the examination objectives and detailed preparation for a certification in information security.

Prerequisite(s): E T 285.

E T 290. Networking Wireless Communication**3 Credits (3+1P)**

This course provides an introduction to wireless networking and communications. Some of the topics covered are protocols, transmission methods, and IEEE 802.11 standards. Wireless LAN (WLAN) fundamentals, devices, and security, cellular telephony, broadband, and satellite communications.

Prerequisite: E T 273.

E T 291. PC Forensics and Investigation**3 Credits (3)**

Introduction to computer forensics and investigative fundamentals. Topics include understanding computer forensic and investigation law and requirements, processing crime and incident scenes, and the extraction, preservation, analysis and presentation of computer-related evidence.

Prerequisite(s): E T 120 or E T 122.

ECED-EARLY CHILDHOOD EDUCATION (ECED)

ECED 1110. Child Growth, Development, and Learning

3 Credits (3)

This basic course in the growth, development, and learning of young children, prenatal through age eight, provides students with the theoretical foundation for becoming competent early childhood professionals. The course includes knowledge of how young children grow, develop and learn. Major theories of child development are integrated with all domains of development, including biological-physical, social, cultural, emotional, cognitive and language. The adult's role in supporting each child's growth, development and learning is emphasized.

Learning Outcomes

1. Incorporate understanding of developmental stages, processes, and theories of growth, development, and learning into developmentally appropriate practice. A.1
2. Demonstrate knowledge of the interaction between maturation and environmental factors that influence physical, social, emotional, cognitive, and cultural domains in the healthy development of each child. A.2
3. Demonstrate knowledge of the significance of individual differences in development and learning.
4. Demonstrate knowledge of how certain differences may be associated with rate of development and
5. developmental patterns associated with developmental delays and/or specific disabilities. A.3
6. Demonstrate knowledge of the similarities between children who are developing typically and those with diverse abilities. A.4
7. Demonstrate knowledge of the many functions that language serves in the cognitive, social, and emotional aspects of development in the formative years. A.7
8. Demonstrate knowledge of the developmental sequence of language and literacy, including the
9. influence of culture and home factors. A.8
10. 1Demonstrate knowledge of how children acquire and use verbal, non-verbal, and alternative means of communication. A.9
11. 1Demonstrate knowledge of the relationship among emotions, behaviors, and communication skills to assist children in identifying and expressing their feelings in appropriate ways. A.10
12. 1Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11

ECED 1115. Health, Safety, and Nutrition

2 Credits (2)

This course provides information related to standards and practices that promote children's physical and mental well-being sound nutritional practices, and maintenance of safe learning environments. It includes information for developing sound health and safety management procedures for indoor and outdoor learning environments for young children. The course examines the many scheduling factors that are important for children's total development, healthy nutrition, physical activity, and rest.

Learning Outcomes

1. Recognize and respond to each child's physical health, intellectual and emotional well-being, and nutritional and safety needs. B.1
2. Articulate an understanding of indoor and outdoor learning environments that provide opportunities for children to put into practice healthy behaviors (physically, socially and emotionally). B.2
3. Use appropriate health appraisal and management procedures and makes referrals when necessary. B.3
4. Recognize signs of emotional distress, child abuse, and neglect in young children and use procedures appropriate to the situation, such as initiating discussions with families, referring to appropriate
5. professionals, and, in cases of suspected abuse or neglect, reporting to designated authorities. B.4
6. Establish an environment that provides opportunities and reinforcement for children's practice of healthy behaviors that promote appropriate nutrition and physical and psychological well-being. B.5
7. Provide a consistent daily schedule for rest/sleep, as developmentally appropriate. B.6
8. Implement health care and educational activities for children and families based on health and a nutritional information that is responsive to diverse cultures. B.7
9. Assist young children and their families, as individually appropriate, in developing decision-making and interpersonal skills that enable them to make healthy choices and establish health-promoting behaviors. B.8

ECED 1120. Guiding Young Children**3 Credits (3)**

This course explores various theories of child guidance and the practical applications of each. It provides developmentally appropriate methods for guiding children and effective strategies and suggestions for facilitating positive social interactions. Strategies for preventing challenging behaviors through the use of environment, routines and schedule will be presented. Emphasis is placed on helping children become self-responsible, competent, independent, and cooperative learners and including families as part of the guidance approach.

Learning Outcomes

1. Apply knowledge of cultural and linguistic diversity and the significance of socio-cultural and political contexts for development and learning and recognize that children are best understood in the contexts of family, culture and society. A.6
3. Demonstrate knowledge of the many functions that language serves in the cognitive, social, and emotional aspects of development in the formative years. A.7
4. Demonstrate knowledge of the relationship among emotions, behaviors, and communication skills to assist children in identifying and expressing their feelings in appropriate ways. A.10
5. Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11
6. Recognize and respond to each child's physical health, intellectual and emotional well-being, and nutritional and safety needs. B.1
7. Demonstrate knowledge and skill in building positive, reciprocal relationships with families. C.1
8. Demonstrate knowledge of and respect for variations across cultures, in terms of family strengths, expectations, values, and child-rearing practices. C.4
10. Demonstrate the ability to incorporate the families' desires and goals for their children into classroom or intervention strategies. C.7
11. Demonstrate knowledge and skills in developmentally appropriate guidance techniques and strategies that provide opportunities to assist children in development positive thoughts and feelings about themselves and others through cooperative interaction with peers and adults. E.3
12. 1Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
13. 1Demonstrate knowledge of assessment techniques, interpretation of assessment information in the application of this

ECED 1125. Assessment of Children and Evaluation of Programs**3 Credits (3)**

This basic course familiarizes students with a variety of culturally appropriate assessment methods and instruments, including systematic observation of typically and non-typically developing children. The course addresses the development and use of formative and summative assessment and evaluation instruments to ensure comprehensive quality of the total environment for children, families, and the community. Students will develop skills for evaluating the assessment process and involving other teachers, professionals and families in the process.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Learning Outcomes

1. Demonstrate ability to choose valid tools that are developmentally, culturally, and linguistically appropriate; use the tools correctly; make appropriate referrals; and interpret assessment results, with the goal of obtaining valid, useful information to inform practice and decision making. F.1
2. Demonstrate knowledge of maintaining appropriate records of children's development and behavior that safeguard confidentiality and privacy. F.2
3. Demonstrate knowledge of the educator's role as a participating member of the assessment process as described and mandated by state and federal regulations for Individual family service plans (IFSP) and individual education plans (IEP). F.3
4. Demonstrate understanding of the influences of environmental factors, cultural/linguistic differences, and diverse ways of learning on assessment outcomes. F.4 Involve the family and, as appropriate, other team members in assessing the child's development, strengths, and needs in order to set goals for the child. F.5 Articulate an understanding of the distinctions and definitions of assessment concepts (e.g., screening, diagnostic assessment, standardized, testing, accountability assessment). F.6
5. Apply understanding of assessment concepts toward selection of appropriate formal assessment measures, critiquing the limitations of inappropriate measures, and discussing assessment issues as part of interdisciplinary teams. F.7
6. Articulate an understanding that responsible assessment is legally and ethically grounded and guided by sound professional. It standards is collaborative and open with the goal of supporting diverse children and families. F.8
7. Demonstrate knowledge of assessment techniques, interpretation of assessment information in the Application of this data to curriculum development and/or intervention planning. F.9
8. 1Demonstrate knowledge of a variety of techniques and procedures to evaluate and modify program goals for young children and their families. F.10
9. 1Demonstrate knowledge and use of program evaluation to ensure comprehensive quality of the total Environment for children, families, and the community. F.11
10. 1Use both self and collaborative evaluations as part of ongoing program evaluations. F.12

ECED 1130. Family and Community Collaboration**3 Credits (3)**

This beginning course examines the involvement of families and communities from diverse cultural and linguistic backgrounds in early childhood programs. Ways to establish collaborative relationships with families in early childhood settings is discussed. Families' goals and desires for their children will be supported through culturally responsive strategies.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Learning Outcomes

1. Demonstrate knowledge and skill in building positive, reciprocal relationships with families. C.1
2. Articulate an understanding of a safe and welcoming environment for families and community members. C.2
3. Develop and maintain ongoing contact with families through a variety of communication strategies. C.3
4. Demonstrate knowledge of and respect for variations across cultures, in terms of family strengths, expectations, values, and child-rearing practices. C.4
5. Articulate understanding of the complexity and dynamics of family systems. C.5
6. Demonstrate understanding of the importance of families as the primary educator of their child. C.6
7. Involve families and community members in contributing to the learning environment. C.9
8. Demonstrate ability to communicate to families the program's policies, procedures, and those procedural safeguards that are mandated by state and federal regulations. C.11
9. Apply knowledge of family theory and research to understand family and community characteristics including socioeconomic conditions; family structures, relationships, stressors, and supports (including the impact of having a child with diverse abilities); home language and ethnicity. C.12
10. 1Demonstrate knowledge of and skill to access community resources that assist families and contribute directly or indirectly to children's positive development such as mental health services, health care, adult education, English language instruction, and economic assistance. C.13
11. 1Demonstrate effective written and oral communication skills when working with children, families, and early care, education, and family support professionals. E.14
12. 1Demonstrate a commitment to leadership and advocacy for excellence in programs and services for young children and their families. G.6

ECED 2110. Professionalism**2 Credits (2)**

This course provides a broad-based orientation to the field of early care and education. Early childhood history, philosophy, ethics and advocacy are introduced. Basic principles of early childhood systems are explored. Multiple perspectives on early care and education are introduced. Professional responsibilities such as cultural responsiveness and reflective practice are examined.

Learning Outcomes

1. Recognize signs of emotional distress, child abuse, and neglect in young children and use procedures appropriate to the situation, such as initiating discussions with families, referring to appropriate professionals, and, in cases of suspected abuse or neglect, reporting to designated authorities. B.4
2. Demonstrate ability to communicate to families the program's policies, procedures, and those procedural safeguards that are mandated by state and federal regulations. C.11
3. Use both self and collaborative evaluations as part of ongoing program evaluations. F.12
4. Demonstrate ability to adhere to early childhood professional codes of ethical conduct and issues of confidentiality. G.1
5. Demonstrate awareness of federal, state, and local regulations, and public policies regarding programs and services for children birth through eight years of age. G.2
6. Demonstrate understanding of conditions of children, families, and professionals; the historical and current issues and trends; legal issues; and legislation and other public policies affecting children, families, and programs for young children and the early childhood profession. G.3
7. Demonstrate critical reflection of one's own professional and educational practices from community, state, national, and global perspectives. G.4
8. Demonstrate understanding of the early childhood profession, its multiple historical, philosophical, and social foundations, and how these foundations influence current thought and practice. G.5
9. Demonstrate knowledge in technology resources to engage in ongoing professional development. G.7

ECED 2115. Introduction to Language, Literacy, and Reading**3 Credits (3)**

This course is designed to prepare early childhood professionals for promoting children's emergent literacy and reading development. Through a developmental approach, the course addresses ways in which early childhood professionals can foster young children's oral language development, phonemic awareness, and literacy problem solving skills, fluency, vocabulary, and comprehension. . This course provides the foundation for early childhood professionals to become knowledgeable about literacy development in young children. Instructional approaches and theory-based and research based strategies to support the emergent literacy and reading skills of native speakers and English language learners will be presented.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H, or ENGL 1110M).

Learning Outcomes

1. Demonstrate knowledge of the many functions that language serves in the cognitive, social, and emotional aspects of development in the formative years. A.7
3. Demonstrate knowledge of the developmental sequence of language and literacy, including the influence of culture and home factors. A.8
5. Demonstrate knowledge of how children acquire and use verbal, non-verbal, and alternative means of communication. A.9
6. Develop partnerships with family members to promote early literacy in the home. C.8
7. Establish partnerships with community members in promoting literacy. C.10
8. Demonstrate knowledge of the reading and writing components of emergent literacy at each developmental level. D.4
9. Provide and use anti-bias materials/literature and experiences in all content areas of the curriculum. D.7
10. Create and manage a literacy-rich environment that is responsive to each child's unique path of development. E.9
11. Use a variety of strategies during adult-child and child-child interactions and facilitate communication and dialogue of expressive language and thought. E.10 1
12. Demonstrate a variety of developmentally appropriate instructional strategies that facilitate the development of literacy skills. E.11

ECED 2120. Curriculum Development through Play Birth through Age 4 (PreK)**3 Credits (3)**

The beginning curriculum course places play at the center of curriculum in developmentally appropriate early childhood programs. It addresses content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSPs is included. Curriculum development in all areas, including literacy, numeracy, the arts, health, science, social skills, and adaptive learning for children, birth through age four, is emphasized. Consent of instructor required.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Corequisite(s): ECED 2121.

Learning Outcomes

1. Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11
2. Demonstrate knowledge of relevant content for young children and developmentally appropriate ways of integrating content into teaching and learning experiences for children from birth to four (0-4) years of age. D.1
3. Demonstrate the integration of knowledge of how young children develop and learn with knowledge of the concepts, inquiry tools, and structure of content areas appropriate for different developmental levels. D.2
4. Adapt content to meet the needs of each child, including the development of individualized family
5. service plans (IFSP) or individualized education plans (IEP) for children with diverse abilities through the team process with families and other team members. D.6
6. Demonstrate knowledge of varying program models and learning environments that meet the individual needs of all young children, including those with diverse abilities. E.1
7. Create environments that encourage active involvement, initiative, responsibility, and a growing sense of autonomy through the selection and use of materials and equipment that are suitable to individual learning, developmental levels, diverse abilities, and the language and cultures in New Mexico. E.2
8. Create and manage inclusive learning environments that provide individual and cooperative
9. opportunities for children to construct their own knowledge through various strategies that include
10. decision-making, problem solving, and inquiry experiences. E.4
11. Demonstrate understanding that each child's creative expression is unique and can be encouraged through diverse ways, including creative play. E.5
12. Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
13. 1Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
14. 1Use and explain the rationale for developmentally appropriate methods that include play, small group projects, open-ended questioning, group discussion, problem solving, cooperative learning and inquiry experiences to help young children develop intellectual curiosity, solve problems, and make decisions. E.8
15. 1Demonstrate a variety of developmentally appropriate instructional strategies that facilitate the development of emergent literacy skills. E.11
16. 1Demonstrate knowledge of assessment techniques, interpretation of assessment information in the application of this data to curriculum development of intervention planning. F.

ECED 2121. Curriculum Development through Play Birth through Age 4 (PreK) Practicum**2 Credits (2)**

The beginning practicum course is a co-requisite with the course Curriculum Development through Play – Birth through Age 4. The field based component of this course will provide experiences that address curriculum content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSPs is included. Curriculum development in all areas, including literacy, numeracy, the arts, health, science, social skills, and adaptive learning for children, birth through age four, is emphasized. Consent of instructor required.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Corequisite(s): ECED 2120.

Learning Outcomes

1. Provide a variety of activities that facilitate development of the whole child in the following areas: Physical/motor, social/emotional, language/cognitive and adaptive/living skills. A.5
2. Develop, implement and evaluate an integrated curriculum that focuses on children's development and interests, using their language, home experiences, and cultural values. D.5
3. Provides and uses anti-bias materials and literature, and experiences in all content areas of the curriculum. D.7
4. Create and manage inclusive learning environments that provide individual and cooperative opportunities for children to construct their own knowledge through various strategies that include decision-making, problem solving, and inquiry experiences. E.4
5. Demonstrate understanding that each child's creative expression is unique and can be encouraged through diverse ways, including creative play. E.5
6. Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
7. Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
8. Use and explain the rationale for developmentally appropriate methods that include play, small group projects, open-ended questioning, group discussion, problem solving, cooperative learning and inquiry experiences to help young children develop intellectual curiosity, solve problems, and make decisions. E.8

ECED 2130. Curriculum Development and Implementation Age 3 (PreK) through Grade 3**3 Credits (3)**

The curriculum course focuses on developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills, is emphasized. Information on adapting content areas to meet the needs of children with special needs and the development of IEP's is included. Consent of instructor required.

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Corequisite(s): ECED 2131.

Learning Outcomes

1. Use appropriate guidance to support the development of self-regulatory capacities in young children. A.11
2. Demonstrate the integration of knowledge of how young children develop and learn with knowledge of the concepts, inquiry tools, and structure of content areas appropriate for different developmental levels. D.2
3. Demonstrate knowledge of what is important in each content area, why it is of value, and how it links with early and later understandings within and across areas. D.3
4. Demonstrate knowledge of the language, reading and writing components of emergent literacy at each developmental level. D.4
5. Adapt content to meet the needs of each child, including the development of individualized family service plans (IFSP) or individualized education plans (IEP) for children with diverse abilities through the team process with families and other team members. D.6
6. Demonstrate knowledge of varying program models and learning environments that meet the individual needs of all young children, including those with diverse abilities. E.1
7. Create environments that encourage active involvement, initiative, responsibility, and a growing sense of autonomy through the selection and use of materials and equipment that are suitable to individual learning, developmental levels, diverse abilities, and the language and cultures in New Mexico. E.2
8. Create and manage inclusive learning environments that provide individual and cooperative opportunities for children to construct their own knowledge through various strategies that include decision-making, problem solving, and inquiry experiences. E.4
9. Demonstrate understanding that each child's creative expression is unique and can be encouraged through diverse ways, including creative play. E.5
10. 1Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
11. 1Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
12. 1Demonstrate knowledge of developmentally appropriate uses of technology, including assistive technology. E.12
13. 1Demonstrate knowledge of assessment techniques, interpretation of assessment information in the application of this data to curriculum development of intervention planning. F.9

ECED 2131. Curriculum Development and Implementation Age 3 (PreK) through Grade 3 Practicum**2 Credits (2)**

The beginning practicum course is a co-requisite with the course Curriculum Development and Implementation: Age 3 through Grade 3. The field based component of this course will provide experiences that address developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills is emphasized. Information on adapting content areas to meet the needs of children with special needs and the development of IEPs is included. Consent of instructor required. Corequisite(s): ECED 2130

Prerequisite(s): ECED 1110 and (ENGL 1110G or ENGL 1110H or ENGL 1110M).

Learning Outcomes

1. Provide a variety of activities that facilitate development of the whole child in the following areas: Physical/motor, social/emotional, language/cognitive and adaptive/living skills. A.5
2. Develop, implement and evaluate an integrated curriculum that focuses on children's development and interests, using their language, home experiences, and cultural values. D.5
3. Provides and uses anti-bias materials and literature, and experiences in all content areas of the curriculum. D.7
4. Create and manage inclusive learning environments that provide individual and cooperative opportunities
5. for children to construct their own knowledge through various strategies that include decision-making, problem solving, and inquiry experiences. E.4
6. Demonstrate understanding that each child's creative expression is unique and can be encouraged
7. through diverse ways, including creative play. E.5
8. Plan blocks of uninterrupted time for children to persist at self-chosen activities, both indoors and outdoors. E.6
9. Demonstrate understanding of the influence of the physical setting, schedule, routines, and transitions on children and use these experiences to promote children's development and learning. E.7
10. Use and explain the rationale for developmentally appropriate methods that include play, small group projects, open-ended questioning, group discussion, problem solving, cooperative learning and inquiry experiences to help young children develop intellectual curiosity, solve problems, and make decisions. E.8

ECED 2140. Effective Program Development for Diverse Learners and their Families**3 Credits (3)**

This course addresses the role of a director/administrator in the implementation of family-centered programming that includes individually appropriate and culturally responsive curriculum in a healthy and safe learning environment for all children and their families.

Learning Outcomes

1. Describe important aspects of leadership that an administrator in an early childhood setting must demonstrate.
2. Identify and describe ways in which classrooms can have a multicultural environment.
3. Observe a classroom and identify, using photographs good practice with classroom environment.
4. Describe important aspects of a good early childhood curriculum
5. Describe how culture and socioeconomic factors influence classroom environment.

ECED 2141. Effective Program Development for Diverse Learners and their Families Practicum**2 Credits (2)**

Provides opportunities for students to apply knowledge gained from Curriculum for Diverse Learners and their Families in a practicum setting. Consent of instructor required. Restricted to ECED majors.

Corequisite(s): ECED 2140.

Learning Outcomes

1. Describe the requirements to maintain and enhance the physical and mental health, safety, and nutrition components of a program: Demonstrate knowledge of facility management to include evaluation, maintenance, security, and meeting applicable codes; Demonstrate knowledge of planning for appropriate indoor and outdoor environments; Identify ways to support early childhood educators in the selection of appropriate materials and equipment for the environment; Demonstrate knowledge of the impact of the environment on children's learning and development.
2. Demonstrate knowledge of early care and education curriculum that is individually, culturally, linguistically, and developmentally responsive: Describe a variety of curriculum goals and teaching strategies; Describe the importance of ongoing curriculum assessment and planning, and collaboration with teachers, families and community entities; Identify ways to support early childhood educators in curriculum assessment and planning.
3. Demonstrate knowledge of family/community involvement in effective program development: Describe the importance of supporting families as partners in early care and education program development; Describe both informal and formal communication systems with families that encourage information sharing and joint decision making; Identify strategies for resolving conflicts and supporting families with diverse backgrounds and parenting expectations; Identify the range of family needs including transitional periods; Identify within the community the network to support families with their special needs; Describe a "family friendly" inclusive philosophy
4. Demonstrate knowledge of a director's role as an educational leader in an inclusive setting: Describe what a director does in supporting the instructional component of the program for children, staff, and families; Identify resources that a director might use to keep current with information relating to the instructional component of the program; Describe ways to involve teachers in instructional decision making.

ECED 2215. Program Management**3 Credits (3)**

This course emphasizes the technical knowledge necessary to develop and maintain an effective early care and education program. It focuses on sound financial management and vision, the laws and legal issues that affect programs, and state and national standards such as accreditation. Consent of instructor required.

ECED 2280. Professional Relationships**3 Credits (3)**

This course addresses staff relations that will foster diverse professional relationships with families, communities and boards. Topics of staff recruitment, retention, support and supervision will lay the foundation for positive personnel, family and community relationships. Consent of instructor required.

Corequisite(s): ECED 2281.

Learning Outcomes

1. Interview an administrator and write a paper describing personnel management, staff support,
2. supervision, and professional development.
3. Identify and describe ethical and legal requirements in maintaining a professional relationship with subordinates, the community, clients, and fellow administrators.
4. Identify and describe technologies which may be used in an early childhood setting.
5. Identify and describe legal and ethical considerations in the employment of others.

ECED 2281. Professional Relationships Practicum**2 Credits (2)**

Practical experience in the development of staff relationship that will foster professional relationships with families, communities and boards. Issues of staff recruitment, retention, support and supervision will lay a foundation for positive personnel management. Consent of instructor required. Restricted to ECED majors.

Corequisite(s): ECED 2280.

Learning Outcomes

1. Demonstrate knowledge of personnel management, staff support, supervision, and professional development within a diverse and inclusive organization: Describe methods for recruiting and retaining a diverse staff; Describe job descriptions for each position; Review a sampling of personnel policies and procedures; Review a variety of staff handbooks; Explain why on-going system of supervision should include regular meetings for professional goal setting, self-assessment, and feedback; Review program needs to effectively manage the work of the program including scheduling, covering ratios, initial orientation, in-service, staff meeting, etc.
2. Demonstrate an awareness of appropriate communication and collaboration skills: Improve written and oral communication skills; Describe strategies for resolving conflicts; Explain how to promote consensus building as a decision making process.
3. Demonstrate knowledge that promotes effective professional relationships with families, communities, and board members: Describe methods for demonstrating respect, understanding, and appreciation for all people; Identify the aspects of culture that facilitate relationship building among people; Describe how to build a common vision and develop long range program plans with parents, staff, board, and the community; Communicate program goals to visitors, prospective parents, volunteers, and board members; Describe how public relations and marketing strategies can impact programs; Review assessment tools that identify needs for early care, education and family support; Develop a personal professional development plan; Describe methods to work effectively with a board and advisory group.
4. Demonstrate knowledge of technology uses and skill acquisition: Describe how to use technology resources to engage in ongoing professional development and lifelong learning; Describe how you will use technology to communicate and collaborate in your leadership role

ECON-ECONOMICS (ECON)

ECON 1110G. Survey of Economics**3 Credits (3)**

This course will develop students' economics literacy and teaches students how economics relates to the everyday life of individuals, businesses and society in general. The course will also introduce students to the roles different levels of governments play in influencing the economy. At the conclusion of the course, students will be able to identify economic causes for various political and social problems at national and international levels, and have a better understanding of everyday economic issues that are reported in media and public forums.

Learning Outcomes

1. Gain and demonstrate a contextual understanding of economic terms and concepts.
2. Recognize and analyze common economic issues which relate to individual markets and the aggregate economy.
3. Learn basic economic principles that influence global trading and challenges relating to globalization.
4. Outline the implications of various economic policies on individuals and on economies.
5. Demonstrate ability to use diagrams and graphs to explain economic principles, policies and their applications.
6. Appreciate and understand how individual decisions and actions, as a member of society, affect economies locally, nationally and internationally.
7. Explain the roles of governments in influencing buyer and seller behavior in the market and how government failure occurs when intervention fails to improve or actually worsens economic outcomes.
8. Be able to apply course concepts to interpret, evaluate and think critically about economic events and policies, especially as regularly reported in the media and other public forums.

ECON 2110G. Macroeconomic Principles**3 Credits (3)**

Macroeconomics is the study of national and global economies. Topics include output, unemployment and inflation; and how they are affected by financial systems, fiscal and monetary policies.

Learning Outcomes

1. Explain the concepts of opportunity cost, comparative advantage and exchange.
2. Demonstrate knowledge of the laws of supply and demand and equilibrium and use supply and demand curves to analyze responses of markets to external events.
3. Explain the circular flow model and use the concepts of aggregate demand and aggregate supply to analyze the response of the economy to disturbances.
4. Explain the concepts of gross domestic product, inflation and unemployment and how they are measured.
5. Describe the determinants of the demand for money, the supply of money and interest rates and the role of financial institutions in the economy.
6. Define fiscal policy and monetary policies and how these affect the economy.
7. Students will be able to identify the causes of prosperity, growth, and economic change over time and explain the mechanisms through which these causes operate in the economy.

ECON 2110H. Principles of Macroeconomics Honors**3 Credits (3)**

Macroeconomic theory and public policy designed: national income concepts, unemployment, inflation, economic growth and international payment problems. Must be a Crimson Scholar.

Prerequisite(s): MATH 1220G.

Learning Outcomes

1. Explain the concepts of opportunity cost, comparative advantage and exchange.
2. Demonstrate knowledge of the laws of supply and demand and equilibrium and use supply and demand curves to analyze responses of markets to external events.
3. Explain the circular flow model and use the concepts of aggregate demand and aggregate supply to analyze the response of the economy to disturbances.
4. Explain the concepts of gross domestic product, inflation and unemployment and how they are measured.
5. Describe the determinants of the demand for money, the supply of money and interest rates and the role of financial institutions in the economy.
6. Define fiscal policy and monetary policies and how these affect the economy.
7. Students will be able to identify the causes of prosperity, growth, and economic change over time and explain the mechanisms through which these causes operate in the economy.

ECON 2120G. Microeconomics Principles**3 Credits (3)**

This course will provide a broad overview of microeconomics. Microeconomics is the study of issues specific to households, firms, or industries with an emphasis on the role of markets. Topics discussed will include household and firm behavior, demand and supply, government intervention, market structures, and the efficient allocation of resources.

Learning Outcomes

1. Explain the concept of opportunity cost.
2. Demonstrate knowledge of the laws of supply and demand and equilibrium.
3. Use supply and demand curves to analyze responses of markets to external events.
4. Use supply and demand analysis to examine the impact of government intervention.
5. Explain and calculate price elasticity of demand and other elasticities.
6. Demonstrate an understanding of producer choice, including cost and break-even analysis.
7. Compare and contrast the following market structures: perfect competition, monopoly, monopolistic competition, and oligopoly.

ECON 2120H. Principles of Microeconomics Honors**3 Credits (3)**

Microeconomic theory and public policy: supply and demand, theory of the firm, market allocation of resources, income distribution, competition and monopoly, governmental regulation of businesses and unions. Must be a Crimson Scholar.

Prerequisite(s): MATH 1220G.

Learning Outcomes

1. Explain the concept of opportunity cost.
2. Demonstrate knowledge of the laws of supply and demand and equilibrium.
3. Use supply and demand curves to analyze responses of markets to external events.
4. Use supply and demand analysis to examine the impact of government intervention.
5. Explain and calculate price elasticity of demand and other elasticities.
6. Demonstrate an understanding of producer choice, including cost and break-even analysis.
7. Compare and contrast the following market structures: perfect competition, monopoly, monopolistic competition, and oligopoly.

EDLT-EDUCATIONAL TECHNOLOGY

EDLT 2110. Integrating Technology with Teaching**3 Credits (3)**

Considers impact of technology on communication and knowledge development; engages students in the design of technology-integrated lessons with a constructivist approach.

Learning Outcomes

1. Students will demonstrate a sound understanding of technology operations and concepts.
2. Students will plan and design effective learning environments and experiences supported by technology.
3. Students will implement curriculum plans that include methods and strategies for applying technology to maximize learning.
4. Students will apply technology to facilitate a variety of effective assessment and evaluation strategies.
5. Students will use technology to enhance their productivity and professional practice.
6. Students will better understand the social, ethical, legal, and human issues surrounding the use of technology on PreK-12 schools and apply that knowledge into future practice.

EDUC-EDUCATION (EDUC)

EDUC 1110. Freshman Orientation**1 Credit (1)**

Introduction to the university and to the College of Education. Discussion of planning for individualized education program and field experience.

Restricted to Las Cruces campus only.

Learning Outcomes

1. Demonstrates knowledge of and uses theories, approaches, methods, and techniques for teaching, reading, writing, and other academic skills in English and the native language.
2. Demonstrates knowledge of and applies management techniques appropriate to classrooms containing students who have varying levels of proficiency and academic experience in both languages.
3. Community/Family Involvement
4. The bilingual teacher:
5. Recognizes the importance of parental and community involvement for facilitating the learner's successful integration to his/her school environment.
6. Demonstrates knowledge of the teaching and learning patterns of the students' home environment and incorporates these into the instructional areas of program.
7. Assessment
8. The bilingual teacher:
9. Assesses oral and written language proficiency in academic areas in both languages utilizing the results for instructional placement, prescription, and evaluation.
10. Evaluates the growth of the learner's native and second language in the context of the curriculum.
11. Continuously assesses and adjusts her or his own language use in the classroom in order to maximize learner comprehension and verbal participation

EDUC 1120. Introduction to Education**2 Credits (2)**

Introduction to the historical, philosophical, sociological foundations of education, current trends, and issues in education; especially as it relates to a multicultural environment. Students will use those foundations to develop effective strategies related to problems, issues and responsibilities in the field of education. Restricted to Las Cruces campus only.

Learning Outcomes

1. Describe the teaching and learning of various American education settings including early childhood, elementary, middle school, high school, and special education.
2. Describe how teachers use educational theory and the results of research of students' learning.
3. Explain the techniques for establishing a positive and supportive environment in the classroom
4. Identify and describe instructional strategies supported by current research to promote thinking skills of all learners.
5. Recognize the teachers' role and responsibilities in an increasingly diverse, multicultural society.

EDUC 1140. Math for Paraprofessionals**3 Credits (3)**

Applied math skills for paraprofessionals working with children.

Prerequisite: CCDM 103 N.

Learning Outcomes

1. Students will plan developmentally appropriate math activities for young children.
2. Students will plan adaptations to math activities for children with diverse abilities.
3. Students will demonstrate understanding of recent research in methods of teaching mathematics.
4. Students will demonstrate understanding of early childhood theories as they relate to the teaching of mathematics.
5. Students will demonstrate understanding of unique needs of children from diverse economic or cultural backgrounds.

EDUC 1150. Math for Paraprofessionals II**3 Credits (3)**

Applied math skills for paraprofessionals working under the direction of a teacher.

Prerequisite(s): EDUC 1140.

Learning Outcomes

1. Students will plan developmentally appropriate math activities for young children.
2. Students will plan adaptations to math activities for children with diverse abilities.
3. Students will demonstrate understanding of recent research in methods of teaching mathematics.
4. Students will demonstrate understanding of early childhood theories as they relate to the teaching of mathematics.
5. Students will demonstrate understanding of unique needs of children from diverse economic or cultural backgrounds.

EDUC 1185. Introduction to Secondary Education and Youth**3 Credits (3)**

Introductory course for students considering a career in secondary education. Includes historical, philosophical, and sociological foundations, program organization, critical dispositions, and understanding the context of schools and youth. Practicum required. Restricted to: Secondary Ed majors.

Traditional Grading with RR.

Learning Outcomes

1. Articulate the attributes of an education professional entering the field.
2. Differentiate and summarize the major educational philosophies and historical events that have influenced the progression of educational practice.
3. Describe the role of law in education with emphasis on the rights and responsibilities of teachers and learners.
4. Develop a preliminary personal philosophy of teaching and learning.
5. Discuss the characteristics and roles of the teacher, the student, and the school in today's education.
6. Identify effective teaching methods, instructional strategies and learning styles.
7. Evaluate the Lesson Planning Process using various lesson planning templates, formats, and rubrics.
8. Explain classroom management techniques.
9. Identify different types of diversity in the classroom environment.
10. 1Describe how learning differences are manifested in schools.
11. 1Describe how teachers use multiple methods of assessment to engage learners in their own growth, to monitor learner progress
12. 1Describe how teachers use multiple methods of assessment to modify instruction and inform decision making.
13. 1Identify the role of Standards and High Stakes Testing in the life of an educational professional
14. 1Complete 24 hours internship in a classroom, preferably a bilingual classroom.
15. 1Document and reflect on your observations throughout your internship.
16. 1Construct an individualized map to teacher licensure in the State of New Mexico.

EDUC 1995. Field Experience I**1 Credit (1)**

Introduction to public school teaching, school visits, classroom observations and discussion seminar.

Learning Outcomes

1. Demonstrate an understanding of personal attitudes and motivations for entering the field of education.
2. Identify effective teaching strategies that enhance student learning outcomes.
3. Identify classroom management techniques and learning styles.
4. Develop observational skills and reflective thinking skills.
5. Evaluate instructional methods that enhance upper level thinking skills in children.

EDUC 1996. Special Topics in Education**1 Credit (1)**

Supervised study in a specific area of interest. Each course shall be designated by a qualifying subtitle. May be repeated for a maximum of 9 credits.

Learning Outcomes

1. Varies

EDUC 1998. Internship I**3 Credits (3)**

Supervised experience in elementary education settings.

Learning Outcomes

1. Varies

EDUC 2710. Pre-Teacher Preparation**3 Credits (3)**

Assists students in developing the necessary competencies needed for acceptance to the Teacher Education Program. Course content includes basic skill development, test taking skills, and completion of teacher preparation packet. Maybe repeated for a maximum of 6 credits. Graded S/U. Community Colleges only.

Learning Outcomes

1. Investigate the process and requirements of the Teacher Education Program
2. Read critically about teacher's experiences and write brief reactions
3. Discuss philosophies of education and draft a written personal philosophy of education
4. Discuss the nature of education for students with diverse languages, cultures and abilities
5. Draft personal position statements concerning education for students with disabilities and diverse cultures

EDUC 2998. Internship II**3 Credits (3)**

Supervised experience in junior high settings.

Prerequisite: must be a co-op student.

Learning Outcomes

1. Varies

ELAD-EDUCATIONAL LEADERSHIP ADMINISTRATION

ELAD 2210. Leadership and Change in Education**3 Credits (3)**

This course will introduce students to the challenges and key strategies in initiating, implementing, and sustaining educational change and reform. In the first part of the course, participants will learn about the challenges of educational change in the United States and the role that they as school leaders play in facilitating change and reform. The course continues with an examination of how culture, micro-politics, and power structures support or impede national and global change initiatives. The last part of the course offers suggestions for change agents including community organizing, culture building, and embracing sustainable leadership practices. Participants will learn how to apply the change theories and concepts introduced in the course to practice through course readings, online discussions with the instructor and colleagues, group work, active examination of daily practice in schools, and personal reflection.

Learning Outcomes

1. Students will be able to communicate in clear manners that articulate, convey and deepen the understandings others have of issues affecting their communities.
2. Students will be able to collaborate on democratic processes.
3. Students will be able to communicate engage in critical social analysis and how the status quo fits into a larger movement for social change.

ELAD 2340. Multicultural Leadership in Education**3 Credits (3)**

Introduction to the social and cultural constructions of gender, class, and race. Students will critically apply theoretical constructs to everyday life and discuss the intersection of gender and race with class inequality in national and global contexts. Using a social justice framework, readings, and assignments integrate a variety of racial/ethnic groups while considering the effects of historically uneven resource distribution, unearned privilege, forms of domination and subordination, immigration status, and cultural representation and ideologies. Participants will learn how to apply the change theories and concepts introduced in the course to practice through course readings, online discussions with the instructor and colleagues, group work, active examination of daily practice in schools, and personal reflection.

Learning Outcomes

1. Students will develop awareness of their own social identities.
2. Students will recognize differences among various communities, perspectives, and world-views.
3. Students will describe how privilege and biases impact our communities and systems.
4. Students will create meaningful peer-to-peer relationships.
5. Students will understand the impact of their actions on community members.
6. Students will identify their leadership skills to shape social change on and off campus.
7. Students will act on opportunities to promote social change.
8. Students will use academic resources including advising, computers, printing, library, and space.

ELAD 2996. Special Topics in Educational Leadership**1-3 Credits (1-3)**

Special topics course in education for undergraduate students. Course will be identified by a subtitle. May be repeated up to 12 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Students will be able to engage in systems thinking which aids in seeing how individual situations are shaped by a broader contexts
2. Students will be able to understand how to apply theoretical frameworks for understanding social problems.
3. Students will be able to help develop leadership capacity in others.
4. Students will be able to gain an understanding of cultural competence, which recognizes that diverse perspectives strengthen the dialogue and approaches to solving social problems.

ELT - ELECTRONICS TECHNOLOGY (ELT)

ELT 103. Math Study Skills for Electronics

1 Credit (1)

Covers specific math study skills and critical thinking processes to reinforce practical applications of math and its use with electronics. The student will be introduced to electronic mathematical formulas during the problem-solving steps required for circuit analysis. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): E T 183 OR E T 184. Restricted to Community Colleges only.

ELT 105. Basic Electricity and Electronics

3 Credits (2+2P)

Fundamentals of electricity and electronics, basic circuit devices, meters, transistors, integrated circuits and other solid state devices, computers, fiber optics, and industrial application topics. Minimum math proficiency of CCDM 103 or CCDM 104 required or math placement into CCDM 114 or higher.

Restricted to: Community Colleges only. Crosslisted with: AERT 111

ELT 110. Electronics I

4 Credits (3+3P)

Fundamentals of electronics including: components, schematics, Ohm's law, Thevenin's and Norton's theorems, and series/parallel circuits incorporating passive, active and magnetic elements. Introduction to AC circuits. Crosslisted with: AERT123. Restricted to: Community Colleges only.

ELT 120. Mathematics for Electronics

4 Credits (4)

Includes fundamental mathematics, algebra, sine, cosine, and other elementary functions as they specifically apply to the operation, manipulation, and evaluation of direct current (DC) and alternating current (AC) circuits. Minimum math proficiency of CCDM 114 required or math placement into MATH 1215 or higher. Restricted to: Community Colleges only. Crosslisted with: AERT 124

ELT 135. Electronics II

4 Credits (3+3P)

Analysis of AC circuits, filters, and resonance. Introduction to solid state fundamentals including diodes and rectifier circuits, voltage regulators, various transistors and transistor characteristics, amplification and amplifiers, photoelectric effects, gates and timing circuits. Restricted to Community Colleges campuses only.

Prerequisite(s): ELT 110 and ELT 120.

ELT 155. Electronics CAD and PCB Design

3 Credits (2+2P)

Introduction to and the use of commercially available CAD software covering schematic representation of electronic components and circuits. Printed circuit board layout techniques including proper schematic capture, netlist generation, design rule checking and manual routing covered.

ELT 160. Digital Electronics I

4 Credits (3+3P)

Number systems, codes, Boolean algebra, logic gates, Karnaugh maps, combination circuits, flip-flops, and digital troubleshooting techniques.

Restricted to: Community Colleges only.

Prerequisite(s): ELT 110 and (ELT 120 or MATH 1215).

ELT 175. Soldering Practices

3 Credits (2+2P)

Methods and techniques of hand soldering in the production of high quality and reliable soldering connections. Restricted to: Community Colleges only.

ELT 205. Semiconductor Devices

4 Credits (3+3P)

Analysis and trouble shooting of linear electronic circuits including amplifiers, op-amps, power supplies, and oscillators. Restricted to: Community Colleges only.

Prerequisite(s): ELT 110 and ELT 135.

ELT 215. Microprocessor Applications I

4 Credits (3+2P)

Fundamentals of microprocessor architecture and assembly language with an emphasis on hardware interfacing applications.

Prerequisite(s)/Corequisite(s): ELT 235. Prerequisite(s): ELT 160. Restricted to: Community Colleges only.

ELT 220. Electronic Communication Systems

4 Credits (3+2P)

Principles and applications of circuits and devices used in the transmission, reception, and processing of RF, microwave, digital and telecommunications systems.

Prerequisite(s)/Corequisite(s): ELT 205. Prerequisite(s): ELT 135. Restricted to: Community Colleges only.

ELT 221. Cooperative Experience I**1-6 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U.

Prerequisite: consent of instructor.

ELT 222. Cooperative Experience II**1-6 Credits**

Continuation of ELT 221. Maximum of 6 credits. Graded S/U.

Prerequisite: consent of instructor.

ELT 225. Computer Applications for Technicians**3 Credits (2+2P)**

An overview of computer hardware, software applications, operating systems, high level programming languages and networking systems.

ELT 230. Microprocessor Applications II**4 Credits (3+2P)**

Advanced microprocessor interfacing techniques. Topics in A/D and D/A conversion, I/O port address decoding, direct memory accessing, and peripheral device interfacing applications.

Prerequisite: ELT 215.

ELT 235. Digital Electronics II**3 Credits (2+2P)**

Sequential logic circuits, latches, counters, shift-registers, fault analysis and troubleshooting of digital IC s, multiplexers, timers, encoders/decoders, arithmetic circuits, pulse shaping, and memory devices. Restricted to: Community Colleges only.

Prerequisite(s): ELT 160.

ELT 240. Introduction to Photonics**4 Credits (3+2P)**

Nature of light, light emitters, lasers, detectors, fiber optics communications systems, and other applications of light to electronics.

Prerequisite: ELT 135 or consent of instructor.

ELT 245. Radar: Principles and Applications**3 Credits (3)**

Explores the principles of operation for microwave radar applications and supporting subsystems.

Prerequisite: E T 246.

Learning Outcomes

1. Students will analyze the various factors that comprise the Radar Equation and apply the equation in calculations for various scenarios. Students will explain the principles of Moving Target Indication, Pulse Doppler, Phased Array, and Synthetic Aperture Radars, and their advantages and disadvantages. Students will analyze and calculate the effects of clutter and environmental noise, earth surface scattering, and atmospheric attenuation, diffraction, and refraction on radar propagation. Students will analyze the performance of supporting radar subsystems, including transmitters, receivers, antennas, tracking servos, and signal processing. Students will explain the kinds of information that can be obtained from radar signals and perform calculations associated with range determination, target motion resolution, and error. Students will explain the use of telemetry, and correlate test radar and telemetry measurements. Students will explain and compare radar countermeasures and analyze their effect on radar return cross-sections.

ELT 250. Electronics Systems Analysis**2 Credits (1+3P)**

Capstone course emphasizing a systems approach to troubleshooting and maintaining complex electronics systems. Includes program review in preparation for technician certification.

Prerequisite: consent of instructor.

ELT 260. Instrumentation Control and Signal Conditioning**4 Credits (3+2P)**

Introduction to sensors and transducers, signal conditioning and transmission for measuring and process control systems. Includes AD, DA converter, small servos and actuators. Prerequisite:ELT 205.

ELT 265. Special Topics**1-6 Credits**

Topic to be announced in the Schedule of Classes.

ELT 270. Biomedical Equipment Instrumentation**4 Credits (3+2P)**

Principles and applications of electronic circuits and devices used in biomedical equipment. Skills taught to include evaluating, troubleshooting and repairing various types of medical equipment.

Prerequisite(s)/Corequisite(s): ELT 260. Prerequisite(s): ELT 205. Restricted to: Community Colleges only.

ELWK - ELECTRICAL LINEWORKER

ELWK 130. Introduction to Electrical Power Systems

2 Credits (2)

An overview of electrical power systems, equipment, safety practices, first aid and CPR. May be repeated up to 2 credits. Students must be accepted into the electrical lineworker program before enrolling in this course. Restricted to: OEET majors. Restricted to Community Colleges campuses only.

Corequisite(s): OEET 110,OEET 131.

ELWK 131. Electrical Lineworker Lab I

6 Credits (12P)

Climbing and work on utility poles using ropes and rigging, pole setting and an introduction to transmission and distribution line construction. Maintenance and troubleshooting to include the use of hot sticks. May be repeated up to 6 credits. Students must be accepted into the electrical lineworker program before enrolling in this course. Restricted to: OEET majors. Restricted to Community Colleges campuses only.

Corequisite(s): OEET 110,OEET 130.

ELWK 140. Electrical Power Systems II

3 Credits (2+2P)

Theory of power generation and distribution with emphasis on three phase systems to include transformers, voltage regulators, surge arrestors. Includes troubleshooting. May be repeated up to 3 credits. Students must be accepted into the electrical lineworker program before enrolling in this course. Restricted to: OEET majors. Restricted to Community Colleges campuses only.

Corequisite(s): OEET 141.

ELWK 141. Electrical Lineworker II

6 Credits (12P)

Practice in the installation of electrical power lines including transformers, voltage regulators, and surge arrestors. Also advanced hot sticking procedures, troubleshooting, underground systems procedures, and pole-top rescue. May be repeated up to 6 credits. Students must be accepted into the electrical lineworker program before enrolling in this course. Restricted to: OEET majors. Restricted to Community Colleges campuses only.

Corequisite(s): OEET 140.

ELWK 221. Cooperative Experience I

1-4 Credits (1-4)

Supervised cooperative work program. Student is employed in an approved occupation and is supervised and rated by the employer and instructor. Student will meet in a weekly class. May be repeated up to 4 credits. Consent of Instructor required. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of instructor.

ENGL-ENGLISH (ENGL)

ENGL 1105M. Intermediate ESL Composition and Grammar Review

3 Credits (3)

Development of fluent academic writing skills, with an emphasis on grammar review for editing purposes. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Placement based on English language screening test, and either a minimum TOEFL score of 500 or consent of instructor.

ENGL 1110G. Composition I

4 Credits (4)

In this course, students will read, write, and think about a variety of issues and texts. They will develop reading and writing skills that will help with the writing required in their fields of study and other personal and professional contexts. Students will learn to analyze rhetorical situations in terms of audience, contexts, purpose, mediums, and technologies and apply this knowledge to their reading and writing. They will also gain an understanding of how writing and other modes of communication work together for rhetorical purposes. Students will learn to analyze the rhetorical context of any writing task and compose with purpose, audience, and genre in mind. Students will reflect on their own writing processes, learn to workshop drafts with other writers, and practice techniques for writing, revising, and editing.

Prerequisite: ACT standard score in English of 16 or higher, or an Accuplacer score 250 or higher, or an SAT score of 400 or higher or CCDE 1110 N.

Learning Outcomes

1. Analyze communication through reading and writing skills.
2. Employ writing processes such as planning, organizing, composing, and revising.
3. Express a primary purpose and organize supporting points logically.
4. Use and document research evidence appropriate for college-level writing.
5. Employ academic writing styles appropriate for different genres and audiences.
6. Identify and correct grammatical and mechanical errors in their writing

ENGL 1110H. Composition I Honors**4 Credits (4)**

In this course, students will read, write, and think about a variety of issues and texts. They will develop reading and writing skills that will help with the writing required in their fields of study and other personal and professional contexts. Students will learn to analyze rhetorical situations in terms of audience, contexts, purpose, mediums, and technologies and apply this knowledge to their reading and writing. They will also gain an understanding of how writing and other modes of communication work together for rhetorical purposes. Students will learn to analyze the rhetorical context of any writing task and compose with purpose, audience, and genre in mind. Students will reflect on their own writing processes, learn to workshop drafts with other writers, and practice techniques for writing, revising, and editing. Individualized assignments and independent study.

Prerequisite: ACT standard English score of 25 or higher, or an SAT score of 550 or higher.

Learning Outcomes

1. Analyze communication through reading and writing skills.
2. Employ writing processes such as planning, organizing, composing, and revising.
3. Express a primary purpose and organize supporting points logically.
4. Use and document research evidence appropriate for college-level writing.
5. Employ academic writing styles appropriate for different genres and audiences.
6. Identify and correct grammatical and mechanical errors in their writing.

ENGL 1110M. Composition I Multilingual**4 Credits (4)**

In this course, students will read, write, and think about a variety of issues and texts. They will develop reading and writing skills that will help with the writing required in their fields of study and other personal and professional contexts. Students will learn to analyze rhetorical situations in terms of audience, contexts, purpose, mediums, and technologies and apply this knowledge to their reading and writing. They will also gain an understanding of how writing and other modes of communication work together for rhetorical purposes. Students will learn to analyze the rhetorical context of any writing task and compose with purpose, audience, and genre in mind. Students will reflect on their own writing processes, learn to workshop drafts with other writers, and practice techniques for writing, revising, and editing. For international and multilingual students. Your instructor and classmates will serve as your readers and will give you helpful and constructive criticism, which will in turn assist you in becoming a more fluent and engaging communicator in English. Restricted to Las Cruces campus only.

Prerequisite(s): CBT/PB score of 500, or IBT score of 61, or SPCD 110, or consent of instructor.

Learning Outcomes

1. Analyze communication through reading and writing skills.
2. Employ writing processes such as planning, organizing, composing, and revising.
3. Express a primary purpose and organize supporting points logically.
4. Use and document research evidence appropriate for college-level writing.
5. Employ academic writing styles appropriate for different genres and audiences.
6. Identify and correct grammatical and mechanical errors in their writing.

ENGL 1120. Composition II**2 Credits (2)**

In this course, students will explore argument in multiple genres. Research and writing practices emphasize summary, analysis, evaluation, and integration of secondary sources. Students will analyze rhetorical situations in terms of audience, contexts, purpose, mediums, and technologies and apply this knowledge to their reading, writing, and research. Students will sharpen their understanding of how writing and other modes of communication work together for rhetorical purposes. The emphasis of this course will be on research methods.

Prerequisite: successful completion of ENGL 1110G or ENGL 1110H or ENGL 1110M.

Learning Outcomes

1. Analyze the rhetorical situation for purpose, main ideas, support, audience, and organizational strategies in a variety of genres.
2. Employ writing processes such as planning, organizing, composing, and revising.
3. Use a variety of research methods to gather appropriate, credible information.
4. Evaluate sources, claims, and evidence for their relevance, credibility, and purpose.
5. Quote, paraphrase, and summarize sources ethically, citing and documenting them appropriately.
6. Integrate information from sources to effectively support claims as well as other purposes (to provide background information, evidence/examples, illustrate an alternative view, etc.).
7. Use an appropriate voice (including syntax and word choice).

ENGL 1410G. Introduction to Literature**3 Credits (3)**

In this course, students will examine a variety of literary genres, including fiction, poetry, and drama. Students will identify common literary elements in each genre, understanding how specific elements influence meaning.

Learning Outcomes

1. Identify, define, and understand basic literary conventions and themes in fiction, poetry and drama.
2. Write reasonable, well-supported analyses of literature that ethically integrate evidence from texts

ENGL 2130G. Advanced Composition**3 Credits (3)**

This course is for students who are striving for fluency, maturity, clarity and significance in their writing. It is an intermediate writing course that builds on and refines writing skills acquired in previous courses. It focuses on non-fiction writing for the professions, business, science, technical fields, academe and/or the popular press. Short works of master writers are studied for ideas, style and structure.

Learning Outcomes

1. Students will examine and apply different writing styles and modes used by masters of personal essay and keep a reading response journal of assigned readings as demonstrated by scoring a 70% in faculty designed assignments.
2. Students will develop a sense of audience by discussing their papers with each other in small groups during class or by reading each other's papers and participating in positive, helpful peer reviews as demonstrated by scoring a 70% in faculty designed assignments.

ENGL 2210G. Professional & Technical Communication**3 Credits (3)**

Professional and Technical Communication will introduce students to the different types of documents and correspondence that they will create in their professional careers. This course emphasizes the importance of audience, document design, and the use of technology in designing, developing, and delivering documents. This course will provide students with experience in professional correspondence and communicating technical information to a non-technical audience.

Prerequisite(s): Grade of C- or better in ENGL 1110G or ENGL 1110H or ENGL 1110M.

Learning Outcomes

1. Choose professional communication appropriate for audiences and situations.
2. Write in different genres of professional communication.
3. Identify the purpose of a work-related communication and assess the audiences' informationa
4. I needs and organizational constraints.
5. Employ appropriate design/visuals to support and enhance various texts.
6. Demonstrate effective collaboration and presentation skills.
7. Integrate research and information from credible sources into professional communication

ENGL 2210H. Professional and Technical Communication Honors**3 Credits (3)**

Professional and Technical Communication writing for Crimson Scholars/Honors students will introduce students to the different types of documents and correspondence that they will create in their professional careers. This course emphasizes the importance of audience, document design, and the use of technology in designing, developing, and delivering documents. This course will provide students with experience in professional correspondence and communicating technical information to a non-technical audience. 3.5 GPA is also required. Restricted to Las Cruces campus only.

Prerequisite(s): grade of C- or better in ENGL 1110G or the equivalent; approval of the honors college.

Learning Outcomes

1. Choose professional communication appropriate for audiences and situations.
2. Write in different genres of professional communication.
3. Identify the purpose of a work-related communication and assess the audiences' informational needs and organizational constraints.
4. Employ appropriate design/visuals to support and enhance various texts.
5. Demonstrate effective collaboration and presentation skills.
6. Integrate research and information from credible sources into professional communication.

ENGL 2210M. Professional and Technical Communication for Multilingual Students**3 Credits (3)**

Professional and Technical Communication will introduce students to the different types of documents and correspondence that they will create in their professional careers. This course emphasizes the importance of audience, document design, and the use of technology in designing, developing, and delivering documents. This course will provide students with experience in professional correspondence and communicating technical information to a non-technical audience. NMSU specific description: In this course, students will explore the unique advantages and challenges of being multilingual writers. This course is designed for international and domestic multilingual students.

Prerequisite: Grade of C- or better in ENGL 1110G or ENGL 1110H or ENGL 1110M.

Learning Outcomes

1. Choose professional communication appropriate for audiences and situations.
2. Write in different genres of professional communication.
3. Identify the purpose of a work-related communication and assess the audiences' informational needs and organizational constraints. Employ appropriate design/visuals to support and enhance various texts.
4. Demonstrate effective collaboration and presentation skills.
5. Integrate research and information from credible sources into professional communication.

ENGL 2215G. Advanced Technical and Professional Communication**3 Credits (3)**

Theory and practice of writing in technical and professional fields, individualized to each student's field. Emphasizes efficient writing processes and effective written products. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Junior or above standing, or consent of instructor.

Learning Outcomes

1. To complicate the definition of "technical and scientific communication" and its relationship(s) to studying and practicing "rhetoric."
2. To complicate our relationship to concepts like "science", "knowledge", "objectivity," neutrality, "clarity," etc.
3. To use a community-based approach to study and practice technical and scientific documents within various discourse communities.
4. To study and practice different genres (i.e. memos, letters, e-mails, reports, proposals, and instruction sets) attending to issues of audience and purpose within discourse communities.
5. To practice some mindful reading strategies that allow you to attend to the use of language and its material and discursive effects in different situations.
6. To examine the material effects of producing, circulating, and consuming technical and scientific texts on the bodies of people within different contexts.
7. To complicate our understanding of "ethics," "responsibility," and "accountability" toward ourselves and others.
8. To work collaboratively and individually to research, to analyze, and to write about public debates regarding the conduct of science and technology.
9. To understand and use basic principles of document design attending to issues of usability and accessibility.
10. 1 To articulate the relationship between technical and scientific communication and issues of inclusion and social justice in the world.

ENGL 2221G. Writing in the Humanities and Social Science**3 Credits (3)**

Theory and practice in interpreting texts from various disciplines in the humanities and social sciences. Strategies for researching, evaluating, constructing, and writing researched arguments. Course subtitled in the Schedule of Classes. May be repeated up to 3 credits.

Prerequisite(s): Grade of C- or better in ENGL 1110G or ENGL 1110H, or ENGL 1110M.

Learning Outcomes

1. Develop the ability to interpret and respond to humanities and social sciences texts
2. Analyze and evaluate cultural artifacts such as texts, images, and practices as a means of academic inquiry
3. Critique arguments offered in the readings to determine the underlying methodology as well as underlying values
4. Construct a rhetorical argument with evidence appropriate for an explicit audience and purpose
5. Use written, visual, or oral strategies to persuade, inform, or engage, considering situation, audience, purpose, aesthetics, and diverse points of view
6. Practice effective research strategies, and integrate research correctly and ethically from credible sources
7. Understand and apply components of the writing process such as planning, collaborating, organizing, composing, revising, and editing

ENGL 2280. History of Argument**3 Credits (3)**

Investigates the major figures and movements in rhetoric from the classical period to modern rhetorical theory, examining relations between rhetorical teaching and practice, culture, epistemology, and ideology. Main campus only. Prerequisite(s): ENGL 1110G, or ENGL 1110GH, or ENGL 1110M

Learning Outcomes

1. Understand how rhetoric, argument, and persuasion work. Become familiar with the key terms and various contexts in which rhetoric, argument, and persuasion function and the contingencies that influence their use and effectiveness;
2. be familiar with the broad history and major figures of western rhetoric;
3. apply a number of approaches used to analyze and construct/deconstruct rhetorical arguments, including (but not limited to) Aristotelian appeals and commonplaces, stasis theory, toulmin analysis, pentadic/dramatistic analysis, fallacy analysis, and rogerian analysis;
4. complete an analysis as well as design and present a project regarding a contemporary issue or concern about which you feel deep passion and commitment; and
5. Improve general critical thinking and communication skills, both oral and written.

ENGL 2310G. Introduction to Creative Writing**3 Credits (3)**

This course will introduce students to the basic elements of creative writing, including short fiction, poetry, and creative nonfiction. Students will read and study published works as models, but the focus of this "workshop" course is on students revising and reflecting on their own writing. Throughout this course, students will be expected to read poetry, fiction, and nonfiction closely, and analyze the craft features employed. They will be expected to write frequently in each of these genres.

Prerequisite(s): ENGL 1110G or ENGL 1110H or ENGL 1110M.

Learning Outcomes

1. Participate in a constructive conversation and community about creative writing.
2. Read and critically engage with a variety of texts.
3. Compose creative works in various genres of creative writing.
4. Provide respectful, honest, and critical feedback to peers about their work.
5. Revise creative work based on peer feedback and critique.
6. Develop thoughtful workshop reflection on students' own writing and writing process.
7. Evaluate and engage with publication process.

ENGL 2381. Script Development and Storyboarding**3 Credits (3)**

Examines effective writing principles for creating storyboards that communicate the overall picture of a project, timing, scene complexity, emotion and resource requirements. Crosslisted with: FDMA 2381.

Learning Outcomes

1. develop a story idea into a complete storyboard
2. describe and visualize the creative aspects of a media project from conception to completion
3. write a scene in the professional script format
4. deliver a professional verbal and visual presentation of a story idea to an audience
5. the ability to conceive, illustrate and plan a visual project
6. proficiency in oral, written, and visual communication via storyboarding, script writing and verbal
7. presentations

ENGL 2382. Narrative: Principles of Story Across the Media**3 Credits (3)**

Examines the various strategies of written and visual storytelling, narrative structure and its principal components (plot, theme, character, imagery, symbolism, point of view) with an attempt to connect them to elements of contemporary forms of media expression, including screenwriting, playwriting, writing for documentaries and animation, etc. Crosslisted with: FDMA 2382

Learning Outcomes

1. Identify use the building blocks of storytelling: plot, theme, character, imagery,
2. Symbolism and point of view
3. Develop these building blocks into a cohesive narrative within a written document
4. Effectively communicate in different written formats
5. Create design documents for varied genres of media: narrative short, documentary,
6. Animation, commercial/industrial video, computer game
7. Describe how a written narrative can be translated into a visual medium

ENGL 2520G. Film as Literature**3 Credits (3+3P)**

The purpose of this course is to teach students how to analyze film as a visual text. Students will learn to analyze films, film techniques, eras, and genres. Students will also identify significant trends and developments in film-making, examining the ways in which film reflects and creates cultural trends and values.

Learning Outcomes

1. Develop an understanding of the cultural, historical, and technical contexts for various films.
2. Identify, define, and analyze basic film techniques used in different genres and time periods.
3. Analyze how film uses literature by studying different sources of adaptation.
4. Demonstrate an understanding of film in its various aspects by writing film analysis, reviews, and/or other projects.

ENGL 2521. The Bible as Literature**3 Credits (3)**

Develops informed readings of Hebrew and Christian scriptures. Emphasizes understanding Biblical literary forms, techniques, themes; historical, cultural contexts for interpretation; authorship, composition, audience for individual books; development of Biblical canon.

Learning Outcomes

1. Develop and articulate historically informed and textually supported arguments regarding the form and meaning of biblical texts
2. Express arguments and explication in clear, organized,
3. Understand the Jewish and Christian scriptures as cultural artifacts, using some fundamental techniques of literary analysis and interpretation, especially: thematic interpretation, stylistic analysis, narrative analysis, poetics, and the rhetorical analysis of figurative language.
4. Use socio-historically informed interpretive methods focused on these fundamental contextual questions : 1) who probably wrote and edited these texts, 2) why and how they most likely did so, 3) how their earliest audiences probably responded to them, and 4) why and how they were later combined to form the canonical Jewish and Christian bibles read today.
5. Know in detail substantial selections of representative, influential, and historically informative biblical texts
6. Distinguish literary critical and historical analysis of the Bible from those based on faith, tradition, authority, and theology
7. Recognize, understand, and analyze the forms, genres, and techniques used by biblical authors
8. Become familiar with and be able to use essential knowledge of the historical, cultural, and geographical contexts of Biblical writing
9. Learn how evaluate texts as historical documents, as well as how doing so relates to and differs from literary critical analysis and interpretation
10. 1 Become familiar with common and influential scholarly, critical, and aesthetic ways of reading Biblical texts from a contemporary perspective
11. 1 Understand the cultural influence of the Bible and its relevance for other areas of scholarly and artistic work

ENGL 2610. American Literature I**3 Credits (3)**

This course surveys American literature from the colonial period to the mid-nineteenth century. This course provides students with the contexts and documents necessary to understand the origins of American Literature and the aesthetic, cultural, and ideological debates central to early American culture.

Learning Outcomes

1. Recognize the traditions of American literature and their connection to issues of culture, race, class, and gender.
2. Demonstrate familiarity with a variety of major works by American authors.
3. Explore the various influences and sources of American literature.
4. Apply effective analytic and interpretive strategies to American literary works using academic conventions of citation and style.

ENGL 2620. American Literature II**3 Credits (3)**

This course surveys American literature from the mid-nineteenth-century to the contemporary period. This course provides students with the contexts and documents necessary to understand American literature and the aesthetic, cultural, and ideological debates central to American culture.

Learning Outcomes

1. Recognize the traditions of American literature and their connection to issues of culture, race, class, and gender.
2. Demonstrate familiarity with a variety of major works by American authors.
3. Explore the various influences and sources of American literature.
4. Apply effective analytic and interpretive strategies to American literary works using academic
5. conventions of citation and style.

ENGL 2630. British Literature I**3 Credits (3)**

This course offers a study of British literature from its origins in Old English to the 18th century. This survey covers specific literary works--essays, short stories, novels, poems, and plays--as well as the social, cultural, and intellectual currents that influenced the literature.

Learning Outcomes

1. Read and discuss representative works of British writers from its origins in Old English to the 18th century to understand cultural and historical movements which influenced those writers and their works.
2. Identify the characteristics of various British literary genres, such as the essay, novel, short story, poetry, and dramatic literature.
3. Apply effective analytic and interpretive strategies to British literary works using academic conventions of citation and style.

ENGL 2640. British Literature II**3 Credits (3)**

This course offers a study of British literature from the 18th century to the present. This survey covers specific literary works--essays, short stories, novels, poems, and plays--as well as the social, cultural, and intellectual currents that influenced the literature.

Learning Outcomes

1. Read and discuss representative works of British writers from the 18th century to the present to understand cultural and historical movements, which influenced those writers, and their works.
2. Identify the characteristics of various British literary genres, such as the essay, novel, short story, poetry, and dramatic literature.
3. Apply effective analytic and interpretive strategies to British literary works using academic conventions of citation and style.

ENGL 2650G. World Literature I**3 Credits (3)**

In this course, students will read representative world masterpieces from ancient, medieval and Renaissance literature. Students will broaden their understanding of literature and their knowledge of other cultures through exploration of how literature represents individuals, ideas and customs of the world cultures. The course focuses strongly on examining the ways literature and culture intersect and define each other.

Learning Outcomes

1. Identify and comprehend key authors and literary works from ancient periods to the Enlightenment.
2. Understand each text's historical and cultural context.
3. Identify and analyze a variety of literary forms, including poetry, plays, and philosophical and religious texts.
4. Compare works from different cultures and historical periods examining genre, style, and content or theme.
5. Analyze how literary works reflect historical, national, cultural, and ethnic differences.

ENGL 2996. Special Topics**1-3 Credits**

Emphasis on a literary and/or writing subject chosen for the semester. Repeatable for a unlimited credit under different subtitles.

Learning Outcomes

1. Varies

ENGR-ENGINEERING (ENGR)

ENGR 100G. Introduction to Engineering**3 Credits (2+3P)**

An introduction to the various engineering disciplines, the engineering approach to problem solving, and the design process. Projects emphasize the importance of teamwork, written & oral communication skills, as well as ethical responsibilities. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 1220G or above.

Learning Outcomes

1. Analyze the engineering road maps and have a solid curriculum plan for each semester including summers.
2. Discuss the importance of information on engineering student organizations.
3. Demonstrate an understanding of the design process from initial conception to final solution through the application of critical thinking while learning important team building skills approaches to problem solving.
4. Identify the different engineering fields, the engineering profession, career paths open to engineers, and the process to professional licensure.
5. Apply clear communication and critical thinking skills by collecting, organizing, and analyzing data in a complete, clearly written, and oral presentation of their work.
6. Make use of basic knowledge and skills in Microsoft Excel to complete engineering assignments.
7. Identify, compute, and apply how dimensions, length, time, mass, force, temperature, electric current, energy and power, and related parameters are related to the different fields of engineering.
8. recognize ethical and professional responsibilities in engineering situations and make informed judgements.

ENGR 100GH. Introduction to Engineering Honors**3 Credits (2+3P)**

An introduction to the various engineering disciplines, the engineering approach to problem solving, and the design process. Projects emphasize the importance of teamwork, written & oral communication skills, as well as ethical responsibilities. May be repeated up to 3 credits. Crosslisted with: ENGR 100.

Prerequisite(s)/Corequisite(s): MATH 1220G or above.

Learning Outcomes

1. Analyze the engineering road maps and have a solid curriculum plan for each semester including summers.
2. Discuss the importance of information on engineering student organizations.
3. Demonstrate an understanding of the design process from initial conception to final solution through the application of critical thinking while learning important team building skills approaches to problem solving.
4. Identify the different engineering fields, the engineering profession, career paths open to engineers, and the process to professional licensure.
5. Apply clear communication and critical thinking skills by collecting, organizing, and analyzing data in a complete, clearly written, and oral presentation of their work.
6. Make use of basic knowledge and skills in Microsoft Excel to complete engineering assignments.
7. Identify, compute, and apply how dimensions, length, time, mass, force, temperature, electric current, energy and power, and related parameters are related to the different fields of engineering.
8. recognize ethical and professional responsibilities in engineering situations and make informed judgements.

ENGR 110. Introduction to Engineering Design**3 Credits (2+3P)**

Sketching and orthographic projection. Covers detail and assembly working drawings, dimensioning, tolerance specification, and design project

Learning Outcomes

1. Students will learn the fundamentals of part modeling and assemblies using modeling techniques in the SolidWorks solid modeling software.
2. They will learn how to put these parts and assemblies into production drawings using proper Geometric Dimensioning.

ENGR 111. Mathematics for Engineering Applications**3 Credits (3)**

An introduction to engineering mathematics and basic programming skills needed to perform elementary data manipulation and analysis. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): MATH 1250G. Prerequisite(s): MATH 1220G.

ENGR 120. DC Circuit Analysis**4 Credits (3+3P)**

This course provides an introduction DC circuit analysis using Ohm's law, Kirchoff laws, Thevenin's and Norton's theorems.

Prerequisite: MATH 1250G or MATH 1430G.

Learning Outcomes

1. Analyze and design DC circuits, including ideal op-amps, using concepts of voltage, current, power, Kirchhoff's laws, and network theorems. Design simple systems involving dc circuits Work and learn in teams.

ENGR 130. Digital Logic**4 Credits (3+3P)**

This course introduces logic design and the basic building blocks used in digital systems, as well as introducing applications of digital integrated circuits. Topics include Numbering systems (binary & hexadecimal), Boolean algebra and digital logic theory, simple logic circuits, combinational logic, and sequential logic, and applications such as ALU (Arithmetic Logic Units), multiplexers, encoders, counters, and registers. These basic logic units are the main parts of microprocessors. Includes hands-on labs and software designs.

Prerequisite/Corequisite: ENGR 120.

Learning Outcomes

1. Demonstrate ability to convert numerical values to the commonly used digital representations and their use for arithmetic and logical functions. Formulate and solve problems related to Boolean logic functions and truth tables and using them to simplify logic expressions. Formulate and solve problems related to sequential logic functions, and the ability to integrate with combinational logic to produce a simple state machine. Formulate and solve problems related to common integrated circuit issues, such as logic voltage levels, propagation delay, and fan-out.

ENGR 140. Arduino Programming**4 Credits (3+3P)**

An introduction to computer programming concepts as applied to engineering technology. Includes basic logic design, algorithm development, debugging and documentation. History and use of computers and their impact on society.

Prerequisite: MATH 1250G or MATH 1430G.

Prerequisite/Corequisite: E T 182 or ENGR 130.

Learning Outcomes

1. Set up and use a rich programming environment for programming with Arduino hardware
Analyze existing code
Employ effective use of basic programming and basic troubleshooting
Write, debug and test code given software requirements
Apply testing and documentation best practices
Transfer programming knowledge and apply coding knowledge

ENGR 190. Introduction to Engineering Mathematics**4 Credits (4)**

Engineering applications involving involved Math topics most heavily used in first and second-year engineering courses. Topics include engineering applications of algebra, trigonometry, vectors, complex numbers, sinusoids and signals, systems of equations and matrices, derivatives, integrals and differential equations.

Prerequisite: MATH 1250G or higher.

Learning Outcomes

1. Ability to solve systems of linear equations by use of matrices
Ability to use complex numbers and periodic function to solve engineering problems
Ability to solve problems using various coordinate system
Write and Solve problems with 2-D 3D vectors
Write and Solve problems with derivatives
Write and solve problems with integrals

ENGR 198. Special Topics in Engineering**1-3 Credits**

Directed individual study of topics in engineering. Written reports covering work required. May be repeated for a maximum of 6 credits. Restricted to engineering majors. Graded S/U.

Prerequisite: consent of academic dean.

ENGR 230. AC Circuit Analysis**4 Credits (3+3P)**

This course provides an introduction to Circuit analysis techniques, RLC transients, phasors, filter response, and an introduction to discrete electronic devices.

Prerequisite: ENGR 120 and (MATH 1521G or MATH 1521H or MATH 1440 or ENGR 190).

Learning Outcomes

1. Analyze and design AC circuits, including ideal op-amps, using concepts of voltage, current, power, Kirchhoff's laws, and network theorems. Design simple systems involving ac circuits
2. Work and learn in teams.

ENGR 233. Engineering Mechanics I**3 Credits (3)**

Engineering mechanics using vector methods. Force systems, resultants, equilibrium, distributed forces, area moments, and friction.

Prerequisite(s)/Corequisite(s): PHYS 1310G. Prerequisite: MATH 1521G or MATH 1521H or ENGR 190.

Learning Outcomes

1. Have an understanding of the force systems, resultants, equilibrium, distributed forces, area moments, and friction; Be able to apply the acquired knowledge to formulate, solve and interpret solutions of engineering mechanics problems

ENGR 234. Engineering Mechanics II**3 Credits (3)**

Kinetics of particles, kinematics and kinetics rigid bodies, systems of particles, energy and momentum principles, and kinetics of rigid bodies in three dimensions.

Prerequisite(s): M E 236, C E 233, or ENGR 233.

Learning Outcomes

1. Have a good understanding of the kinetics of particles, kinematics and kinetics rigid bodies, energy and momentum principles, and kinetics of rigid bodies. Be able to apply the acquired knowledge to formulate, solve and interpret solutions of engineering mechanics problems

ENTR-ENTREPRENEURSHIP

ENTR 1110. Entrepreneurship

3 Credits (3)

Introduces students to the concept of entrepreneurship and to the process of business startups.

Prerequisite(s): BUSA 1110.

Learning Outcomes

1. Identify the unique characteristics of an entrepreneur.
2. Identify opportunities and conduct needs analysis.
3. Develop value proposition/market fit for proposed products and services.
4. Develop an appropriate business model.
5. Identify availability of necessary resources.

ENVS-ENVIRONMENTAL SCIENCE

ENVS 1110G. Environmental Science I

4 Credits (3+2P)

Introduction to environmental science as related to the protection, remediation, and sustainability of land, air, water, and food resources. Emphasis on the use of the scientific method and critical thinking skills in understanding environmental issues.

Learning Outcomes

1. Students will learn to critically analyze cause-and-effect relationships in the environment
2. Students will integrate and synthesize knowledge and draw appropriate conclusions based on the scientific method

ENVS 2111. Environmental Engineering and Science

3 Credits (3)

Principles in environmental engineering and science: physical chemical systems and biological processes as applied to pollution control. Crosslisted with: C E 256

Prerequisite: CHEM 1215G and MATH 1511G or ENGR 190.

Learning Outcomes

1. To understand the nature of water quality parameters in the context of Civil Engineering and Environmental Science (Water Treatment/Wastewater Treatment/Environmental Science) To learn to apply engineering and scientific solutions to water quality problems To understand environmental regulations and their consequences on the design of pollution control systems

ENVS 2111L. Environmental Science Laboratory

1 Credit (1)

Laboratory experiments associated with the material presented in ENVS 2111. Same as C E 256 L.

Corequisite(s): ENVS 2111.

Learning Outcomes

1. List typical analyses commonly performed to evaluate physical, chemical, and microbiological parameters used to describe water quality.
2. Follow experimental procedures listed in the class laboratory manual, or other publications such as Standards Methods, to perform common water quality analyses.
3. Evaluate, analyze, and discuss experimental results and present the conclusions in the form of a professional report

EPWS-ETMLGY/PLNT PTHLGY/WD SCI (EPWS)

EPWS 1110. Applied Biology

3 Credits (3)

Introduction to applied biology and ecology focusing on insects, plants and pathogens in natural areas, crops and urban settings. EPWS 1110L is strongly recommended to take in the same semester. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Students will learn about the Department of Entomology Plant Pathology and Weed Science and will have the opportunity to meet the Las Cruces-based faculty in the department.
2. By the end of this course students will have gained a broad understanding of the pests in a wide range of systems, their interactions with other organisms, and the methods available to minimize the influence of pests on target commodities.

EPWS 1110L. Applied Biology Lab**1 Credit (1)**

Study of applied biology and ecology of insects, plants and pathogens in natural areas, crops, and urban settings. EPWS 1110 strongly recommended to take in the same semester. May be repeated up to 1 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Students will learn about the Department of Entomology Plant Pathology and Weed Science and will have the opportunity to meet the Las Cruces-based faculty in the department.
2. By the end of this course students will have gained a broad understanding of the pests in a wide range of systems, their interactions with other organisms, and the methods available to minimize the influence of pests on target commodities.

EPWS 2996. Special Topics**1-4 Credits**

Specific subjects and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester and a grand total of 9 credits.

Learning Outcomes

1. Varies

FCSC-FAMILY AND CONSUMER SCIENCES

FCSC 2250. Overview of Family and Consumer Sciences Teaching**3 Credits (3)**

Overview of planning and teaching skills. Supervised experiences in observing and directing the learning of secondary family and consumer sciences students. Philosophy and history of the profession.

Learning Outcomes

1. Explain the foci of FCS—past, present and future.
2. Begin to develop a professional role in FCS.
3. Formulate a personal philosophy of FCS, and of teaching.
4. Explain the teaching process.
5. Give examples of roles, responsibilities and qualities of effective and ethical teachers.
6. Assess the characteristics, backgrounds, and needs of learner audiences.
7. Explain various learning theories/principles.
8. Illustrate how various input factors influence teaching decisions.
9. Plan a researched based student-centered lesson with a learning activity in a FCS content area.
10. 1 Give examples of ways to evaluate learner growth.
11. 1 Present a FCS content-based lesson effectively to learners using PowerPoint presentation software and a selected teaching method.
12. 1 Evaluate one's own teaching and the teaching of others.
13. 1 Exhibit increased confidence in one's abilities as a teacher/educator.
14. 1 Exhibit excitement about assuming the teacher/educator role.

FCSC 2330. Housing and Interior Design**3 Credits (3)**

Investigation of types of housing and factors impacting housing decisions for families. Selection, planning, and arrangement of interior components of homes to meet the needs of the family. Restricted to Las Cruces campus only.

Learning Outcomes

1. Differentiate between different architectural designs (i.e., Cape Cod, contemporary, craftsman, ranch, southern colonial, Spanish, Victorian, pueblo, New Mexican territorial, and territorial revival) and be able to identify historical, cultural, demographic, geographical, and environmental influences on style and aesthetics.
2. Analyze the fundamentals of housing for all families and cultures and understand the role housing plays in the ecological model of human ecology.
3. Define elements of design as related to housing and interiors (i.e., color, form, line, space texture).
4. Define principles of design as related to housing and interiors (i.e., balance emphasis, harmony, proportion, unity).
5. Compare and contrast the different periods of interior design from the 20th century to the present.
6. Analyze the influence of historical and cultural factors in the development of current interior trends.
7. Select and arrange interiors that are functional and aesthetically pleasing to designated interior design situations.
8. Identify, describe and make application of textiles as related to various furniture and interior design styles.
9. Design a three-dimensional tiny house or an interior space, using all concepts learned.

FCST-FAMILY AND CHILD STUDIES

FCST 1130. Interpersonal Skills in Intimate Relationships

3 Credits (3)

Developing social skills within friendships, dating relationships, marriage, parenting, and families.

Learning Outcomes

1. To understand several theories that explain why some people have healthy interpersonal relationships while others do not.
2. To gain insight about one's self.
3. To learn and improve upon selected relationship skills that improve quality of life.
4. To learn skills that improve interpersonal relationships

FCST 2110. Infancy and Early Childhood in the Family

3 Credits (3)

Research and theory relevant to prenatal development and the physical, mental, and socio-emotional development of the child from birth to age five. Attitudes, knowledge, and skills needed for working with young children and their families. Restricted to Las Cruces campus only.

Learning Outcomes

1. Evaluate how genes and the environment interact to impact human development. Describe the major events during the three periods of prenatal development. Assess the effects of environmental influences on the developing fetus. Outline the stages of birth and medical interventions that may be used. Discuss the capacities of the newborn baby. Evaluate how individuals and couples change during the transition to parenthood. Analyze the physical, cognitive, and social-emotional development of the child from birth through age 5. Formulate ways that parents and professionals can promote the development of the child from birth to age 5

FCST 2135. Adolescent Development and the Family

3 Credits (3)

Research and theory relevant to the physical, mental, social, and emotional development of the children ages 12 to 18. Attitudes, knowledge, and skills related to working with adolescents in the family system. Observation in a variety of settings may be required. Restricted to Las Cruces campus only.

Learning Outcomes

1. Compare adolescents of today with adolescents of the past.
2. Describe the physical, cognitive, and psychosocial development of the adolescent in the family system and evaluate individual differences in development.
3. Compare and contrast ways in which culture impacts adolescent development.
4. Assess effective parenting strategies with adolescents.
5. Analyze the influence of family, peers, school, and work on adolescent development.

FCST 2140. Adult Development and Aging

3 Credits (3)

Research and theory related to the physical, mental, social, and emotional development of older adults. Attitudes, knowledge, and skills related to working with older adults in the family system, including normative, and nonnormative transitions. Restricted to Las Cruces campus only.

Learning Outcomes

1. Compare and contrast theories of adult development and aging and apply theories to adult behavior.
2. Distinguish the similarities and differences of physical, emotional, cognitive, and psychosocial aspects of adult development.
3. Describe multicultural factors that impact attitudes toward aging and coping with aging family members.
4. Evaluate ways in which special issues (including but limited to Alzheimer's Disease, heart disease, end of life issues) impact aging.
5. Devise a conceptualization of one's own perspective in dealing with aging and aging family members.

FDMA-FILM & DIGITAL MEDIA ARTS

FDMA 1110. Film History

3 Credits (3)

This course surveys the history of cinema -investigating the process by which the original "cinema of attractions" evolved into a globally dominant form of visual storytelling. We will explore the development of cinema both as an art form and as an industry, and consider the technological, economic, cultural factors, and key international movements that shape it.

Learning Outcomes

1. Develop appreciation for the history of cinema.
2. Develop knowledge of the key eras in the history of US cinema.
3. Learn the characteristics of major movements in international cinema.
4. Explain technological innovations that were necessary for, and integral to, the advancement of cinema.
5. Recognize the various elements that go into telling a story in cinema.

FDMA 1120. Desktop Publishing

3 Credits (2+2P)

This course is designed to teach introductory skills for designing and creating publications and presentations with layout software. The course will focus on graphics and typographic design, fonts, and other skills for print and web publishing.

Learning Outcomes

1. Demonstrate knowledge of fundamental features and navigation of desktop publishing software.
2. Combine text and images for effective communication.
3. Develop a balanced composition through use of color, contrast, and alignment.
4. Place images within a composition and wrap around text.
5. Produce documents with professional layout and typography skills.
6. Create attractive and effective designs.
7. Combine knowledge of typography, images, and design principles to produce professional print and web media.
8. Create or add to a professional design portfolio for future use.

FDMA 1210. Digital Video Production I

3 Credits (2+4P)

An introduction to digital video production. Students learn camera operation, lights and audio equipment. Hands-on production is completed in the studio and on location.

Learning Outcomes

1. Plan and produce a digital video project
2. Apply post-production workflow
3. Work in team and as individual to complete digital video projects.

FDMA 1220. Introduction to Digital Video Editing

3 Credits (3)

In this course, students learn the basics of the post-production process for non-linear video editing. Students work with multiple video formats and create short movies for multiple distribution platforms. Skills include media management and professional terminology. Sections on the Main Campus will be restricted to CMI students.

Learning Outcomes

1. Define concepts related to digital video editing.
2. Use non-linear video editing software for editing a short film
3. Enhance storytelling through the use of continuity, timing, cutaways, intercutting, compositing, transitioning, jump cutting, montaging and animating.
4. Use text, titles, transitions, video effects, sound effects, dialogue, and visual assets for digital video editing.

FDMA 1260. Introduction to Digital Media**1-3 Credits (1-3)**

Explores concepts of how text, graphics, sound, images and video come together in a digital media program and researching new trends and current issues related to media applications and design. Students will be involved in teamwork, communication and workplace interaction simulation . May be repeated up to 12 credits. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Describe and identify the principal components and terminology of digital media.
2. Analyze and examine the use of digital media as a communication tool
3. Plan and implement a digital media project
4. Critique professional digital media products.
5. Create projects using a variety of digital media tools
6. Demonstrate a working knowledge of copyright and usage rights
7. Present completed projects in a professional manner for critique.

FDMA 1360. Web Design I**3 Credits (2+2P)**

This course provides an introduction to web development techniques, theory, and design. Students will learn HTML, CSS application, and strategies for effective site navigation and design, along with industry standard web editing software to develop various websites. May be repeated up to 6 credits.

Restricted to Community Colleges campuses only.

Prerequisite(s): ARTS 1520 OR FDMA 1515.

Learning Outcomes

1. Acquire and utilize web design terminology.
2. Create basic web pages using HTML.
3. Demonstrate how to use industry-standard, web editing software.
4. Design professional pages that are easy to navigate and quick to load.
5. Develop a basic comprehension of CSS
6. Prepare and export a variety of graphics to be used online.
7. Compare and contrast designing for web media vs. print media.
8. Analyze the importance of web presence in today's business/social climate

FDMA 1410. Audio Production I**3 Credits (2+2P)**

Students will learn about and apply essential tools and techniques in analog and digital audio production. Topics include acoustic science, microphones, recording and mixing techniques, analog and digital audio hardware and software, including, multi-track, computer-based recording and editing systems.

Restricted to: Community Colleges only.

Prerequisite(s): FDMA 1210 and FDMA 2410.

Learning Outcomes

1. Apply tools and techniques in analog and digital audio production
2. Illustrate the fundamentals of acoustic science.
3. Model professional behavior used in audio recording.

FDMA 1415. Principles of Sound**3 Credits (2+2P)**

The creation of a professional quality original media soundtrack is possible for relatively low production/post production cost. This class is designed to give the student and overview of creating sound for a variety of digital media. Topics include acoustic principles, sound design, audio hardware, recording techniques; and editing, processing, and multi-track mixing, using software applications. Restricted to: Community Colleges only.

Prerequisite(s)/Corequisite(s): FDMA 1220.

Learning Outcomes

1. Record and edit wild sound effects and synced dialogue
2. Discover, upload, and edit on-linemusic, ambience and sound effect loops
3. Implement audio design theories
4. Create an aesthetic soundtrack which incorporates multiple elements and dimensions
5. Design, edit, process, mix and master a synced multi-track soundtrack
6. Demonstrate capable use of digital audio production and post-production workflow
7. Produce short audio projects which meet media industry technical standards

FDMA 1510. Introduction to 3D Animation**3 Credits (3)**

This course provides an overview of 3D animation production processes. Students will be introduced to basic story development and the creation of computer-generated assets and cinematic sequences. The course will survey specialty areas of digital animation and various software and techniques applied in entertainment and information media. Students will review and critique other's animation, as well as plan and produce original animation for review by classmates and as part of a CGI demo reel.

Prerequisite(s): FDMA 2382 or FDMA 2381 or consent of instructor.

Learning Outcomes

1. Demonstrate a fundamental understanding of 3D animation history and principles.
2. Analyze animation work of other artists.
3. Appropriately utilize the various media technologies for digital 3D animation.
4. Demonstrate and apply basic techniques of digital 3D animation.
5. Demonstrate and apply basic processes of creating CGI for a narrative.
6. Apply some basic strategies for developing and creating a story visually, and create original animations.
7. Present original animations to instructor and classmates for critique.
8. Create a CGI demo reel of work completed during the course.

FDMA 1515. Introduction to Digital Image Editing - Photoshop**3 Credits (2+2P)**

In this course, students will learn how to use the tools in Adobe Photoshop to create new images and edit existing images. Tools used will include selections, layers, and adjustments, among other pixel editing tools. Basic composition and output will be emphasized in all projects. May be repeated for a maximum of 6 credits.

Learning Outcomes

1. Make and refine selections
2. Adjust color and tone in an image
3. Eliminate unwanted objects in an image
4. Apply layers to organize and create effects
5. Create brushes, styles and vector shapes
6. Prepare image for print and screen output
7. Apply masking and layers to non-destructively edit an image
8. Effectively utilize blending modes and layer styles
9. 1Apply adjustment layers
10. 1Apply design principles including typography

FDMA 1531. Evolution of Electronic Games**3 Credits (2+2P)**

Focus on the evolution of video games and how they have shaped mainstream entertainment. May be repeated up to 6 credits.

FDMA 1535. Introduction to Illustrator**3 Credits (2+2P)**

Students receive instruction on vector graphics creation using vector illustration software. The students will create professional-quality artwork for print publishing and multimedia graphics. Instruction includes creating and manipulating basic shapes, drawing with the pen tool, using various brushes, working with type and preparing graphics for web, print, and digital publication. May be repeated for a maximum of 6 credits.

Learning Outcomes

1. Apply a variety of shape blending options
2. Create and apply new gradients
3. Apply Gradient Meshes and Envelopes
4. Create symbols, brushes and vector shapes
5. Apply Pathfinder and other effects
6. Effectively utilize the pen tool to draw and edit shapes
7. Effectively utilize Vector tools
8. Prepare image for print and screen output
9. Apply clipping masks
10. 1Prepare image for use in another program
11. 1Apply design principles including typography

FDMA 1536. Advanced Computer Illustration**3 Credits (2+2P)**

Advanced techniques in 2D vector drawing and fundamentals of 3D illustration for use in print, web, and multimedia applications. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1535.

Learning Outcomes

1. Demonstrate proficiency in using advanced features of Illustrator.
2. Identify and create different illustrator/art styles using advanced techniques for shading, perspective, light, reflection.
3. Produce high quality digital imagery incorporating basic principles of composition.
4. Create a series of illustrations demonstrating a design competency in layout foundation and illustrative moods or client/project based solutions.
5. Create high quality portfolio pieces that demonstrate an advanced knowledge of design, composition and Illustrator techniques.
6. The students will produce finished printed portfolio pieces demonstrating a comprehensive knowledge of typographical, design, illustrative and layout skills

FDMA 1545. Introduction to Photography & Digital Imaging**3 Credits (2+2P)**

This course is a study of the principles and techniques of photography using digital equipment, and discusses how digital cameras, imaging editing, and technology have changed the world of photography. Students will learn about studies in resolution, lighting, software, editing, printing, and web applications. They will gain fundamental knowledge in the rapidly expanding technology of photography and imaging, and be able to incorporate the knowledge into all areas of digital graphics.

Learning Outcomes

1. Exhibit proper usage of the principles and techniques of photography using digital equipment.
2. Utilize features and techniques of a digital camera with proper use of lenses, settings, and flashes.
3. Create photo collections that represent proper use of technical skills.
4. Demonstrate proficiency in planning, lighting, capturing, and distributing photographic projects which show ability to create photographs artistically and to tell a story or express an idea.
5. Utilize appropriate software to create original projects.
6. Demonstrate knowledge in post-production of photos as to sizing, sampling, resolution, and exporting.
7. Produce original projects which respect intellectual property of others.
8. Create a digital portfolio of work completed during the course.

FDMA 1555. Introduction to the Creative Media Industry**3 Credits (3)**

This class is an introductory course for students who are beginning their understanding of Media and how it affects them and our society. It offers a broad-stroked view of the entire industry including Marketing, Production, History, Jobs, Design, Architecture, New Media Literacy, and industry standards. Students will listen to experts in the field, get involved in open discussions about the industry and use new information to complete hands-on individual & group assignments.

Learning Outcomes

1. The basic philosophies and methods that guide people working in the Creative Media industry.
2. Knowledge of a wide variety of different jobs, qualifications and paradigms used in the industry.
3. Marketing, Production, Budgets, History, New Media, Inspiration and other aspects of the industry.
4. An accurate view of the Creative Media field.

FDMA 1630. Principles of Design**3 Credits (2+2P)**

This course will explore how we see and use visuals to communicate information. Students will develop critical thinking skills in applying concepts of basic design principles. Students will apply the concepts with hands-on and analysis assignments. These concepts will then be applied to design for advertising, print, digital media, and web design. The business of design will also be covered with emphasis on client relations and networking. Restricted to: Community Colleges only. Prerequisite(s): FDMA 1535

Learning Outcomes

1. Practice Creativity
2. Plan a Design project
3. Demonstrate the effective use of Emphasis Contrast
4. Demonstrate the effective use of Balance and Alignment
5. Demonstrate the effective use of Harmony and Repetition
6. Demonstrate the effective use of Flow, Movement, and Rhythm
7. Demonstrate the effective use of Simplicity and Economy
8. Effectively apply basic color theory
9. Demonstrate the effective use of Typography principles
10. 1Apply design principles to Screen Print Projects
11. 1Develop client relations

FDMA 1710. 2D Animation**3 Credits (2+2P)**

Concepts and techniques in storyboarding and creating interactive 2D animations for web, multimedia and video.

Prerequisite(s): FDMA 1535.

Learning Outcomes

1. Be able to correctly storyboard an animation scene
2. Define and demonstrate basic animation terminology and principles.
3. Produce a complete hand drawn animation using industry standard software and processes.

FDMA 1715. 2-D COMPOSING & FX**3 Credits (3)**

The purpose of this course is to familiarize students with the powerful compositing and special effects tools of Adobe After Effects for 2D, traditional animation. Students will learn how to assemble an existing un-rendered animation into a final piece with advanced 3D lighting, spacing, and digital effects so that it can achieve a dynamic, professionally rendered look. Restricted to Las Cruces campus only.

Learning Outcomes

1. The goal of this class is for students to learn how to use advanced compositing and effects tools in order to achieve a more dynamic and professional visual look for their animations or motion graphics.
2. By the end of the class, you should be proficient animation compositors that can assemble and
3. synthesize a basic animation into a rendered, visually sophisticated piece.
4. Students who pass this class will have a basic to intermediate knowledge of Adobe After Effects

FDMA 1720. 3-D Character Design**3 Credits (2+4P)**

Focus on designing a character and then taking that design and building it in 3D using intermediate modeling techniques. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1510 or FDMA 2530.

Learning Outcomes

1. Translate concept art into a low and high resolution 3D model using proper modeling techniques
2. Use Polygon modeling techniques to create a 3D character
3. Layout UVs and utilize Adobe Photoshop to texture a model.

FDMA 1996. Selected Topics**1-4 Credits (1-4)**

Specific titles to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Varies

FDMA 2111. Environmental Scene Design**3 Credits (2+4P)**

Modeling design techniques used to create environments and scenes for use in animated films and games. Investigation of both natural and architectural environments to be recreated in the virtual world.

Prerequisite(s): FDMA 1510 or FDMA 2530.

FDMA 2120. Film Crew I/ Introduction to Film and Media Workflow**9 Credits (9)**

An introduction to the film industry. This class teaches film production processes, film crew hierarchy, film production set-safety and etiquette and provides hands-on training in industry standard film production equipment. Students complete the semester by participating as a below-the-line crew member on a short film. Restricted to: Community Colleges only.

Learning Outcomes

1. Explain film production processes; Interpret call sheets and deal memos, model basic on-set protocols and professional behavior
2. Assist producers and directors in completing a professional film project
3. Work effectively in production crew positions in a group environment.
4. Recognize and articulate specific film production structure, from original concept to final release

FDMA 2125. Film Crew II**9 Credits (9)**

The second course designed to train students to become working members of film crews. It will be taught by working film professionals. Content will be lecture and hands-on. Students complete the semester by working as part of an actual film crew as below-the-line and above-the-line crew members. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 2120.

Learning Outcomes

1. Understand film production processes used to produce a film
2. Manage craft area job functions
3. Model on-set protocols and professional behaviors
4. Assist producers and directors in completing a professional film project

FDMA 2150. Desktop Publishing II**3 Credits (2+2P)**

This class will enhance and build upon student layout/design skills developed in the Introduction to Desktop Publishing course, incorporating intermediate to advanced concepts in typography and layout design. Upon completion of this course, students will be able to use page layout software to prepare a variety of documents for presentation and critique, including newsletters, instructional flyers, and other complex design/typographic pieces. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1120.

Learning Outcomes

1. Build upon knowledge of design and design terminology.
2. Exhibit intermediate to advanced design principles using type, layout, and color.
3. Demonstrate skill in intermediate to advanced concepts and features of page layout software.
4. Exhibit knowledge of styles, tables, images and clipping paths and interactive documents as well as printing preparations and procedures.
5. Create layouts for print, web, and other media that demonstrate an intermediate to advanced knowledge in typography and layout design.
6. Format and produce newsletters and instructional flyers, as well as larger, complex projects such as packaging mechanicals, multiple master page documents, and books.
7. Assess works of graphic design for quality and effectiveness.
8. Utilize produced material to create or add to a design portfolio for future use.

FDMA 2210. Digital Video Production II**3 Credits (2+2P)**

Advanced techniques of the tools and application of professional film making. May be repeated for a maximum of 6 credits.

Prerequisite: FDMA 1210.

Learning Outcomes

1. Demonstrate the ability to produce and manage a video project: Produce a script, storyboard, and production schedule for a video project designed for a specific audience.
2. Demonstrate proficiency in producing quality digital video footage and audio tracks: Shoot to the script and storyboard using a variety of camera and lighting techniques; Produce a finished complex sound track including narration, music, and sound effect.
3. Demonstrate ability to produce and edit a professional quality video project: Integrate all production aspects of the project including video, audio, graphics, titles, transitions, and effects. Guide the project through the final production stages.
4. Develop competency in digital video distribution using various formats and techniques: Distribute project in various formats which could include DVD and web posting.

FDMA 2241. Advanced Camera Techniques**3 Credits (2+2P)**

Professional camera techniques and training for electronic news gathering and studio filmmaking. Utilizes high-end handheld shooting techniques, cranes, dollies, and steadicam training. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1210.

Learning Outcomes

1. Students knowledge of high-end video camera operation and features.
2. Students must know all the working features of the video production equipment being used during the course in order to achieve the desired footage as required by the instructor.
3. Demonstrate proficiency in producing quality digital video footage.
4. Individuals must acquire the knowledge of different shooting styles in different productions situations and use those acquired skills to produce the appropriate video footage.
5. Using the proper lighting in different on location shooting styles.
6. Skill of each individual utilizing the usage of high-end camera equipment such as dollies, cranes and Steadicam.
7. Each individual must work as a team player to create professional style video footage.

FDMA 2285. Digital Video Production and Editing II**3 Credits (2+2P)**

Advanced features of digital video, audio/music, and titling production software. Included are color correction, vector scopes, motion effects, and advanced editing techniques used by filmmakers. Restricted to Community Colleges campuses only. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1220.

Learning Outcomes

1. Intermediate to advanced video editing create short films and training videos, create TV quality commercials, direct a news broadcast, and work as a mentor to students on digital media equipment

FDMA 2287. Digital Design Studio**1-3 Credits**

A design studio environment in which students obtain real-world experience while providing service to college and non-profit associations with faculty supervision using a variety of media. Can be used with permission to fulfill cooperative requirement. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1630 or ARTS 1712.

Learning Outcomes

1. Demonstrate competency in the use of InDesign software.
2. Create appropriate visual solutions based on target marketing information.
3. Demonstrate competency in the design and production of advertising and promotional materials.
4. Present ideas and concepts effectively and competently.
5. Visually demonstrate design solutions to be used in a portfolio.

FDMA 2310. History of Cinema I**3 Credits (3)**

This course surveys the history of cinema - investigating the process by which the original "cinema of attractions" evolved into a globally dominant form of visual storytelling. We will explore the development of cinema both as an art form and as an industry, and consider the technological, economic, cultural factors, as well as many key international movements that helped shape it. Restricted to: G-CMI, DFM, ANVE majors.

Learning Outcomes

1. Gain a greater appreciation for the history of cinema
2. Develop knowledge of the key eras in the history of U.S. cinema
3. Learn the characteristics of major movements in international cinema
4. Understand the various elements that go into telling a story in cinema: screenplay, narrative devices, director, producer, talent, production design, cinematography, editing, sound design
5. Learn how major genres in U.S. cinema have evolved in the past 100+ years
6. Gain a basic understanding of the operations and organization of the Hollywood film industry, from the studio system until today
7. Gain an awareness of the shifts in the film industry that present new opportunities for independent filmmakers
8. Understand the importance of learning about the history of cinema to the process of becoming a filmmaker
9. Strengthen public speaking skills

FDMA 2311. History of Animation**3 Credits (3)**

Explores the history of Animation as an art form and industry through readings, screenings, lecture and periodic guest speakers. Restricted to: G-CMI, ANVE, DFM majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. To expand your knowledge of the history of animation and its evolution to the modern day.
2. To expand your ability to view animation critically and to understand its early connections to cartooning as well as its ongoing cultural presence and relevance.
3. To expand your comfort with accessing information and completing assignments both online and independently. Canvas will be utilized for many of our readings and for some response assignments.

FDMA 2312. History of Media Design**3 Credits (3)**

An introduction to the principles of design history and theory within a chronological framework of historical and emerging media.

Learning Outcomes

1. Introduction to visual communication: Defines design media; Discuss universal design principles and strengthen student basic design skills.
2. Historical technological development and design: Prehistoric communication; Beginnings of alphabet and written language; Movable type and the printing press; Industrial revolution; Digital Age; Designers and Trends; Personalities and their influence and contributions
3. Identify design styles and discuss the relevance of how design influences: Idea generation; Trend sources; Influences or appropriation; Propaganda and advertising.

FDMA 2325. Advanced Photoshop**3 Credits (2+2P)**

This course expands on the Photoshop skill set to develop proficiency with selections, masking, channels, filters, color correction, painting tools, vector integration, video, special effects, and compositing techniques. The focus is on the core image-editing tools of Photoshop that can be universally applied to photography, print, film or the web. The material is covered in production-oriented projects and students develop work suitable for portfolios. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1515.

Learning Outcomes

1. Create effects using advanced blending techniques
2. Effectively utilize advanced masking techniques
3. Refine Selections with advanced techniques
4. Assess Adjust color in an image
5. Utilize advanced photo enhancement techniques
6. Alter images using Photoshop painting techniques
7. Create brush presets
8. Create vector elements with paths
9. 1Add manipulate type on a path
10. 1Create advanced special effects
11. 1Apply vanishing point warping
12. 1Create a video clip
13. 1Apply color adjustments to video

FDMA 2326. Digital Photography and Imaging II**3 Credits (2+2P)**

Provide understanding and skills needed for advanced digital capture, editing, optimizing and manipulating photographic images for print, web and multimedia applications. The course will prepare students to make more advanced technical and more refined aesthetic decisions relative to specific photographic applications. Restricted to: Alamogordo campus, Carlsbad campus, Dona Ana campus.

Prerequisite(s): FDMA 1545.

Learning Outcomes

1. Apply proper exposure techniques.
2. Practice effective composition techniques.
3. Demonstrate knowledge of working with Camera RAW files.
4. Demonstrate proper image adjustment and correction techniques.
5. Successfully apply the basics of HDR digital photography.
6. Apply techniques for modifying light.

FDMA 2360. Web Design II**3 Credits (2+2P)**

In this course, students will refine their skills in coding and web graphic design as well as be introduced to methods in constructing sites that adhere to the standards of responsive web design. Students will expand their knowledge of HTML and CSS using a code editor, and they will both analyze existing websites and also construct an interactive website. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1360.

Learning Outcomes

1. Plan and produce web design mockups.
2. Demonstrate a proficiency in HTML/CSS coding.
3. Utilize basic web scripts.
4. Integrate animation into web design.
5. Create fully functional websites using one or more web editors.
6. Make a website "live."
7. Evaluate web designs for aesthetics and functionality.
8. Demonstrate the utilization of responsive design.

FDMA 2365. Web Design for Small Business**3 Credits (2+2P)**

Technology and techniques for designing and building a web presence for small business. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): FDMA 1360.

Learning Outcomes

1. Learning advanced tools and techniques for creating and maintaining complex Business web sites. We will be using CSS, PHP, HTML, Photoshop, and Wordpress.
2. design a complete and fully functional online web business.
3. understand and develop a plan to better manage a web store/business.
4. review basic design guidelines in preparing a variety of web applications for business.
5. develop technical skills in using various web based solutions.
6. reinforce your knowledge of web design software.
7. introduce alternate sources of data, communication and financial solutions.

FDMA 2370. Advanced Web Techniques**3 Credits (2+2P)**

Creating and managing complex web sites using advanced techniques and tools. May be repeated for a maximum of 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 1515 and FDMA 2360.

Learning Outcomes

1. Create webpages using Hypertext Markup Language (HTML) elements and tags
2. Format webpages using Cascading Style Sheets (CSS)
3. Validate webpage code
4. Apply industry-standard webpage design and organization principles
5. Publish a website

FDMA 2381. Storyboarding**3 Credits (3)**

Examines effective writing principles to create storyboards that communicate the overall picture of a project, timing, scene complexity, emotion and resource requirements. Further, the purpose of this course is to introduce students to the principles of visual storytelling—in film--through the use of the storyboard. In other words, to show how storyboards are critical "architectural component" of the filmmaking process, used as a blueprint (or guide) to communicate the complex elements of a film story. Crosslisted with: ENGL 2381. Restricted to: DFM, ANVE, G-CMI majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Learn to conceive and draw original images.
2. Learn to use images to tell a story.
3. Design, develop, and order images (shots) into storyboarded scenes.
4. Understand how storyboarded sequences are a tool in the process of filmmaking.
5. Understand how the storyboard image is translated from the written page.
6. Build scenes from the scripted sequences into a storyboard.

FDMA 2382. Principles of Story Across the Media**3 Credits (3)**

The purpose of this course is to help students understand the basic elements of narrative structure (e.g. character, dramatic conflict, theme, etc.) and how these elements may be used effectively in media expression. Crosslisted with: ENGL 2382. Restricted to: G-CMI, DFM, ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Identify the elements of storytelling in scripted text or improvised performance
2. Understand how these elements work together across different media
3. Apply these elements of storytelling in original work
4. Appreciate and master these elements for independent or collaborative work

FDMA 2410. Audio Production II**3 Credits (2+2P)**

Students will use skills developed in the Audio Production I course to produce audio projects utilizing a variety of analog and digital audio hardware and software, including continued use of multi-track, computer-based recording and editing systems, as well as exploring more advanced audio techniques and concepts. Restricted to: Community Colleges only.

Learning Outcomes

1. Apply analog and digital audio hardware and software in audio recording.
2. Apply common professional set-up practices of audio production facilities.
3. Produce audio projects, sync sound recordings, and audio dialogue replacement (ADR) demonstrating technical expertise.
4. Perform an audio mix and master for a final professional product.
5. Analyze and compare existing audio productions for quality.

FDMA 2510. Introduction to Sound Design for Film**3 Credits (3)**

This course is an introduction to the principles, techniques and applications of sound design and film scoring. Students learn how sound affects storytelling in a film, examine the role of sound from the script to screen, and the professional process of creating a soundtrack. Students learn how to use sound equipment in a production environment and execute basic techniques used to develop a soundtrack. Crosslisted with: FDMA 1415.

Prerequisite(s)/Corequisite(s): FDMA 2382. Restricted to: DFM, ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Compare the properties and propagation of sound and importance of sound to the storytelling aspect of
2. filmmaking
3. Learn the process of designing a soundtrack for film and recording live audio dialogue for use in post-production editing.
4. Learn methods of capturing sound including live audio recording, dialogue recording, foley, orchestration and audio dialogue replacement
5. Design a soundtrack for motion media project.

FDMA 2520. Introduction to Cinematography**3 Credits (3)**

The Director of Photography (or Cinematographer), in close collaboration with the Director and Production Designer, helps determine the look of a film. This course is designed to introduce students to the technical and aesthetic fundamentals of creating, developing, and collaborating on the visual elements of storytelling, using camera framing, lensing, and lighting fundamentals such as shadows, light and color. May be repeated up to 6 credits. only. Prerequisite(s)/Corequisite(s): FDMA 2382 (Las Cruces Campus) or FDMA 1210 (Community College Campus(es))

Learning Outcomes

1. Define and explain the fundamental concepts of cinematography, such as exposure, lighting solutions, and color temperature.
2. Understand how cinematography brings the Director's vision to reality.
3. Demonstrate proficiency in plotting and executing interior and exterior lighting solutions.

FDMA 2530. Introduction to 3D Modeling**3 Credits (3)**

This course will introduce 3D modeling methods and current practices. Students will learn preliminary and detailed modeling techniques using industry standard software. Methods will emphasize formal and functional aspects of modeling as they apply to mechanical, organic, and sculpted topology for application in animation, games, and information media. May be repeated for a maximum of 6 credits.

Learning Outcomes

1. Identify the role of a 3D modeler in a production pipeline within various fields of digital animation.
2. Apply techniques in modeling mechanical and organic objects.
3. Utilize tools available in professional 3D modeling software.
4. Create simple animations and renders.
5. Present original animations to instructor and classmates for critique.
6. Create a demo reel of work completed during the course.

FDMA 2535. Digital Illustration**3 Credits (3)**

Introductory course examining traditional artistic expressions and translating visual art experiences into a digital art medium to enhance visual storytelling. Students acquire basic principles of drawing and painting through hands-on experience manipulating tonal value, composition, form development, light and shadow, color theory, rendering realism, and graphic design. Restricted to: DFM, ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. Be familiar with the CMI computer system, facilities, equipment and policies.
2. Appropriately utilize the various media technologies available at CMI for digital illustration.
3. Understand the different roles and areas of digital illustration.
4. Understand and apply some basic techniques of digital illustration.
5. Understand and apply some basic processes of creating pleasing images based on knowledge of traditional art principles.
6. Begin to apply some basic strategies for developing and creating aesthetically pleasing images.

FDMA 2570. Creative Media Studio**3 Credits (2+2P)**

A studio environment where students specialize in creating film-festival quality and portfolio-ready projects under the supervision of faculty. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 1210 and FDMA 1220 or FDMA 2530.

Learning Outcomes

1. Students will work together to create portfolio-quality work in a studio environment.
2. Through classroom discussion and reporting the students will collaborate to produce a professional quality "vertical slice" game concept within a defined timeline and financial budget

FDMA 2710. Beginning 2-D Animation**3 Credits (3)**

Students will learn the basics of digital 2D animation by working through a variety of exercises, creating an original storyboard, and animating five or more shots utilizing industry standard software. Restricted to: DFM, ANVE majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. The student will demonstrate an overall knowledge of computers as a tool of the animation artist and be able to produce simple animations using the techniques learned in class.
2. Use major software tools with ease
3. Manage time lines through key frames
4. Build storyboards
5. Demonstrate knowledge of 2-D and animation terminology
6. Produce actions, set environments and constraints for 2-D animation
7. Render full animation.

FDMA 2715. Special Effects**3 Credits (2+4P)**

Creating advanced virtual special effects for both rigid and soft bodies. Using MEL, dynamic principles, mixing nodes, and advanced particle systems. How to drive particles over surfaces, add texture to flow, create surface tensions, and use collision events to drive texture. Study of integrating computer-generated images with real-life video and audio.

Prerequisite(s): FDMA 2530 or FDMA 2765.

FDMA 2720. 3-D Animation**3 Credits (3)**

Overview of the essentials and principles of 3D animation; creative methods for using industry standard tools to produce the illusion of movement for storytelling. Topics include, keyframe and curve animation, kinematics, cycle animation, camera animation, deformers, and constraints.

Prerequisite(s): FDMA 1510, FDMA 2710 or consent of instructor.

Learning Outcomes

1. Clearly describe the role of an animator in cinema, gaming and related fields.
2. Recognize leading animators and their methods.
3. Demonstrate knowledge of advances in contemporary animation.
4. Utilize current industry standard animation tools.
5. Apply fundamental animation processes and techniques

FDMA 2725. Rigging for 3D Animation**3 Credits (3)**

This course will introduce principles and practices of current 3D animation rigging. Students will develop fundamental methods necessary to create character rigs. Students will learn aesthetic, technical, and optimization concepts as they apply to organic and mechanical designs. Topics will include: hierarchies, constraints, deformation rigging, skeleton creation, skinning, forward and inverse kinematics, controls, body and facial rigging. Restricted to: DFM, ANVE majors.

Prerequisite(s): FDMA 1510.

Learning Outcomes

1. Understand what Rigging is and the role it plays in the world of cinema and video games.
2. Be familiar with industry professionals and their techniques and approaches to rigging.
3. Understand and be able to apply the fundamentals of rigging to industry standard applications.
4. Demonstrate ability to rig basic to intermediate machines, bipeds and quadrupeds

FDMA 2730. Advanced Character Animation**3 Credits (2+2P)**

Focus on complex rigging techniques as well as utilizing advanced animation functions to blend multiple animations into complex animations. May be repeated for a maximum of 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 2530.

Learning Outcomes

1. Create skeletal riggings for use with a 3D model
2. Attach riggings to a 3D model using Smooth and rigid binding and refine the bindings so that they are properly weighted
3. Animate a 3D model using skeletal and vertex animation techniques

FDMA 2735. Advanced 3D Animation Workshop A**3 Credits (2+4P)**

Program capstone. Students will utilize the skills learned in the program to produce their final animation. Group integrated projects are strongly recommended to emulate a real-work animation studio environment. May be repeated for a maximum of 9 credits. Consent of instructor required.

Corequisite(s): FDMA 2740.

Learning Outcomes

1. Define the duties and skills sets required for a career in 3D Modeling.
2. Understand the Maya interface, the uses for all of the major modes and menus of the interface and be able to describe how to access the tools, actions and the options of those tools and actions.
3. Complete and compile a multi shot animated short.

FDMA 2740. Advanced 3D Animation Workshop B**3 Credits (2+4P)**

Program capstone. Students will utilize the skills learned in the program to produce their final animation. Group integrated projects are strongly recommended to emulate a real-work animation studio environment. May be repeated for a maximum of 9 credits. Consent of instructor is required.

Corequisite(s): FDMA 2735.

Learning Outcomes

1. Define the duties and skills sets required for a career in 3D Modeling.
2. Understand the Maya interface, the uses for all of the major modes and menus of the interface and be able to describe how to access the tools, actions and the options of those tools and actions.
3. Complete and compile a multi shot animated short.

FDMA 2745. Light, Shade, Render**3 Credits (3)**

This course will explore the theory and practice of 3D lighting and rendering methodologies. Techniques covered will implement cameras, lighting sources, textures, surface-mapping and algorithmic rendering to produce stylized and photo realistic images. Topics covered will include direct and indirect lighting, shaders that simulate physical substances and effects, rendering multiple passes and simulating physical lens effects. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

Prerequisite(s): FDMA 1510, FDMA 2530, or Consent of Instructor.

Learning Outcomes

1. Understand the role of lighting and surfacing to tell a story.
2. Be familiar with leading lighting artist and their approaches.
3. Utilize the software implemented in the entertainment industry.
4. Understand and apply fundamental lighting and rendering techniques.
5. Demonstrate ability to create successfully rendered scenes from concept through production.

FDMA 2750. Digital Sculpting**3 Credits (3)**

Introduce students to the 3D Sculpting programs which are the industry standard sculpting programs. Students will learn how to create complex high polygon sculpts and normal maps and transfer the models into 3D studio Max and Autodesk Maya. May be repeated up to 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): FDMA 2530.

Learning Outcomes

1. Demonstrate communication skills through written critiques and explanations
2. Students will demonstrate visual communication skills through critiques, written explanations, and storyboarding
3. Demonstrate a working knowledge of Zbrush's interface
4. Demonstrate a working knowledge of Zpheres and how they are best used to create sculpts
5. Demonstrate a working knowledge of painting a mesh using Spotlight
6. Demonstrate a working knowledge of retopologizing and exporting the mesh
7. Demonstrate a working knowledge of integrating the full Zbrush pipeline into Unity and Unreal

FDMA 2755. Drawing for Animation**3 Credits (3)**

Introductory study of the human and animal form in relation to animation. Students learn fundamentals and exaggeration of the figure, as related to proportion, rhythm, mechanics, and motion. Areas of focus are: basic form, proportion, shape, contour, gesture, anatomy, portraiture, perspective, clothing effects and drawing from observation. Restricted to: CMT,DFM,ANVE majors.

Learning Outcomes

1. Students will have an opportunity to gain hands on experience using industry standard state of the art animation software.
2. Understand what the basics of drawing the human form.
3. Have a general understanding of human anatomy as needed for the artist.
4. Be able to design the human form from imagination.

FDMA 2770. Critical Game Studies**3 Credits (2+2P)**

Focus on creating a complete design document utilizing techniques and standards used in the industry today. May be repeated for up to 6 credits. Restricted to: Community Colleges only.

FDMA 2775. Game Tools and Techniques**3 Credits (2+2P)**

Focus on the different engines and gaming technologies that power the games of today. May be repeated for a maximum of 6 credits.

Prerequisite(s): FDMA 2770.

Learning Outcomes

1. Students will develop rapid prototyping techniques.
2. Through classroom exercises the students will gain competency in industry-standard game creation engines and tools, and learn to work together in groups to create rapid prototypes.
3. This includes creating art, sound and music, and creating basic scripts within an engine.

FDMA 2785. Level Design Concepts**3 Credits (2+2P)**

Focus on the design and creation of video game levels. Dealing with the challenges and pitfalls of different video game genres. May be repeated for a maximum of 6 credits. Prerequisite(s): FDMA 2770

Learning Outcomes

1. Students will develop level design skills.
2. Through classroom exercises the students will gain a comfortable competency with designing levels both on paper and digitally.
3. This includes creating first person shooter levels, third person levels, multiplayer level design, and more.

FDMA 2993. Workshops (Advanced Photography)**1 Credit (1)**

This is a series of 1-credit workshops offering specialized and intense advanced skill training and upgrading applications of photography for commercial purposes and training in photographic skills and styles presented by a variety of professional lecturers. May be repeated up to 7 credits. Restricted to Community Colleges only.

Prerequisite(s): FDMA 1545.

Learning Outcomes

1. Varies

FDMA 2994. Portfolio Design & Development**1-3 Credits**

Personalized design and creation of the student's professional portfolio including hard-copy, demo reel, and online. May be repeated up to 6 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Varies

FDMA 2995. Film Crew Cooperative Experience**3-6 Credits (3-6)**

Industry production experience in specific craft areas for film crew technicians who have successfully completed two semesters of FTTP. Restricted to: Dona Ana campus, Carlsbad campus.

Prerequisite(s): FDMA 2125.

Learning Outcomes

1. Varies

FDMA 2996. Special Topics**1-4 Credits**

Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits.

Learning Outcomes

1. Varies

FDMA 2997. Independent Study**1-3 Credits**

Individual studies directed by consenting faculty with prior approval of department head. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Minimum GPA of 3.0 and sophomore standing.

Learning Outcomes

1. Varies

FDMA 2998. Internship**1-3 Credits**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 9 credits. Consent of Instructor required. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only. Consent of instructor required.

Learning Outcomes

1. Varies

FIRE-FIRE INVESTIGATION (FIRE)

FIRE 101. Firefighter I

8 Credits (6+6P)

This course will train the student to the Firefighter I level as outlined in NFPA 1001, Standard for Firefighter Professional Qualifications. Firefighter I certification issued through the New Mexico Firefighter's Training Academy upon successful completion (IFSAC accredited). May be repeated up to 8 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): OEEM 103 and FIRE 115. Restricted to Community Colleges campuses only.

FIRE 102. Fire Fighter I and II

12 Credits (12)

This course will train the student as outlined in NFPA 1001, Fire Fighter Professional Qualifications. Firefighter I & II Certification issued through the New Mexico Firefighter's Training Academy (NMFTA) upon successful completion [International Fire Service Accreditation Congress (IFSAC) & Pro Board accredited]. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): FIRE 115, FIRE 252, OEEM 103. Restricted to Dona Ana campus only.

FIRE 104. Firefighter II

8 Credits (6+6P)

This course will train the student to the Firefighter II level as outlined in NFPA 1001, Standard for Firefighter Professional Qualifications. Firefighter II certification issued through the New Mexico Firefighter's Training Academy upon successful completion (IFSAC accredited). May be repeated up to 8 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): FIRE 252. Prerequisite(s): FIRE 101. Restricted to Community Colleges campuses only.

FIRE 112. Principles of Emergency Services

3 Credits (3)

This course provides an overview to fire protection and emergency services including career opportunities in fire protection and related fields. The organization and function of public and private fire protection services is studied including how fire departments fit as part of local government. An overview of laws and regulations affecting the fire service is explored along with specific fire protection functions and responsibilities including basic fire chemistry and physics, introduction to fire strategy and tactics and life safety initiatives. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

FIRE 114. Fire Behavior and Combustion

3 Credits (3)

This course explores the theories and fundamentals of how and why fires start, spread, and are controlled. Restricted to: Community colleges only.

FIRE 115. Hazardous Materials Awareness and Operations

3 Credits (3)

This course will train the student to the Hazardous Materials Awareness and Operations level as outlined in NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents and OSHA 29 CFR 1910.120. Hazardous Materials Awareness and Operations certification issued through the New Mexico Firefighter's Training Academy upon successful completion (IFSAC accredited). May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

FIRE 120. Fire Protection Hydraulics and Water Supply

3 Credits (3)

This course will train students on skill requirements for becoming a safe and effective fire apparatus driver/operator. The focus will be on pump operation, construction, testing, and mathematical calculation required for effective pump operation and fire control. Responsibilities of the driver/operator will be taught and assessed consistent with applicable NFPA standards and the New Mexico Firefighters' Training Academy (NMFTA) guidelines. Students who meet all course requirements will be eligible for International Fire Service Accreditation Congress (IFSAC) certification through the NMFTA. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s)/Corequisite(s): FIRE 128.

FIRE 126. Fire Prevention

3 Credits (3)

This course will educate students about the principles and techniques of fire prevention and life-safety inspection and code compliance in accordance to NFPA 1031, Standard for Professional Qualifications for Fire Inspector and Plan Examiner, Level I. Students who meet all course requirements will be eligible for International Fire Service Accreditation Congress (IFSAC) certification through the New Mexico Firefighters' Training Academy (NMFTA). Restricted to Community Colleges campuses only.

FIRE 128. Apparatus and Equipment

2 Credits (2)

The course will train students on attitude and skill requirements for becoming a safe and effective fire apparatus driver/operator. The focus will be on apparatus inspection, operation, maintenance, and specification. Responsibilities of the driver/operator will be taught and assessed consistent with applicable NFPA standards and the New Mexico Firefighters' Training Academy (NMFTA) guidelines. Students pursuing certification must possess a current and valid New Mexico driver's license. Students who meet all course requirements will be eligible for International Fire Service Accreditation Congress (IFSAC) certification through the NMFTA. Restricted to Community Colleges campuses only.

FIRE 130. Principles of Fire and Emergency Services Safety and Survival**3 Credits (3)**

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. Consent of instructor required. Restricted to: Community colleges only.

FIRE 200. Special Topics**1-12 Credits (1-12)**

Specific subjects to be announced in the Schedule of Classes. Course may be repeated for credit as topics change. May be repeated up to 12 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

FIRE 201. Independent Study**1-3 Credits**

Research on an approved topic to meet graduation requirements. Meets or exceeds NFPA standards. May be repeated for total of 9 credits.

Prerequisite: consent of instructor.

FIRE 202. Wildland Fire Control**1-3 Credits**

Focuses on factors affecting wildland fire control and prevention, fire behavior, control techniques, command structure and other operations including Standards for Survival I-100, S-130 and S-190 Meets or exceeds NWCG Training Curriculum and NFPA 1051 standards. Restricted to: Community Colleges Only.

FIRE 203. Fire and Emergency Services Administration**3 Credits (3)**

This course will provide students entry-level training in company operations and administration at the first-line supervisory level. The student will learn how to effectively manage human resources and community/public relations. Students will learn about fire department organization and administration; including budgets, reports, and planning. Students will learn the process involved in fire inspection, investigation, public education, emergency service delivery, and safety, per NFPA Standard 1021, Fire Officer Professional Qualifications. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

FIRE 210. Building Construction for Fire Protection**3 Credits (3)**

This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. Restricted to: Community colleges only.

FIRE 220. Cooperative Experience I**1-3 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and rated by the employer and instructor. May be repeated for a maximum of 6 credits. Graded S/U.

Prerequisite: consent of instructor.

FIRE 221. Cooperative Experience II**3 Credits (3)**

Apply advanced firefighting knowledge and skills while working with fire protection agencies. Meets or exceeds NFPA standards. Consent of instructor required. Graded: S/U. Restricted to: Community Colleges only.

Prerequisite(s): FIRE 220.

FIRE 223. Fire Investigations I**3 Credits (3)**

This course meets the requirements set forth in NFPA 1033 Professional Qualifications for Fire Investigator. This course will give a comprehensive understanding of the principles of fire investigation, scene examination, documentation, evidence collection/preservation, interview techniques, and post-incident investigations. Student who meet all course requirements are eligible for International Fire Service Accreditation Congress (IFSAC) certification through New Mexico Firefighters' Training Academy (NMFTA). Restricted to Community Colleges campuses only.

FIRE 224. Strategy and Tactics**3 Credits (3)**

Provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment and extinguishing agents on the fire ground. Covers the development of systematic action plans for emergency situations. Includes recognizing and prioritizing emergency scene needs and developing related strategies, tactics and contingencies. Educates students on how resources should be deployed to implement those plans. Restricted to Community Colleges campuses only.

FIRE 225. Fire Protection Systems**3 Credits (3)**

This course provides information relating to the features and design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. Restricted to: Community colleges only.

FIRE 230. Fire Service Instructor**3 Credits (3)**

Provides the instructor candidate with methods and techniques of instruction including oral communications, preparing lesson plans, writing performance objectives, use of audio and other training aids, and the selection, evaluation and preparation of performance tests. Meets and exceeds NFPA 1041 Level I standards. Restricted to: Community Colleges only.

FIRE 232. Firefighter Internship**3 Credits (3)**

Application of knowledge, skills and abilities in a fire service department, as a firefighter intern and integrated member of a fire affiliated agency. Restricted to majors.

Prerequisites: FIRE 101, FIRE 102, FIRE 115, FIRE 202 and EMT-B and consent of instructor.

FIRE 233. Practical Approach to Terrorism**3 Credits (3)**

Gives responder an overall safety approach in recognizing and responding to incidents involving terrorism. Presents an overview in types of harm, explosive weapons, chemical weapons, biological weapons and radiological weapons. Restricted to: Community Colleges only. Crosslisted with: LAWE 233

FIRE 252. Vehicle Extrication**2 Credits (1+2P)**

This course will train the student to the Vehicle & Machinery Extrication level I as outlined in NFPA 1006, Standard for Technical Rescuer Professional Qualifications. Vehicle & Machinery Extrication certification issued through the New Mexico Firefighter's Training Academy upon successful completion (IFSAC accredited). May be repeated up to 2 credits. Restricted to Community Colleges campuses only.

FREN-FRENCH (FREN)

FREN 1110. French I**4 Credits (4)**

Intended for students with no previous exposure to French, this course develops basic listening, speaking, reading, and writing skills aiming toward the ACTFL novice-high level. This is an introductory course designed to teach the student to communicate in French in everyday situations and to develop an understanding of French and Francophone cultures through the identification of cultural products and practices, of cultural perspectives, and the ability to function at a survival level in an authentic cultural content. This course will also develop the student's sense of personal and social responsibility through the identification of social issues.

Learning Outcomes

1. Students can communicate and exchange information about familiar topics using phrases and simple sentences, sometimes supported by memorized language.
2. Students can usually handle short social interactions in everyday situations by asking and answering simple questions
3. Students can write short messages and notes on familiar topics related to everyday life.
4. Students can often understand words, phrases, and simple sentences related to everyday life.
5. Students can recognize pieces of information and sometimes understand the main topic of what is being said.
6. Students can understand familiar words, phrases, and sentences within short and simple texts related to everyday life.
7. Students can sometimes understand the main idea of what they have read.
8. Students can identify beliefs, behaviors and cultural artifacts of the French-speaking world.
9. In English, students will engage with social issues confronting the French-speaking world to develop their sense of personal and social responsibility.

FREN 1120. French II**4 Credits (4)**

A continuation of French 1, students will develop a broader foundation in skills gained during the first semester, including understanding, speaking, reading and writing French aiming toward the ACTFL intermediate-low level. This course is designed to increase student fluency in French as applied to everyday situations. Students will also learn to recognize and understand various French and Francophone products, practices, and perspectives, identifying common cultural patterns, describing basic cultural viewpoints, and further developing their sense of personal and social responsibility through the investigation of cultural issues.

Prerequisite(s): C or better in FREN 1110.

Learning Outcomes

1. Students can participate in conversations on a number of familiar topics using simple sentences.
2. Students can handle short social interactions in everyday situations by asking and answering simple questions.
3. Students can write briefly about most familiar topics and present information using a series of simple sentences.
4. Students can understand the main idea in short, simple messages and presentations on familiar topics.
5. Students can understand the main idea of simple conversations that they overhear.
6. Students can understand the main idea of short and simple texts when the topic is familiar.
7. Students can describe and make comparisons between decisions about beliefs, behaviors and cultural artifacts of the French-speaking world.
8. Students will engage with social issues confronting the French-speaking world to continue to develop their sense of personal and social responsibility

FREN 2110. French III**3 Credits (3)**

In this third semester course, students will continue to develop a broader foundation in skills gained during the first year, including understanding, speaking, reading and writing French aiming toward the ACTFL intermediate-mid level. This course is designed to teach the student to communicate in a more sustained way in areas of personal interest and in everyday situations. Students will engage in and analyze various French and Francophone products, practices, and perspectives, as well as continue to develop their sense of personal and social responsibility through comparison and contrast of cultural perspectives.

Prerequisite(s): C or better in FREN 1120.

Learning Outcomes

1. Students can participate in conversations on familiar topics using sentences and series of sentences.
2. Students can engage in short social interactions in everyday situations by asking and answering a variety of questions. Students can usually say what they want to say about themselves and their everyday life.
3. Students can write on a wide variety of familiar topics using connected sentences.
4. Students can understand the main idea in messages and presentations on a variety of topics related to everyday life and personal interests and studies.
5. Students can understand the main idea of conversations that they overhear.
6. Students can understand the main idea of texts related to everyday life and personal interests or studies.
7. Students can analyze beliefs, behaviors and cultural artifacts of the French-speaking world, and discuss the nature and value of French and Francophone products, practices, and perspectives.
8. Students will engage with social issues confronting the French-speaking world to continue to develop their sense of personal and social responsibility

FREN 2120. French IV**3 Credits (3)**

In this fourth semester course, students will continue to broaden and refine skills gained during previous semesters, including understanding, speaking, reading and writing French aiming at the ACTFL intermediate-high level. This course is designed to teach the student to communicate in a more sustained way in situations that go beyond the everyday. Students will evaluate various French and Francophone products, practices, and create ways to demonstrate their sense of personal and social responsibility through participation in cultural interaction.

Prerequisite(s): C or better in FREN 2110.

Learning Outcomes

1. Students can participate with ease and confidence in conversations on familiar topics. They can usually describe people, places, and things. They can usually talk about events and experiences in various time frames.
2. Students can handle social interactions in everyday situations, sometimes even when there is an unexpected complication.
3. Students can write about topics related to school, work, and community in a generally organized way. They can write some simple paragraphs about events and experiences in various time frames.
4. Students can easily understand the main idea in messages and presentations on a variety of topics related to everyday life and personal interests and studies.
5. Students can usually understand a few details of what I overhear in conversations, even when something unexpected is expressed. The student can sometimes follow what they hear about events and experiences in various time frames.
6. Students can understand the main idea of texts with topics related to everyday life, personal interests, and studies, as well as sometimes follow stories and descriptions about events and experiences in various time frames.
7. Students can analyze beliefs, behaviors and cultural artifacts of the French-speaking world, and recognize and discuss the representations and controversies of French and Francophone products, practices, and perspectives.

FSTE-FOOD SCIENCE & TECHNOLOGY (FSTE)

FSTE 1120. ACES in the Hole Foods I**4 Credits (4)**

Food production activities related to operation of ACES in the Hole Foods, a student-run food company that will give FSTE majors hands-on experience in all aspects of developing, producing and marketing food products Restricted to Las Cruces campus only. Students enrolled in this class must possess A Food Handler Card

Learning Outcomes

1. Apply basic scientific principles, procedures, techniques and standards in the production of food products.
2. Apply principles of sanitation and safety to the production of food products.
3. Assist in the development and evaluation of new and/or existing food products made for human consumption.
4. Prepare a resume and portfolio

FSTE 2110G. Food Science I**4 Credits (3+2P)**

The scientific study of the principles involved in the preparation and evaluation of foods. May be repeated up to 4 credits.

Learning Outcomes

1. Explain basic scientific principles involved in the preparation of high quality food products.
2. Utilize scientific inquiry in the experimental investigation of factors influencing the chemical, physical and sensory properties of food products.
3. Apply basic scientific principles, procedures, techniques and standards in the preparation of all types of high quality food products.
4. Use basic methods of quantitative analysis to critically evaluate quality characteristics of food.
5. Use sensory science techniques and terminology to critically evaluate acceptability and quality characteristics of food.
6. Describe high quality characteristics of a variety of food products using appropriate terminology.
7. Apply principles of sanitation and safety to food preparation.

FSTE 2120. ACES in the Hole Foods II**4 Credits (8P)**

Food production activities related to operation of ACES in the Hole Foods, a student-run food company that will give FSTE majors hands-on experience in all aspects of developing, producing and marketing food products. Student must also have a Food Handler Card to enroll in this course.

Prerequisite(s): FSTE 1120.

Learning Outcomes

1. Apply basic scientific principles, procedures, techniques and standards in the production of food products.
2. Apply principles of sanitation and safety to the production of food products.
3. Assist in the development and evaluation of new and/or existing food products made for human consumption.
4. Prepare a resume and portfolio

FSTE 2130G. Survey of Food and Agricultural Issues**3 Credits (3)**

Survey of food and agricultural issues, including: geography of food production and consumption; human-agricultural-natural resource relations; agriculture in the United States and abroad; modern agribusiness; food safety; food, agriculture, and natural resources policy; ethical questions; role and impact of technology. Crosslisted with AEEC 2130G.

Learning Outcomes

1. Understand of global agriculture including production techniques used in various geographical regions, consumption trends, and political and social constraints.
2. Synthesis information about agricultural issues and make informed arguments
3. Articulate discuss modern issues in agriculture
4. Write coherent arguments relative to personal beliefs regarding agricultural issues

FSTE 2996. Special Topics**1-4 Credits**

Specific topics and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester and a grand total of 9 credits.

Learning Outcomes

1. Varies

FWCE-FISH,WILDLF,CONSERV ECOL (FWCE)**FWCE 1110G. Introduction to Natural Resources Management****4 Credits (3+2P)**

This class covers historical and current issues affecting the management of renewable natural resources with an emphasis on water, soil, rangeland, forest, fish, and wildlife resources. An emphasis is placed on the scientific method and critical thinking. In the laboratory students collect and analyze field data on topics covered above and write up each unit as a laboratory report.

Learning Outcomes

1. Students should be able to recall, describe and explain the laws, treaties and acts that have led to our current management of natural resources in the United States.
2. Students should recognize or explain what ecological processes are, the importance of ecological processes in maintaining ecosystem function and how human activities change ecological processes and the ecosystems dependent on those processes.
3. In each of the six course and lab modules (water quality, soils, forestry, rangelands, wildlife and fisheries) students should be able to recall, describe and explain basic terminology, fundamental ecological principles and management techniques and challenges.
4. Students should be able to interpret data presented graphically and in tables from class exercises and lectures.
5. Students should be able to solve problems scientifically through field data collection, laboratory analyses and the use of quantitative methods (basic statistics, tables and graphs).
6. Students should be able to communicate results from laboratory exercises (6 lab modules) orally and in writing.
7. Students will learn to apply scientific thinking to real world problems through in class discussion and short essays
8. based on material from case studies presented in class and guest speakers.

FWCE 1120. Contemporary Issues in Wildlife and Natural Resources Management**3 Credits (3)**

Ecological, socioeconomic, and political issues surrounding the management of our natural resources with an emphasis on fish and wildlife resources.

FWCE 2110. Principles of Fish and Wildlife Management**3 Credits (3)**

Basic principles of fish and wildlife management including history, ecology, economics, and policy. Emphasis on wildlife and fisheries. Uses an ecosystem approach integrating living and nonliving resources.

Prerequisite(s): FWCE 1110G.

Learning Outcomes

1. The goal of this course is to provide a firm foundation in the principles of wildlife and fisheries management.
2. Material will include a background in biological principles geared towards animal populations,
3. characteristics and management of the habitats utilized by fish and wildlife, techniques used to study and manage animals and their habitats, and aspects of the human dimension involved in wildlife and fisheries issues.
4. This course serves as a core requirement for degrees offered in the Department of Fish, Wildlife and Conservation Ecology and as a required course for degrees in other departments such as Rangeland Resources.

FYEX-FIRST YEAR EXPERIENCE

FYEX 1110. First-year Seminar**1-3 Credits**

This course is designed to help students achieve greater success in college and in life. Students will learn many proven strategies for creating greater academic, professional, and personal success. Topics may include career exploration, time management, study and test-taking strategies to adapt to different learning environments, interpersonal relationships, wellness management, financial literacy, and campus and community resources.

Learning Outcomes

1. Recognize the ways in which s/he is responsible for her/his own experience in education.
2. Identify, locate, and utilize available campus resources essential for academic success.
3. Create long-and short-term goals associated with student success and career planning.
4. Implement time management techniques to organize the semester's workload.
5. Develop strategies to use individual strengths to succeed and reflect upon coursework and course progress in multiple classes to alter academic behaviors and create deeper meaning and learning.
6. Apply the skills essential for analyzing and solving problems in her/his academic, professional, and personal life, which may include financial literacy and wellness management.
7. Develop and apply essential skills such as reading, taking notes, studying, memorizing, taking tests, and self-management skills necessary for college success.
8. Identify and revise self-defeating patterns of behavior, thought, and emotion as well as unconscious limiting beliefs.
9. Develop supportive relationships with members of the campus community.
10. 1Develop essential reading, writing, and critical thinking skills used in study and in research.
11. 1Demonstrate understanding of how to use the computer for academic purposes, including learning management systems, email communications, research databases, degree audit, and other online resources.

FYEX 1112. The Freshman Year Experience**3 Credits (3)**

An introduction to the university and its resources; emphasis on development of academic and personal skills that enable freshmen to become successful learners. Restricted to: Main campus only.

Prerequisite(s): Freshman Standing Only.

Learning Outcomes

1. Appreciate the goals, methods, and values of higher education
2. Expand intellectual development and self-direction
3. Establish a faculty mentor relationship
4. Enhance knowledge and practice of collaborative learning principles
5. Establish a familiarity with campus resources and student services
6. Develop public speaking, critical thinking, library research, and study strategies
7. Evaluate talents and interest in relation to selecting a major and career planning
8. Examine and clarify values
9. Acknowledge and enhance respect for diversity

FYEX 1116. Managing Your Money**1 Credit (1)**

Principles and strategies for effective money management. Includes financial goal setting, both short and long term. Explores the relationship between career and income earning potential. Explores issues of credit and debt management and prevention of identity theft.

Learning Outcomes

1. Demonstrate understanding of the psychology of money and how it relates to personal financial decisions
2. Create realistic short- and long-term financial goals and a personal budget
3. Comprehend and manage college finances, including types of financial aid
4. Appreciate the importance of the Free Application for Federal Student Aid (FAFSA)
5. Describe the financial aspects of career development and how they apply to their own lives, including resume, taxes, salary, benefits
6. Apply principles of student loan management
7. Demonstrate use of credit reports in the prevention identity theft
8. Identify essential elements of smart spending and borrowing
9. Recognize debt and repayment costs
10. 1 Explain the basics of saving and planning for the financial future
11. 1 Create focused, developed, clear discussion posts and other written work for this class

FYEX 1117. Financial Literacy Money Matters**2 Credits (2)**

This course will cover a variety of financial literacy topics ranging from budgeting to student loan repayment. This course is designed to assist students in becoming more financially literate. Restricted to Las Cruces campus only.

Learning Outcomes

1. Master effective strategies and other skills related to financial literacy
2. Establish a familiarity with campus resources designed to foster financial literacy and wellness
3. Exhibit intellectual development and self-direction in relation to financial literacy and wellness
4. Identify financial literacy skills which best support individual financial well-being
5. Demonstrate skills and knowledge that allows the student to make informed and effective decisions with all of their financial resources

FYEX 1131. Personal Learning Skills I**1-3 Credits**

Individualized programs for self-improvement in skill areas necessary for academic success in the university environment. Each course to bear an appropriate subtitle. May be repeated up to 3 credits. Graded S/U.

Learning Outcomes

1. Synthesize the importance of critical thinking through self-reflection and self-exploration
2. Analyze and apply critical thinking skills using the eight intellectual standards
3. Describe the common barriers to critical thinking and construct problem solving strategies
4. Evaluate information and knowledge to determine misinformation and inaccuracies
5. Demonstrate information literacy by recognizing when information is needed and being able to
6. efficiently locate, accurately evaluate, effectively use, and clearly communicate the information in various formats and mediums

FYEX 1132. Academic and Personal Effectiveness**2 Credits (2)**

Learn academic self-analysis skills through the application of study and learning techniques to current course demands. Exposure to a variety of topics which enhance university and life-long learning.

Learning Outcomes

1. Students will demonstrate mastery of course objectives in time management, stress management, test taking, and other skills through completion of activities, quizzes, discussions, and more.
2. Students will be able to identify NMSU campus resources, including their services, location, and contact information.
3. Students will exhibit intellectual development and an improved self-direction through participation in the course.
4. Students will be able to identify and adopt those management skills which best support academic and career choices.

FYEX 1133. Academic Reading and Study Skills**1-4 Credits**

Introduction to and practice with strategies for effective reading and studying at the college level. Provides laboratory.

Learning Outcomes

1. Use reading strategies to synthesize texts
2. Identify rhetorical elements of texts
3. Identify and apply different study methods
4. Recognize the role of student support services for student success
5. Identify and practice effective time management skills
6. Demonstrate proficient computer skills
7. Write an effective summary

FYEX 1134. Speed Reading**1 Credit (1)**

Introduction to strategies and techniques for increasing reading rate and comprehension related to academic areas.

Learning Outcomes

1. Demonstrate an understanding of speed reading strategies and eye movement drills
2. Expand vocabulary and reading comprehension
3. Improve reading rates and develop reading techniques
4. Demonstrate an understanding of skimming techniques and scanning strategies

FYEX 1140. Career Exploration**1 Credit (1)**

Survey of careers possible with community college associate degrees. Information on how to make a career choice.

Learning Outcomes

1. Desired career and lifestyle
2. Areas of interest
3. Skills and abilities
4. Personal values
5. DACC programs that match the student's interests, abilities, and values
6. Three careers that match the student's interests, abilities, values, and personality

FYEX 1160. Tutorial**1-3 Credits**

Development of specific skills required for college courses, such as note-taking, listening, and test-taking. To be taken in conjunction with a regular designated college course.

Learning Outcomes

1. Demonstrate the ability to organize their time in order to improve study habits.
2. Apply pre-reading strategies to improve reading concentration and comprehension.
3. Demonstrate basic understanding of the systems of the body.
4. Identify techniques to improve personal concentration and comprehension skills.
5. Identify and demonstrate listening skills.
6. Identify effective study and note taking skills.
7. Identify and demonstrate effective test-taking skills.
8. Identify critical thinking skills used in nursing.
9. Demonstrate knowledge of key terms.

FYEX 1170. NMSU Gospel Choir**1 Credit (1)**

Students will gain performance experience and exposure to urban contemporary gospel music. Open to all majors. May be taken for unlimited credit. Restricted to: Main campus only.

Learning Outcomes

1. Comprehended the foundation related to singing in a gospel choir setting
2. Demonstrate an understanding of the difference between the musical treble and bass clef
3. Expand vocabulary and reading comprehension of gospel music terminology.
4. Improve the speed and accuracy of music sheet and sight reading

FYEX 1995. Preparing for Cooperative Education & Internship**1 Credit (1)**

The Cooperative Education Course provides students with a comprehensive overview of career-related topics designed to assist with securing Cooperative Education and Internship employment. Students learn about philosophies and approaches to resumes, cover letters, interviewing, job searching, networking, and professionalism. A primary focus of the course is on experiential learning where students have opportunities to practice and implement course concepts including interviewing, networking, job searching, and document creation. In addition to exploring topics related to Cooperative Education and Internship, the course is designed to provide students with tools and strategies for successfully navigating the transition from student to employee. Graded: S/U Grading (S/U, Audit). Restricted to Las Cruces campus only.

Learning Outcomes

1. Demonstrate skills related to securing experiential learning experiences
2. Demonstrate knowledge related to the philosophies and approaches to resumes, cover letters, interviewing, cooperative education and internship search, and networking
3. Comprehend the importance of experiential learning experiences in relation to career development
4. Evaluate experiential learning opportunities and demonstrate comprehension of the skills and strategies necessary to transition from student to career

FYEX 1996. Special Topics**1-4 Credits**

Covers specific study skills and critical thinking topics. Specific sub-titles to be listed in the Schedule of Classes. May be repeated for a maximum of 8 credits.

Learning Outcomes

1. Varies

FYEX 2111. Critical Thinking Skills**3 Credits (3)**

Introduction to critical thinking processes. Develops higher order thinking necessary to evaluate clearly, logically, and accurately one's academic and life experiences. Practical emphases on assertive thinking and perspectives. Prerequisite(s): CCDE 110 N

Learning Outcomes

1. Students will raise vital questions and problems, formulating them clearly and precisely.
2. Students will gather and assess relevant information, using abstract ideas to interpret it effectively, come to well-reasoned conclusions and solutions, and them against relevant criteria and standards.
3. Students will think open-mindedly within alternative systems of thought, recognizing and assessing assumptions, implications, and practical consequences.
4. Students will communicate effectively in figuring out solutions to complex problems.

FYEX 2994. Prior Learning: Professional Portfolio**1-6 Credits**

Creating a portfolio that outlines professional and educational experiences. Life skills and education learned through workplace training and non-traditional education experiences will be evaluated for consideration of awarding college credit. Students will draft a life history paper, prepare a professional resume, assemble supporting documentation and evidence in support of their petition to receive college credit for prior learning. Culminating activities will include an oral presentation of the portfolio contents. Graded S/U.

Prerequisite(s): CCDE 110 N or equivalent.

Learning Outcomes

1. produce writing that is focused on a main point
2. produce writing that is organized
3. produce writing follows task-specific conventions of paragraphing, sentence boundaries, usage, agreement, punctuation and spelling
4. deliver effective speeches
5. organize and present information with a purpose
6. apply effective communication strategies in their personal and professional lives

GENE-GENETICS (GENE)

GENE 1110. Experimental Systems in Genetics**1 Credit (1)**

Survey of molecular, biochemical, organismal, and computer science based approaches to investigate how genes determine important traits. Historical development and topics of current interest will be discussed.

Learning Outcomes

1. To give the students a historical perspective on the field of genetics.
2. To familiarize the students to introductory concepts and vocabulary to the field of genetics.
3. Introduce experimental systems within the field of genetics and to give perspective to current genetic research.
4. As this course is designed for beginning students as an overview of faculty and research labs on campus. The students majoring in genetics are encouraged to meet with faculty and to explore opportunities available to them on campus

GEOG-GEOGRAPHY (GEOG)

GEOG 1110G. Physical Geography**4 Credits (3+3P)**

This course introduces the physical elements of world geography through the study of climate and weather, vegetation, soils, plate tectonics, and the various types of landforms as well as the environmental cycles and the distributions of these components and their significance to humans.

Learning Outcomes

1. Define, describe, illustrate, distinguish among or explain the use of maps, map scale, globes, map projections, and remote sensing.
2. Define, describe, illustrate, distinguish among or explain the various elements of the earth's atmosphere, earth's relation to the sun, incoming solar radiation, the ozone layer, the primary temperature controls, and the unequal heating of land and water.
3. Define, describe, illustrate, distinguish among or explain the weather makers (air temperature, air pressure, humidity, clouds, precipitation, visibility, and wind [including pressure gradient, the Coriolis force, and friction]).
4. Define, describe, illustrate, distinguish among or explain air masses, pressure systems, the various fronts and associated types of storms, weather symbols, monsoons, the various forms of precipitation, along with causes and effects of lightning.
5. Define, describe, illustrate or explain the hydrologic cycle, the characteristics and influences of the oceans and continents on the weather, the Southern Oscillation (i.e., El Nino), the effects of land/water distribution, and climates and their global distribution.
6. Define, describe, illustrate or explain the biosphere, including organisms (flora and fauna), food chains, ecosystems and relationships. Define, describe, illustrate or explain soils in terms of soil-forming processes, components, properties, and classification.
7. Define, describe, illustrate or explain the structure of the earth, the internal processes, weathering and mass wasting, fluvial processes, characteristics and processes of arid regions, processes of coastal and Karst topographical regions, the processes and characteristics of glaciation (mountainous and continental).
8. Define, describe, illustrate, distinguish among or explain specific impacts by humans on weather, climate, and on the ecosystem at large.
9. Perform tests and collect data to analyze and classify weather, climate and landforms characteristics, processes, and impacts both quantitatively and qualitatively. This includes reading and extracting basic information from maps, diagrams, remote sensing devices, graphs, and tables.
10. 1 Apply critical thinking skills such as inductive, deductive, and mathematical reasoning to solve problems using the scientific method. This includes interpreting maps, graphs and photos.
11. 1 Recognize and discuss the effect of human activity on climate, climate change, the greenhouse effect, and on landforms at large.
12. 1 Synthesize information from external, current sources and personal observations and discuss their relationships to class material.

GEOG 1120G. World Regional Geography**3 Credits (3)**

Overview of the physical geography, natural resources, cultural landscapes, and current problems of the world's major regions. Students will also examine current events at a variety of geographic scales.

Learning Outcomes

1. Identify, describe, illustrate, distinguish among or explain the basic concepts of geography, the major world regions, areal differences and similarities, the processes that shape geography natural and human, the use of maps, and the key topics of geographical interpretation (e.g., location, world importance, population, political status, resources, etc.).
2. Identify, describe, illustrate, distinguish among or explain the regional groups of Europe, its historical background, its languages and religions, major features, the diversified economy, political structures, and impact on globalization.
3. Identify, describe, illustrate, distinguish among or explain the regional groups of Russia and its satellite nations, its historical background, their languages and religions, major features, their diversified economies, political structures, current problems, and impact on globalization.
4. Identify, describe, illustrate or explain the regional nations of Middle East, their historical background, their languages and religions, the major features, the diversified economies and political structures, the current problems.
5. Identify, describe, illustrate, distinguish among or explain the regional groups of Asia, their historical background its languages and religions, major features, the diversified economy and political structures, current problems, and impact on globalization.
6. Identify, describe, illustrate, distinguish among or explain the regional groups of the Pacific World, their historical background its languages and religions, major features, the diversified economy and political structures, current problems, and impact on globalization.
7. Identify, describe, illustrate, distinguish among or explain the regional groups of Africa, their historical background its languages and religions, major features, the diversified economy and political structures, current problems, and impact on globalization.
8. Identify, describe, illustrate, distinguish among or explain the regional groups of Latin America, their historical background its languages and religions, major features, the diversified economy and political structures, current problems, and impact on globalization.
9. Identify, describe, illustrate, distinguish among or explain the regional groups of Anglo-America, their historical background its languages and religions, major features, the diversified economy and political structures, current problems, and impact on globalization.
10. 1Collect data to analyze or classify the region various historical developments and trends relating to globalization
11. 1Apply critical thinking skills in predicting future developments and impacts in economics, cultural diversity, and political stability globally.
12. 1Recognize and discuss current political "hot-spots," their causes, and potential results with regards to globalization.
13. 1Synthesize information the data into a comprehensive world-view.

GEOG 1130G. Human Geography**3 Credits (3)**

This course serves as an introduction to the study of human geography. Human geography examines the dynamic and often complex relationships that exist between people as members of particular cultural groups and the geographical "spaces" and "places" in which they exist over time and the world today.

Learning Outcomes

1. Locate on maps, globes, and other technologies various geo-political spaces and places around the world, including in the United States.
2. Describe the primary concepts, theories, methods and terms prevalent in the field of human geography.
3. Apply core geographic concepts to the spatial patterns demonstrated in real-world scenarios.
4. Identify the relationships that influence human-environment interaction in a specific location at a specific time.
5. Define and utilize key concepts to explain human social and cultural change over time and across geographical space.
6. Explain the geographic context of a current event or conflict.
7. Identify a current event that illustrates a core cultural geographic concept.
8. Think critically, discuss, and write about the relationships of the natural world to human geography.

GEOG 2130. Map Use and Analysis**3 Credits (2+3P)**

Exploration of the cartographic medium. Development of critical map analysis and interpretation skills, and map literacy. Comprised of traditional lecture, labs, and map use projects.

Learning Outcomes

1. Accurately measure bearings and distances on maps.
2. Read and interpret terrain and landform representation.
3. Utilize a magnetic compass for basic land navigation and basic map making.
4. Utilize a GPS instrument for basic land navigation.
5. Recognize and describe basic physical and cultural spatial patterns portrayed on maps.
6. Analyze and interpret the significance of spatial patterns portrayed on maps.
7. Perform elementary spatial statistical analysis on geographic data.
8. Appreciate and utilize the significance of place names and cultural patterns.
9. Critically examine maps for evidence of information misuse or propagandist motives.
10. 1Recognize and utilize appropriate map categories, symbols, projections, and coordinate systems to effectively and accurately portray, read, analyze, and interpret geographic data.

GEOG 2996. Special Topics**1-3 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Learning Outcomes

1. Varies

GEOL-GEOLOGY (GEOL)

GEOL 1110G. Physical Geology**4 Credits (3+3P)**

Physical Geology is an introduction to our dynamic Earth introducing students to the materials that make up Earth (rocks and minerals) and the processes that create and modify the features of our planet. The course will help students learn how mountains are formed, how volcanoes erupt, where earthquakes occur, and how water, wind, and ice can shape landscapes. Students will also develop a basic understanding of the ways humans have altered the planet including our impact on natural resources and global climate change.

Learning Outcomes

1. Recall, describe or explain geologic vocabulary.
2. Identify or explain aspects of the geologic time scale and compare the uses and limitations of relative and absolute dating.
3. Recognize or explain the evidence used to support the theory of plate tectonics. Describe or identify how plate tectonics is related to the structure and features of the Earth.
4. Describe the formation of, and describe, compare, and classify minerals.
5. Identify or describe the three main rock types, how each forms in the context of the rock cycle and what each indicates about its environment of formation.
6. Recognize or explain the fundamentals of surface and groundwater hydrology and discuss the impact of human activities on water quality and quantity.
7. Describe or discuss the processes that are responsible for specific geologic hazards (e.g., earthquakes, volcanic eruptions, mass movement, flooding, etc.).
8. Recognize or describe the geologic processes involved in the formation and concentration of geologic
9. resources.

GEOL 1150. Introduction to Rocks and Minerals**3 Credits (2+3P)**

This course is an introduction to the characteristics and the formation of the three main types of rocks, the rock-forming minerals, and important ore minerals. An outline of Plate Tectonics will give students the basis to understand how many of these rocks and minerals form. In laboratory exercises, students will gain practice in describing and identifying hand-specimens of the main types of rocks and minerals.

Prerequisite(s)/Corequisite(s): GEOL 1110G.

Learning Outcomes

1. The student Identify the main rock-forming minerals from each mineral group as demonstrated by scoring a total of 70% or more on the relevant laboratory exercise component. Studying minerals, the student will: Identify the main minerals in hand specimens; Describe the environments in which these minerals form; Identify the rock types in which these minerals are found.
2. The student will understand the structure, composition, and genesis of rocks by identifying the principal igneous, sedimentary, and metamorphic rocks, as demonstrated by scoring a total of 70% or more on the relevant laboratory exercise components.
3. Studying rocks, the student will: Define the principal igneous processes and features, identify the most common igneous rocks and their constituting minerals in hand specimens, and discuss their origin and interpretation; Describe the principles of sedimentary processes and features, identify the most common sedimentary rocks in hand specimens, and discuss their origin and interpretation; Describe the principles of metamorphic processes and features, identify the most common metamorphic rocks and constituting minerals in hand specimens, and discuss their origin and interpretation.

GEOL 2130. Introduction to Meteorology**4 Credits (3+3P)**

Introduction to Earth's atmosphere and the dynamic world of weather as it happens. Working with current meteorological data delivered via the Internet and coordinated with learning investigations keyed to the current weather; and via study of select archives.

Learning Outcomes

1. Recall, describe, or explain the various elements of the Earth's atmosphere, Earth's relation to the sun, incoming solar radiation, the ozone layer, the primary temperature controls, and the unequal heating of land and water.
2. Recall, describe, or explain weather variables and parameters.
3. Recall, describe, or explain air masses, pressure systems, the various fronts and associated types of storms, weather symbols, monsoons, the various forms of precipitation, along with causes and effects of lightning.
4. Recall, describe, or explain the hydrologic cycle, the characteristics and influences of the oceans and continents on the weather, the Southern Oscillation (i.e., El Nino), and the effects of land/water distribution.
5. Recall, describe, or explain specific impacts by humans on weather, climate, and on the ecosystem at large.
6. Evaluate and interpret information from maps, diagrams, remote sensing devices, graphs, and tables.
7. Apply critical thinking skills such as inductive, deductive, and mathematical reasoning to solve problems using the scientific method.
8. Recognize and discuss the effect of human activity on climate, climate change and the greenhouse effect.
9. Synthesize information from external, current sources and personal observations and discuss their relationships to class material.

GEOL 2996. Special Topics**1-3 Credits**

Specific subjects to be announced in the Schedule of Classes. Community Colleges only. May be repeated for a maximum of 12 credits.

Learning Outcomes

1. Varies

GNDR-WOMEN'S STUDIES

GNDR 2110G. Introduction to Women, Gender, and Sexuality Studies

3 Credits (3)

This course introduces students to key concepts, debates, and analytical tools informing Women's, Gender, and Sexuality Studies. As an interdisciplinary field of study, Women's, Gender, and Sexuality Studies employs academic perspectives from a range of disciplines and theoretical approaches. It also incorporates lived experience and social location into its object of analysis. Though content will vary according to the expertise and focus of the instructor, this course will develop tools through readings and assignments that critically analyze how gender and sexuality are shaped by different networks of power and social relations and demonstrate how the intersections of race, class, disability, national status, and other categories identity and difference are central to their understanding and deployment. In addition to feminist thought, areas of focus might include gender and sexuality in relation to social, cultural, political, creative, economic, or scientific discourses. This class is recommended for those with a general interest in the topic area as well as for those seeking a foundational course for further study.

Learning Outcomes

1. Understand foundational concepts, theories, and approaches to gender and sexuality in conjunction with contemporary social justice movements such as feminism.
2. Describe the range of social and political forces that shape and are shaped by gender, sexuality, race/ethnicity, and other intersecting categories of identity.
3. Demonstrate the ability to conduct intersectional analysis.
4. Develop and improve skills in reading, critical thinking, academic writing, and public speaking.

GNDR 2120G. Representing Women Across Cultures

3 Credits (3)

Historical and critical examination of women's contributions to the humanities, with emphasis on the issues of representation that have contributed to exclusion and marginalization of women and their achievements.

Learning Outcomes

1. To think critically about contemporary discourses on gender, race, sexuality, and class.
2. To understand how forms of identity intersect with one another
3. To explore the ways power and privilege operate in contemporary society
4. To understand some of the ways social inequalities develop, function, and change
5. To further students' interest in developing their own ideas and research in issues of women and gender, sexuality, race, class, and nation

GRMN-GERMAN

GRMN 1110. German I

4 Credits (4)

Intended for students with no previous exposure to German, this course develops basic listening, speaking, reading, and writing skills aiming toward the ACTFL novice-mid level. This is an introductory course designed to teach the student to communicate in German in everyday situations and to develop an understanding of German cultures through the identification of cultural products and practices, of cultural perspectives, and the ability to function at a survival level in an authentic cultural content. This course will also develop the student's sense of personal and social responsibility through the identification of social issues.

Learning Outcomes

1. Students can communicate on very familiar topics using a variety of words and phrases that they have practiced and memorized.
2. Students can write lists and memorized phrases on familiar topics.
3. Students can recognize some familiar words and phrases when they hear them spoken.
4. Students can recognize some letters or characters.
5. Students can understand some learned or memorized words and phrases when they read.
6. Students can identify beliefs, behaviors and cultural artifacts of the German-speaking world.
7. In English, students will engage with social issues confronting the German-speaking world to develop their sense of personal and social responsibility

GRMN 1120. German II**4 Credits (4)**

A continuation of German 1, students will develop a broader foundation in skills gained during the first semester, including understanding, speaking, reading and writing German aiming toward the ACTFL novice-high level. This course is designed to increase student fluency in German as applied to everyday situations. Students will also learn to recognize and understand various German products, practices, and perspectives, identifying common cultural patterns, describing basic cultural viewpoints, and further developing their sense of personal and social responsibility through the investigation of cultural issues.

Prerequisite(s): C or better in GRMN 1110.

Learning Outcomes

1. Students can communicate and exchange information about familiar topics using phrases and simple sentences, sometimes supported by memorized language.
2. Students can usually handle short social interactions in everyday situations by asking and answering simple questions.
3. Students can write short messages and notes on familiar topics related to everyday life.
4. Students can often understand words, phrases, and simple sentences related to everyday life.
5. Students can recognize pieces of information and sometimes understand the main topic of what is being said.
6. Students can understand familiar words, phrases, and sentences within short and simple texts related to everyday life.
7. Students can sometimes understand the main idea of what they have read.
8. Students can describe and make comparisons between decisions about beliefs, behaviors and cultural artifacts of the German-speaking world.
9. Students will engage with social issues confronting the German-speaking world to continue to develop their sense of personal and social responsibility.

GRMN 2110. German III**3 Credits (3)**

In this third semester course, students will continue to develop a broader foundation in skills gained during the first two semesters, including understanding, speaking, reading and writing German aiming toward the ACTFL intermediate-low level. This course is designed to teach the student to communicate in a more sustained way in areas of personal interest and in everyday situations. Students will engage in and analyze various German products, practices, and perspectives, as well as continue to develop their sense of personal and social responsibility through comparison and contrast of cultural perspectives.

Prerequisite(s): C or better in GRMN 1120.

Learning Outcomes

1. Students can participate in conversations on a number of familiar topics using simple sentences.
2. Students can handle short social interactions in everyday situations by asking and answering simple questions.
3. Students can write briefly about most familiar topics and present information using a series of simple sentences.
4. Students can understand the main idea in short, simple messages and presentations on familiar topics.
5. Students can understand the main idea of simple conversations that they overhear.
6. Students can understand the main idea of short and simple texts when the topic is familiar.
7. Students can analyze beliefs, behaviors and cultural artifacts of the German-speaking world, and discuss the nature and value of German products, practices, and perspectives.
8. Students will engage with social issues confronting the German-speaking world to continue to develop their sense of personal and social responsibility.

GRMN 2120. German IV**3 Credits (3)**

In this fourth semester course, students will continue to broaden and refine skills gained during previous semesters, including understanding, speaking, reading and writing German aiming at the ACTFL intermediate- mid level. This course is designed to teach the student to communicate in a more sustained way in situations that go beyond the everyday. Students will evaluate various German products, practices, and create ways to demonstrate their sense of personal and social responsibility through participation in cultural interaction.

Prerequisite(s): C or better in GRMN 2110.

Learning Outcomes

1. Students can participate in conversations on familiar topics using sentences and series of sentences.
2. Students can engage in short social interactions in everyday situations by asking and answering a variety of questions. Students can usually say what they want to say about themselves and their everyday life.
3. Students can write on a wide variety of familiar topics using connected sentences.
4. Students can understand the main idea in messages and presentations on a variety of topics related to everyday life and personal interests and studies.
5. Students can understand the main idea of conversations that they overhear.
6. Students can understand the main idea of texts related to everyday life and personal interests or studies.
7. Students can analyze beliefs, behaviors and cultural artifacts of the German-speaking world, and recognize and discuss the representations and controversies of German products, practices, and perspectives.
8. Students will engage with social issues confronting the German-speaking world to create ways to demonstrate their sense of personal and social responsibility.

HIST-HISTORY (HIST)

HIST 1105G. Making History**3 Credits (3)**

General introduction to history: how historians carry out research and develop interpretations about the past.

Learning Outcomes

1. Understand and articulate the differences and similarities between history and memory;
2. Analyze and critically interpret primary sources and understand how others might interpret and use the same material in different ways;
3. Recognize and appreciate the diversity of historical experiences and the uses of historical memory in various societies;
4. Understand how historical experiences that include political, geographical, social, cultural, religious and intellectual experiences have been expressed across historical periods;
5. Understand how historical experiences and memories have shaped contemporary societies;
6. Identify and understand the degree to which history has been used and misused in the past;
7. Demonstrate improvement in their ability to read critically, think logically, and express themselves clearly in writing.

HIST 1110G. United States History I**3 Credits (3)**

The primary objective of this course is to serve as an introduction to the history of the United States from the pre-colonial period to the immediate aftermath of the Civil War. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of the United States within the context of world societies.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of the United States from the pre-colonial period to the immediate aftermath of the Civil War. Bloom Taxonomy's Cognitive Process: Remember and Understand
2. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context. Bloom Taxonomy's Cognitive Process: Analyze, Remember, Evaluate, Create
3. Students will summarize and appraise different historical interpretations and evidence in order to construct past events. Bloom Taxonomy's Cognitive Process: Understand, Evaluate, Apply
4. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance. Bloom Taxonomy's Cognitive Process: Remember, Understand, Evaluate
5. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience. Bloom Taxonomy's Cognitive Process: Create, Apply 8
6. Students will APPLY historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present." Bloom Taxonomy's Cognitive Process: Apply, Analyze 9

HIST 1120G. United States History II**3 Credits (3)**

The primary objective of this course is to serve as an introduction to the history of the United States from reconstruction to the present. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of the United States within the context of world societies.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of the United States from the reconstruction to the present. Bloom Taxonomy's Cognitive Process: Remember and Understand
2. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context. Bloom Taxonomy's Cognitive Process: Analyze, Remember, Evaluate, Create
3. Students will summarize and appraise different historical interpretations and evidence in order to construct past events. Bloom Taxonomy's Cognitive Process: Understand, Evaluate, Apply
4. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance. Bloom Taxonomy's Cognitive Process: Remember, Understand, Evaluate
5. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience. Bloom Taxonomy's Cognitive Process: Create, Apply
6. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present." Bloom Taxonomy's Cognitive Process: Apply, Analyze 10 11

HIST 1130G. World History I**3 Credits (3)**

The primary objective of this course is to serve as an introduction to global history from the 16th century to the present. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of world societies.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for global history from ancient times to the 16th century. Bloom Taxonomy's Cognitive Process: Remember and Understand
2. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context. Bloom Taxonomy's Cognitive Process: Analyze, Remember, Evaluate, Create
3. Students will summarize and appraise different historical interpretations and evidence in order to construct past events. Bloom Taxonomy's Cognitive Process: Understand, Evaluate, Apply
4. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance. Bloom Taxonomy's Cognitive Process: Remember, Understand, Evaluate
5. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience. Bloom Taxonomy's Cognitive Process: Create, Apply
6. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present." Bloom Taxonomy's Cognitive Process: Apply, Analyze 12

HIST 1140G. World History II**3 Credits (3)**

The primary objective of this course is to serve as an introduction to global history from ancient times to the 16th century. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of world societies.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of global history from the 16th century to the present. Bloom Taxonomy's Cognitive Process: Remember and Understand
2. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context. Bloom Taxonomy's Cognitive Process: Analyze, Remember, Evaluate, Create
3. Students will summarize and appraise different historical interpretations and evidence in order to construct past events. Bloom Taxonomy's Cognitive Process: Understand, Evaluate, Apply
4. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance. Bloom Taxonomy's Cognitive Process: Remember, Understand, Evaluate
5. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience. Bloom Taxonomy's Cognitive Process: Create, Apply
6. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present." Bloom Taxonomy's Cognitive Process: Apply, Analyze 13

HIST 1150G. Western Civilization I**3 Credits (3)**

This course is a chronological treatment of the history of the western world from ancient times to the early modern era. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of western civilization within the context of world societies. Selective attention will be given to "non-western" civilizations which impact and influence the development of "western" civilization.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of the western world from ancient times to the early modern era. Bloom Taxonomy's Cognitive Process: Remember and Understand
2. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context. Bloom Taxonomy's Cognitive Process: Analyze, Remember, Evaluate, Create
3. Students will summarize and appraise different historical interpretations and evidence in order to
4. construct past events. Bloom Taxonomy's Cognitive Process: Understand, Evaluate, Apply
5. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance. Bloom Taxonomy's Cognitive Process: Remember, Understand, Evaluate
6. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience. Bloom Taxonomy's Cognitive Process: Create, Apply
7. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present." Bloom Taxonomy's Cognitive Process: Apply, Analyze 14

HIST 1160G. Western Civilization II**3 Credits (3)**

This course is a chronological treatment of the history of the western world from the early modern era to the present. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of western civilization within the context of world societies. Selective attention will be given to "non-western" civilizations which impact and influence the development of "western" civilization.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of the western world from the early modern era to the present. Bloom Taxonomy's Cognitive Process: Remember and Understand
2. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context. Bloom Taxonomy's Cognitive Process: Analyze, Remember, Evaluate, Create
3. Students will summarize and appraise different historical interpretations and evidence in order to construct past events. Bloom Taxonomy's Cognitive Process: Understand, Evaluate, Apply
4. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance. Bloom Taxonomy's Cognitive Process: Remember, Understand, Evaluate
5. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience. Bloom Taxonomy's Cognitive Process: Create, Apply
6. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present." Bloom Taxonomy's Cognitive Process: Apply, Analyze

HIST 1170. Survey of Early Latin America**3 Credits (3)**

The primary objective of this course is to serve as a survey of the history of Latin America from pre-Columbian times through independence. This course will explore the contributions of Indigenous peoples, Africans, and Europeans to the creation of Latin America's diverse societies. The elements of this course are designed to inform students on the major events and trends that are essential to the understanding of the history of Latin America within the context of world societies.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of Latin America from independence to the present.
2. Bloom Taxonomy's Cognitive Process: Remember and Understand
3. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context.
4. Bloom Taxonomy's Cognitive Process: analyze, remember, evaluate, create
5. Students will summarize and appraise different historical interpretations and evidence in order to construct past events.
6. Bloom Taxonomy's Cognitive Process: understand, evaluate, apply
7. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance.
8. Bloom Taxonomy's Cognitive Process: remember, understand, evaluate
9. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience.
10. Bloom Taxonomy's Cognitive Process: create. apply
11. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present."
12. Bloom Taxonomy's Cognitive Process: apply, analyze

HIST 1180. Survey of Modern Latin America**3 Credits (3)**

The primary objective of this course is to serve as a survey of the history of Latin America from independence to the present. This course will explore the contributions of Indigenous peoples, Africans, and Europeans to the creation of Latin America's diverse societies. The elements of this course are designed to inform students on the major events and trends that are essential to the understanding of the history of Latin America within the context of world societies.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of Latin America from independence to the present.
2. Bloom Taxonomy's Cognitive Process: Remember and Understand
3. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context.
4. Bloom Taxonomy's Cognitive Process: analyze, remember, evaluate, create
5. Students will summarize and appraise different historical interpretations and evidence in order to construct past events.
6. Bloom Taxonomy's Cognitive Process: understand, evaluate, apply
7. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating credibility, perspective, and relevance.
8. Bloom Taxonomy's Cognitive Process: remember, understand, evaluate
9. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience.
10. Bloom Taxonomy's Cognitive Process: create. apply
11. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present."
12. Bloom Taxonomy's Cognitive Process: apply, analyze

HIST 2110. Survey of New Mexico History**3 Credits (3)**

The primary objective of this course is to serve as an introduction to the history of New Mexico from the pre- Columbian times to the present day. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of New Mexico within the context of the Americas.

Learning Outcomes

1. Students will be able to explain in their work how humans in the past shaped their own unique historical moments and were shaped by those moments, and how those cultures changed over the course of the centuries for the history of New Mexico from pre-Columbian times to the present day. Bloom Taxonomy's Cognitive Process: Remember and Understand
2. Students will distinguish between primary and secondary sources, identify and evaluate evidence and empathize with people in their historical context. Bloom Taxonomy's Cognitive Process: Analyze, Remember, Evaluate, Create
3. Students will summarize and appraise different historical interpretations and evidence in order to construct past events. Bloom Taxonomy's Cognitive Process: Understand, Evaluate, Apply
4. Students will identify historical arguments in a variety of sources and explain how they were constructed, evaluating, credibility, perspective, and relevance. Bloom Taxonomy's Cognitive Process: Remember, Understand, Evaluate
5. Students will create well-supported historical arguments and narratives that demonstrate an awareness of audience. Bloom Taxonomy's Cognitive Process: Create, Apply
6. Students will apply historical knowledge and historical thinking "in order to infer what drives and motivates human behavior in both past and present." Bloom Taxonomy's Cognitive Process: Apply, Analyze 16

HIST 2245G. Islamic Civilizations to 1800**3 Credits (3)**

History of Islamic civilizations to 1800.

Learning Outcomes

1. By the conclusion of the course, the student will be able to demonstrate a knowledge of the history of cultural encounters, exchanges, and conflicts between the Islamic world and the West from the seventh to the sixteenth century;
2. Be able to evaluate the major themes of cultural contact, conflict, and interchange between the Islamic world and the West;
3. Critically read and evaluate historical evidence with the goal of forming an argument about historical evidence
4. Communicate a historical argument logically, clearly, and effectively in writing.

HIST 2246G. Islamic Civilizations since 1800**3 Credits (3)**

History of Islamic civilizations since 1800.

Learning Outcomes

1. By the conclusion of the course, the student will be able to demonstrate a knowledge of the history of cultural encounters, exchanges, and conflicts between the Islamic world and the West from the sixteenth century;
2. Be able to evaluate the major themes of cultural contact, conflict, and interchange between the Islamic world and the West;
3. Critically read and evaluate historical evidence with the goal of forming an argument about historical evidence
4. Communicate a historical argument logically, clearly, and effectively in writing.

HIST 2250G. East Asia to 1600**3 Credits (3)**

History of China, Korea, Vietnam, and Japan from earliest times through the sixteenth century. Emphasis on cultural and political developments and their social and economic contexts, and the interaction between East Asian societies.

Learning Outcomes

1. Students will learn the analytic skills of interpreting historical changes and continuity.
2. They will assess and use historical documents, and learn how to evaluate varying historical interpretations.
3. Students will understand the chronological and geographic context of important historical events, and will understand the social, technological, economic, cultural and political components of the society under study in this course.
4. Students will understand how people shape their culture and its beliefs, and the way in which prevailing cultures and beliefs shape them.
5. They will understand the historical origins of present-day societies, to learn about their own historical roots.
6. They will learn about the development of structures of power, the production of and distribution of goods, and the relationship between science and technology and human values and behavior.

HIST 2251G. East Asia since 1600**3 Credits (3)**

History of China, Korea, Vietnam, and Japan from the sixteenth through the twentieth centuries. Emphasis on internal development of each country, as well as the social and political impact of Western Imperialism, and the emergence of each country's unique version of modern society.

Learning Outcomes

1. Students will learn the analytical skills of interpreting historical changes and continuity.
2. They will assess and use historical documents, and learn how to evaluate varying historical interpretations.
3. Students will understand the chronological and geographic context of important historical events, and will understand the social, technological, economic, cultural and political components of the society under study in this course.
4. Students will understand how people shape their culture and its beliefs, and the way in which prevailing cultures and beliefs shape them.
5. They will understand the historical origins of present-day societies, to learn about their own historical roots.
6. They will learn about the development of structures of power, the production of and distribution of goods, and the relationship between science and technology and human values and behavior.

HIST 2996. Special Topics**1-3 Credits**

Specific subjects to be announced in the Schedule of Classes. Community Colleges only. May be repeated for a maximum of 12 credits.

Learning Outcomes

1. Varies

HIT-HEALTH INFO TECHNOLOGY (HIT)

HIT 110. Electronic Health Records**3 Credits (3)**

Current electronic health record principles, methods and procedures, and computerized medical record concepts and software applications will be introduced. Restricted to: Community Colleges only.

HIT 120. Health Information Introduction to Pharmacology**3 Credits (3)**

Introduction to the principles of pharmacology, including drug terminology; drug origins, forms, and actions; routes of administration; as well as the use of generic name drugs, trade name drugs and categories of drugs to treat multiple and specific body systems. May be repeated up to 3 credits. Crosslisted with: NURS 120. Restricted to Community Colleges campuses only.

HIT 130. Health Information Technology Anatomy & Physiology**3 Credits (3)**

An introductory course in the basics of human structure and function. Body systems are examined as to how they relate to proper code selection and as part of the functioning of the body as a whole. Restricted to Community Colleges campuses only.

HIT 140. Health Information Introduction to Pathophysiology**3 Credits (3)**

Introduction to the nature of disease and its effect on body systems. Disease processes affecting the human body via an integrated approach to specific disease entities will be presented including a review of normal functions of the appropriate body systems. Diseases will be studied in relation to their etiology, pathology, physical signs and symptoms, diagnostic procedures, complications, treatment modalities and prognosis.

HIT 150. Introduction to Medical Terminology**3 Credits (3)**

The study and understanding of medical terminology as it relates to diseases, their causes and effects, and the terminology used in various medical specialties. Emphasis will be placed on learning the basic elements of medical words, appropriate spelling and use of medical terms, and use of medical abbreviations. May be repeated up to 3 credits. Crosslisted with: NURS 150, AHS 120 and BOT 150. Restricted to Community Colleges campuses only.

HIT 158. Advanced Medical Terminology**3 Credits (3)**

Builds upon the concepts covered in HIT 150 or AHS 120 providing greater understanding of how to properly use and apply medical terminology used in the various health fields. Medical terminology associated with the body system's anatomy and physiology, pathology, diagnostic and therapeutic procedures, pharmacology, and abbreviations will be emphasized. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 150 or AHS 120.

HIT 221. Internship I**3 Credits (3)**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. C- or better is required for this course. Consent of Instructor required. Restricted to: BOT, HIT majors. Restricted to Community Colleges campuses

HIT 228. Medical Insurance Billing**3 Credits (3)**

Comprehensive overview of the insurance specialist's roll and responsibilities. Concepts and applications that will assist the student in understanding the steps necessary for successfully completing the insurance claim filing and reimbursement processes for various insurance carriers, both private and government, will be emphasized. Restricted to Carlsbad campus only.

Prerequisite(s): HIT/NURS 150; BOT 208.

HIT 240. Health Information Quality Management**3 Credits (3)**

Introduction to basic concepts of quality improvement and performance improvement as they apply to health record systems and the health care industry. Quality assessment and improvement standards and requirements of licensing, accrediting fiscal and other regulatory agencies will be presented.

HIT 248. Medical Coding I**3 Credits (2+2P)**

Comprehensive overview of the fundamentals, coding conventions, and principles of selecting the most appropriate ICD-10-CM/PCS diagnostic and procedure codes. The most recent version of ICD-10-CM/PCS and an in depth study of current Official Coding Guidelines for coding and reporting will be emphasized. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 228.

HIT 255. Special Topics**3 Credits (3)**

Specific topics to be announced in the Schedule of Classes. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

HIT 258. Medical Coding II**3 Credits (2+2P)**

Continuation of Medical Coding I. Comprehensive overview of the coding and reporting guidelines, fundamentals, coding conventions, and principles of selecting the most appropriate CPT and HCPCS procedural codes for all medical specialties. The most recent version of CPT and a continued study of the ICD-10-CM/PCS coding conventions and principles will be emphasized. Designed as a medical coding capstone course. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 248.

HIT 268. Health Information Systems**3 Credits (3)**

Overview of health data management, work planning, and organization principles; an introduction to health care information systems; and review of the fundamentals of information systems for managerial, clinical support, and information systems.

HLED-HEALTH EDUCATION

HLED 1154. Lifeguarding**2 Credits (2)**

Skills training for a nonsurf lifeguard. Course will include Standard First Aid and CPR certification. May be repeated up to 2 credits. Students must be able to Swim 500 yards, dive to 9-foot depth and retrieve a 10-pound brick, surface dive to 5 feet then swim underwater 15 yards, tread water one minute.

Learning Outcomes

1. To help the student become aware of the common hazards associated with various types of aquatic facilities and to develop the knowledge and skills to eliminate or minimize such hazards.
2. To help the student develop the skills necessary to recognize a person in distress or in a drowning situation and to effectively rescue that person.
3. To help the student understand their responsibility to their employer, fellow employees and especially to the patrons of their facility.
4. To provide explanations, demonstrations, practice and review of the rescue skills essential for lifeguarding.
5. To instill in the students an understanding and appreciation for the responsibilities, swimming skills and additional duties of lifeguarding.
6. To develop more advance swimming skills to assist in a water rescue.

HMSV-HUMAN SERVICES

HMSV 2110. Case Management

3 Credits (3)

This course introduces students to the concept of case management, how it is used in human services, and skills necessary to function effectively as case managers. The emphasis is on the client assessment process, service planning and delivery, and client advocacy. Topics introduced include observation, data collection, documentation, and reporting of client behaviors, identification and referral to appropriate services, monitoring, planning, and evaluation. This course provides student with basic knowledge and beginning case management skills.

Prerequisite(s): PSYC 1110G and SOWK 2110G.

Learning Outcomes

1. Define the purpose of case management and explain the role of the case manager
2. Explain the process of case management and what it entails
3. Explain the ethical, professional and legal responsibilities of case managers
4. Describe several settings within which case management takes place
5. Apply principles of client record management, and protect client rights to privacy and confidentiality
6. Use data to determine the appropriate referral service to professional, agencies, community programs or other resource, and clearly and specifically explain the referral service's role in treatment and contact information
7. Apply standards of clinical evaluation, including establishing rapport, data gathering and screening, analysis of substance abuse implications, treatment possibilities, initial actions, and documentation of findings and treatment recommendations
8. Incorporate individual and cultural relevance in concert with established situation-specific policies and procedures for crisis management.

HNRS-HONORS

HNRS 1110. Journeys of Discovery

1 Credit (1)

Weekly conversations among students and a faculty member; organized around a particular subject and a small selection of readings. The seminars illuminate the many paths of discovery explored by the New Mexico State University faculty.

Prerequisite(s): Honors eligible.

Learning Outcomes

1. Students will comprehend and condense information to contribute to class discussions.
2. Students will develop public speaking and presentation skills based on research conducted in and outside of class.
3. Students will expand upon collaborative skills as both group presentations and group written reports.

HNRS 1115. Honors First Year Seminar

3 Credits (3)

This course is designed to introduce new first semester students to the life of the mind, the life of the University, and the principles that guide the NMSU University Honors Program. Combining critical thinking and experiential exploration, students will develop a personalized plan for success, both in and out of the classroom, consistent with the values of the Conroy Honors College and the mission of the University.

Learning Outcomes

1. Demonstrate critical thought about the nature of knowledge, learning, and student development in the contemporary University. Explain how key concepts and principles serve as the foundation for the Honors College mission and values. Create a plan for their experiences at NMSU, in and out of the classroom, that will maximize their academic achievement and personal success beyond graduation.

HNRS 1135G. Introduction to Biological Anthropology

3 Credits (3)

This course provides a basic introduction to the broad field of biological anthropology. The research interests of biological anthropologists include the history and development of modern evolutionary biology, molecular and population genetics, modern primates, the primate and human fossil record, and modern human biological diversity. This is an Honors version of ANTH 1135G. It is taught with ANTH 1135G with differentiated assignments. .

Corequisite: HNRS 1135L.

Learning Outcomes

1. Summarize the basic principles of evolution and recognize how they apply to the human species. Recognize the biological and behavioral continuity of humans with all life, and especially other modern primate species. Identify ways in which the human species is biologically and behaviorally unique. Summarize fossil evidence for human evolution. Distinguish the major Paleolithic industries and outline the behavioral and cognitive changes indicated by the fossil and archeological evidence. Critically evaluate popular accounts of human variation and human evolution. Interpret modern human dilemmas (e.g., overpopulation, co-evolution of disease, and genetic engineering) from an evolutionary perspective. Discuss in class and analyze in writing scholarly arguments concerning course concepts.

HNRS 1135L. Introduction to Biological Anthropology Lab**1 Credit (1P)**

This laboratory course expand on the topics covered in lecture course and uses scientific methods and principles to examine evidence for the process of evolution, the nature of heredity, human evolutionary history and family tree relationships, primate ecology and behavior, and modern human diversity. Hands-on experience with fossil and skeletal material will be an important part of the learning process. This is an Honors version of ANTH 1135L.

Corequisite: HNRS 1135G.

Learning Outcomes

1. Demonstrate an understanding of the scientific method. Employ principles of Mendelian genetics to determine genotype and phenotype probabilities, and calculate gene, genotype, and phenotype frequencies using the Hardy-Weinberg Equilibrium formula. Demonstrate an understanding of cell structure and functions. Use common lab and anthropometric equipment such as a compound microscope and calipers. Discuss primate evolution, and compare and contrast members of the Primate order in terms of structure, behavior, and phylogeny. Classify hominid species based upon selected traits such as anatomical changes associated with bipedalism, changes in the size and structure of the brain, and the development of culture. Locate and describe the major bones of the human skeleton, and identify characteristics of human skeletons or skulls such as gender, age, and ancestry. Discuss current research in genome analysis of various hominid populations.

HNRS 2110G. The Present in the Past: Contemporary Issues and their Historical Roots**3 Credits (3)**

This course will take today's concerns, trends, and customs and contextualize them in the past, explaining their historical origins and development. As an example, we will examine the history of celebrity and how celebrities -- from Lord Byron to the Kardashians' made an impact on their contemporaries and the broader society of their time. This reading- and writing-intensive course will help students develop skills related to critical thinking, logical argumentation, and written and oral communication.

Learning Outcomes

1. Analyze and critically interpret primary sources and understand how others might interpret and use the same material in different ways;
2. Recognize and articulate the diversity of human experience across a range of historical periods and/or cultural perspectives.
3. Understand how historical experiences and memories have shaped contemporary societies;
4. Identify and understand the degree to which history has been used and misused in the past;
5. Draw on historical and/or cultural perspectives to evaluate any or all of the following: contemporary problems/issues, contemporary modes of expression, and contemporary thought.
6. Demonstrate improvement in their ability to read critically, think logically, and express themselves clearly in writing.

HNRS 2111. Successful Fellowship Writing**1 Credit (1)**

Provides scholars with hands-on skills to complete proposals for scholarships and fellowships, such as the Truman, Rhodes, Marshall, Goldwater, Udall, and others. Other skills include how to write resumes, develop general research skills, and find grant and foundation sources. For freshmen and sophomores. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Review of Prestigious International and National scholarships
2. Best practices in preparing competitive proposals and applications
3. Effective strategies for writing compelling Executive summaries, Resumes, and Personal Statements

HNRS 2114G. Music in Time and Space**3 Credits (3)**

Introduction to all forms of Music. Through our auditory senses and intellectual faculties music is an ideal means for intelligent and humanistic examination of peoples and cultures, and for the enhancement of life. Types of music covered include classical, jazz, rock and roll, and world music. Music videos, live in-class performances, evening concerts, and lectures will be used as a basis for discussions and research. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Analyze and critically interpret significant primary texts and/or works of art (this includes fine art, literature, music, theatre, and film).
2. Compare art forms, modes of thought and expression, and processes across a range of historical periods and/or structures (such as political, geographic, social, cultural, religious, intellectual).
3. Recognize and articulate the diversity of human experience across a range of historical periods and/or cultural perspectives.
4. Draw on historical and/or cultural perspectives to evaluate all of the following: contemporary problems/issues, contemporary modes of expression, and contemporary thought

HNRS 2115G. Encounters with Art**3 Credits (3)**

A multicultural examination of the principles and philosophies of the visual arts and the ideas expressed through them. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Articulate the relationship of art to the human experience
2. Apply the vocabulary of art to critical writings and discussions
3. Interpret art works within cultural, social, personal and historical contexts

HNRS 2116G. Earth, Time and Life**4 Credits (3+3P)**

Covers how the earth's materials form, processes involved in changing the earth's configuration, and extent of people's dependence upon the earth's resources. Includes mineral and energy resources, development of landscapes, environmental problems, evolution of the earth and life forms. May be taken in place of GEOL 1110. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Gain a general understanding of geology and the geological processes that have been occurring throughout Earth's history.
2. Learn about some of the common minerals and rocks that are the building blocks to geology and the rock cycle.
3. Investigate the processes associated with each rock type (e.g., volcanoes, faults, depositional processes, etc.) and as well as potential geologic hazards (e.g., volcanic eruptions, earthquakes, flooding, etc.).
4. Recognize and identify common minerals and rocks and understand the basic processes and conditions responsible for their formation and occurrence.
5. Comprehensively understand how the internal and external parts of the Earth have functioned throughout geologic time.

HNRS 2117G. The World of the Renaissance: Discovering the Modern**3 Credits (3)**

An introduction to the literature and thought of Renaissance Europe. Humanism and the Reformation will be approached through the intensive study of major writers such as Petrarch, Machiavelli, Luther, Erasmus, Montaigne, and Shakespeare. Restricted to Las Cruces campus only. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Analyze and critically interpret significant primary texts and/or works of fine art, literature, philosophy, and theatre from the early modern period;
2. Locate art forms, modes of thought and expression, and processes from the early modern period in historical and/or cultural context and compare them to those of other time periods;
3. Demonstrate an understanding of how early modern historical and/or cultural perspectives and key
4. technological developments contributed to the development of contemporary thought and modes of expression;
5. Recognize and articulate the diversity of human experience across historical periods and/or cultural perspectives;
6. Demonstrate skill in working with relevant secondary resources and research tools to develop a class

HNRS 2120G. Foundations of Western Culture**3 Credits (3)**

Critical reading of seminal texts relating to the foundations of culture and values in Western civilization, from ancient Greece to about 1700. Focus on the development of concepts of nature, human nature, and the state. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will enhance abilities to quickly read, comprehend, and evaluate lengthy, complex texts to extract their fundamental arguments.
2. Students will improve critical thinking by grappling with ethical issues about the rights of individuals versus societies.
3. Students will use historical analysis to contextualize current social, political, geographic, and economic issues and how the foundations continue to affect contemporary society.

HNRS 2130G. Shakespeare on Film**3 Credits (3)**

How do Shakespeare's plays continue to speak to us through the medium of film? Written in a time of rapid social change, Shakespeare's plays invited audiences to think critically about the relationship between the self and others and to question conventions. Performances of Shakespeare have long been used to call out social injustice, from western anti-Semitism prior to World War II (*The Merchant of Venice*), to civil rights-era white supremacy in the US and apartheid in South African (*Othello*), and authoritarianism in the Arab Spring (*Richard III*). This course focuses on post-1980 Hollywood film versions of Shakespeare's plays and a few prior landmark adaptations around the world, examining how they use Shakespeare as a medium for debate and even a catalyst for social change.

Learning Outcomes

1. Demonstrate critical thinking by identifying issues and problems in the film adaptation of Shakespeare;
2. Engage in intercultural reasoning and develop intercultural competence and historical consciousness in analyzing film adaptations from the US, Europe, and Asia;
3. Engage with questions of personal and social responsibility as explored in Shakespeare's plays and modern film adaptations;
4. Conduct effective research on a relevant topic, evaluating the validity and authority of secondary sources, synthesizing ideas, and drawing reasonable conclusions;
5. Present independent research in collaboration with other student researchers and reflect on this teamwork experience

HNRS 2140G. Plato and the Discovery of Philosophy**3 Credits (3)**

Examines arguments and theories found in the Platonic dialogues with a view to determining the nature and value of philosophy both from Plato's point of view and absolutely. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will evaluate a number of Plato's dialogues to understand his doctrines and arguments.
2. Students will use their understanding to further evaluate why his philosophies have remained influential in modern, Western society and beyond.
3. Students will develop well-formulated, compelling arguments from philosophical texts.

HNRS 2141G. Bamboo and Silk: The Fabric of Chinese Literature**3 Credits (3)**

Introductory survey of traditional and modern Chinese prose and poetry in translation with emphasis on genre, theme, and social/historical context. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will acquire extensive knowledge of one of the world's oldest and richest literary traditions.
2. Not incidentally, students will also gain knowledge of China's history and philosophical traditions.
3. As this class is based on reading, writing, and discussion, students will hone their interpretive and
4. expressive skills.

HNRS 2145G. Celtic Literature**3 Credits (3)**

This course provides an overview of the most important early literary works of the so-called Celtic nations, principally Ireland and Wales, from a literary and historical approach. This literature stems from the period 600-1200 and ends with the development of the Romances under influence from the French

Learning Outcomes

1. Students will learn the concept of the international folk tale,
2. Students will learn about the history of the Celts
3. Students will learn about the concept of Celtic nations' formed during the 19th Century.
4. Students will enhance critical thinking skills.
5. Students will enhance written and oral communication.

HNRS 2160G. New Testament as Literature**3 Credits (3)**

Literature of the New Testament examined from a literary perspective. Emphasis on translation history of the New Testament, generic features of gospel, epistle and apocalypse, precedent literary models, problems of authorship, classification of New Testament texts. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will hone critical thinking skills by analyzing arguments and controversies surrounding the roots of Christianity.
2. Students will discern and discuss the viability of both literary and historical sources with debated authorship, dating, and interdependency.
3. Students will practice interpersonal navigation and maintaining an academic environment of respect as they discuss a number of topics that can be considered controversial or subjective.

HNRS 2161G. Window of Humanity**3 Credits (3)**

Anthropology is the most humanistic of the sciences, and the most scientific of the humanities. This course will use anthropological perspectives to examine the human experience from our earliest origins, through the experiences of contemporary societies. We will gain insights into the influence of both culture and biology on shaping our shared human universals, and on the many ways in which human groups are diverse. Restricted to Las Cruces campus only. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Explain the concepts that define Anthropology (along with its subfields) as a specific research discipline.
2. Possess a growing vocabulary for anthropology, cultural study, ethnographic research and writing that will empower them as they continue with their degrees and professional careers.
3. Recognize how Anthropological concepts, terms, and methods are valuable for present-day concerns and how these tools can be used to engage life and the world at large.

HNRS 2165. Humanities in the 21st Century**3 Credits (3)**

An exploration of the humanities, of their intrinsic and extrinsic values, and of the skills and habits of mind they cultivate.

Learning Outcomes

1. Articulate what the humanities are and what role they have played in education throughout the ages
2. Articulate examples of the intrinsic value of the humanities
3. Articulate the skills and habits of thought in at least one chosen discipline in the humanities
4. Articulate common misconceptions about university majors and reframe the common misconceptions
5. Create at least three employment scenarios based on your skills and interests
6. Exercise divergent thinking with regards to future career paths

HNRS 2170G. The Human Mind**3 Credits (3)**

The primary course objective is to develop an appreciation of the variety and complexity of problems that are solved by the human mind. The course explores how problems are solved by a combined computational analysis (computational theory of mind), and evolutionary (evolution by natural selection) perspective. The mind is what the brain does (i.e. information processing) and the brain is a computational device that is a product of evolution by natural selection. Note that this is not a neuroscience course, we will be focusing on the mind (what the brain does) rather than on the brain. Restricted to Las Cruces campus only.

Learning Outcomes

1. Enhance written and oral communication
2. Stimulate critical thinking and learn to weigh scientific evidence
3. Challenge students to make ethical decisions and promote personal and social responsibility

HNRS 2171G. The Worlds of Arthur**3 Credits (3)**

Arthurian texts and traditions from medieval chronicles to contemporary literature. Emphasis on both the continuities of the Arthurian tradition and the diversity of genres, media, and cultures that have given expression to the legend. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. Students will examine how texts and narratives, even with fictional implications, still held psychological, social, cultural, and religious sway within developed societies throughout history.
2. Students will synthesize information from an array of both primary and secondary sources to measure the cultural significance King Arthur holds in contemporary societies.
3. Students will extrapolate how a society's values at any point in history will affect the transference of mythos, just as a myth transmits the values of that society.

HNRS 2172G. Archaeology: Search for the Past**3 Credits (3)**

A critical evaluation of various approaches to understanding prehistory and history. The methods and theories of legitimate archaeology are contrasted with fantastic claims that invoke extraterrestrials, global catastrophes, transoceanic voyages, and extra-sensory perception. May be repeated up to 3 credits. Restricted to Las Cruces campus only. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Identify, describe, and explain how human lifeways changed in diverse communities in different parts of the globe.
2. Select and use relevant archaeological evidence to articulate how people's beliefs and values were influenced by politics, geography, economics, culture, biology, history, and social institutions in the past.
3. Analyze the significance of archaeological artifacts in context and explain their relevance to understanding relations among individuals, their society, and the environment.
4. Evaluate how practices in research, conservation, and tourism to archaeological sites promote ethical stewardship of non-renewable archaeological resources.
5. Design a study tour to archaeological sites that will address a key question or argument in prehistory and promote historic/archaeological preservation.

HNRS 2173G. Middle Ages**3 Credits (3)**

Intensive, interdisciplinary introduction to the thought and culture of medieval Europe. Core texts will include works by St. Augustine, Marie de France, and Dante, as well as anonymous works such as Sir Gawain and the Green Knight, all supplemented by study of medieval art, architecture, philosophy, and social history. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will hone critical reading skills as they read through a wealth of texts, by prioritizing attention to details and how it affects the overall narrative.
2. Students will recognize how the social, religious, and political environments of the medieval era shaped contemporary society in affected regions beyond Europe.
3. Students will employ comparative analysis skills as they examine how Islamic culture might have influenced poetry and music in medieval Europe.

HNRS 2174G. American Politics in a Changing World**3 Credits (3)**

American politics and policies examined from a historical and global perspective. Philosophical underpinnings of American national government, the structure of government based on that philosophy, and the practical implications of both the philosophical and structural base. How American government influences and is influenced by the world community. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will enhance their understanding of the operation of major American political institutions and processes.
2. Students will investigate how the uniquely American form of constitutional governance has sought to adapt to changing historical and cultural conditions.
3. Students will practice interpersonal navigation and maintaining an academic environment of respect as they discuss a number of topics that can be considered controversial or subjective.

HNRS 2175G. Introduction to Communications Honors**3 Credits (3)**

Study and practice of interpersonal, small group, and presentational skills essential to effective social, business, and professional interaction. 5 or higher
Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Analyze and evaluate oral and written communication in terms of situation, audience, purpose, aesthetics, and diverse points of view.
2. Express a primary purpose in a compelling statement and order supporting points logically and convincingly.
3. Use effective rhetorical strategies to persuade, inform and engage.
4. Employ writing and/or speaking processes such as planning, collaborating, organizing, composing, revising editing to create presentations using correct diction, syntax, grammar and mechanics.
5. Integrate research correctly and ethically from credible sources to support the primary purpose of a communication.
6. Engage in reasoned civil discourse while recognizing the distinctions among opinions, facts, and inferences.

HNRS 2176. Acting for Everyone**3 Credits (3)**

To provide fundamental training in acting techniques, including stage voice and movement, improvisation, ensemble building, characterization, emotion exploration and basic performance analysis. The course will provide a correlation between theatre skills and everyday "life" skills and seek to encourage an appreciation for the art of theatre.

Learning Outcomes

1. Improve effectiveness of oral communication.
2. Enhance creativity and appreciation of theatre.
3. Build confidence and expressiveness.

HNRS 2178G. Theatre: Beginnings to Broadway**3 Credits (3)**

Intercultural and historical overview of live theatre production and performance, including history, literature and professionals. Students attend and report on stage productions. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Distinguish and differentiate the characteristics of theatre from other art forms.
2. Describe the major components of a theatrical event.
3. Describe the functions of various theatre personnel.
4. Define specific terms relating to the study of theatre.
5. List and describe the parts of a play.
6. Define the different parts of plot.
7. Critique plays
8. Describe the characteristics of theatre in the different periods of history.
9. Develop an appreciation for theatre as an art form and a reflection of society

HNRS 2180G. Citizen and State Great Political Issues**3 Credits (3)**

The fundamental questions of politics: why and how political societies are organized, what values they express, and how well they satisfy those normative goals and the differing conceptions of citizenship, representation, and freedom. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will investigate the fluid state of American politics by discerning the decisions and policies of a selection of presidents.
2. Students will investigate the complex operations behind a representative democracy.
3. Students will examine how the sociopolitical environment surrounding a president influences his policies, and how a president's policies affect the broader society.
4. Students will assess and measure how politics can be affected by active and engaged citizens

HNRS 2185G. Democracies, Despots and Daily Life**3 Credits (3)**

This course will offer students the chance to read firsthand accounts of ordinary citizens' lives under different political systems, from the earliest age to the present day. This reading- and writing-intensive course will help students develop skills related to critical thinking, logical argumentation, and written and oral communication.

Learning Outcomes

1. Analyze and critically interpret primary sources and understand how others might interpret and use the same material in different ways;
2. Recognize and articulate the diversity of human experience across a range of historical periods and/or cultural perspectives.
3. Understand how historical experiences and memories have shaped contemporary societies;
4. Identify and understand the degree to which history has been used and misused in the past;
5. Draw on historical and/or cultural perspectives to evaluate any or all of the following: contemporary problems/issues, contemporary modes of expression, and contemporary thought.
6. Demonstrate improvement in their ability to read critically, think logically, and express themselves clearly in writing.

HNRS 2190G. Claiming a Multiracial Past**3 Credits (3)**

Survey of history of the United States in the nineteenth and twentieth centuries, with an emphasis on multicultural social and cultural history. Focus on understanding American history from the point of view of dispossessed, impoverished, and disenfranchised Americans who have fought to claim both their rights as Americans and American past. 5 or higher

Prerequisite(s): An ACT score of 26 or higher; or a combination of an ACT score of 24-25 with a High School GPA of 3.75; or a NMSU cumulative GPA of 3.

Learning Outcomes

1. Students will contextualize the current state of American "being" by focusing on the multicultural-social and cultural history of the U.S. in the nineteenth and twentieth centuries.
2. Students will hone public speaking and presentation skills through classroom discussions and activities.
3. Students will practice interpersonal navigation and maintaining an academic environment of respect as they discuss a number of topics that can be considered controversial or subjective.

HNRS 2996. Special Topics**1-3 Credits (1-3)**

Special course offerings, with unique titles listed in Schedule of Classes. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

HORT-HORTICULTURE (HORT)

HORT 1115G. Introductory Plant Science**4 Credits (3+2P)**

Introduction to the physical, biological, and chemical principles underlying plant growth and development in managed ecosystems. In the laboratory portion of the class, students perform experiments demonstrating the principles covered in lecture. The course uses economic plants and agriculturally relevant ecosystems to demonstrate basic principles. Appropriate for nonscience majors. Same as AGRO 1110G.

Learning Outcomes

1. Describe the role plants play in everyday lives
2. Introduce career opportunities in plant and soil sciences, and related fields
3. Define plants through the concepts of plant structure and anatomy
4. Introduce the wide variety of plants cultivated throughout the world
5. Describe how plants work (growth, reproduction, physiology, and soil)
6. Describe how plants are manipulated to feed, clothe and entertain the world

HORT 2110. Ornamental Plants I**4 Credits (2+3P)**

Covers identification, botanical characteristics, culture, and landscape uses of woody plants. Emphasis on deciduous trees, native shrubs, and evergreens.

Learning Outcomes

1. Given 35 ornamental plants selected from the course's plant list, 100% of students will be expected to correctly identify the genus, species, and common names of the plants with 70% accuracy.
2. Given plants selected from the course's plant list, 100% students will be expected to identify to
3. landscape use of those plants with 85% accuracy.

HORT 2120. Ornamental Plants II**4 Credits (2+3P)**

Identification, botanical characteristics, culture, and landscape uses of woody plants. Emphasis on flowering trees, cacti, and members of the pea and rose families.

Learning Outcomes

1. Given 35 ornamental plants selected from the course's plant list, 100% of students will be expected to correctly identify the genus, species, and common names of the plants with 70% accuracy.
2. Given plants selected from the course's plant list, 100% students will be expected to identify to landscape use of those plants with 85% accuracy.

HORT 2130. Floral Quality Evaluation and Design**2 Credits (1+2P)**

Critical hands-on evaluation of the quality of cut and potted floral and tropical foliage crops, their specific merits and faults, and fundamentals of floral design.

Learning Outcomes

1. Identify common floriculture crops, or know resourcing to help identify the crop.
2. Evaluate quality (merit and fault) of common floriculture crops, based on industry standards and merit. Pi Alpha Xi and American Floral Endowment standards will be used for the purpose of this class.
3. Have a basic understanding of the floriculture industry, and identify career pathways within the industry.
4. Know, understand, creatively interpret, and execute basic principles of design in regards to floral design.
5. Use interpersonal communication, problem solving, basic math, and marketing during cash and carry "lab" time (flower sales) in developing job ready skills in floristry.
6. Layer principles of design, marketing, sales, and time management to create floral art in real-world scenarios.

HORT 2160. Plant Propagation**3 Credits (2+2P)**

Practical methods of propagating horticultural plants by seed, cuttings, layering, grafting, division and tissue culture. Examination of relevant physiological processes involved with successful plant propagation techniques. Same as AGRO 2160.

Learning Outcomes

1. Practical methods of propagating plants by seed, cuttings, layering, grafting, division, and tissue culture through experiential, "hands-on" laboratories.
2. Relevant physiological principles involved in propagating horticultural plants through lecture discussions and readings.

HORT 2990. Floriculture Field Practicum**1 Credit (1)**

Participation as team member in the National Intercollegiate Floral Quality Evaluation and Design Competition. Intensive week-long travel for competition, networking with industry, academia, and floriculture tours. May be repeated for a maximum of 3 credits.

Prerequisite(s): HORT 2130 or consent of instructor.

Learning Outcomes

1. Varies

HORT 2996. Special Topics**1-4 Credits**

Specific subjects and credits as announced. Maximum of 4 credits per semester and a grand total of 9 credits. May be repeated up to 9 credits. Consent of Instructor required.

Learning Outcomes

1. Varies

HOST-HOSPITALITY AND TOURISM (HOST)

HOST 155. Special Topics

1-3 Credits (1-3)

Specific subjects to be announced in the Schedule of Classes. Restricted to: Community Colleges only.

HOST 201. Introduction to Hospitality Industry

3 Credits (3)

Overview of hospitality industry; organization and operation of lodging, food and beverage, and travel and tourism segments; focus on career opportunities and future trends of hospitality industry. Restricted to: Community College campuses only.

HOST 202. Front Office Operations

3 Credits (3)

Hotel/motel front office procedures detailing flow of business, beginning with reservations and extending to the night audit process. Restricted to: Community College campuses only.

HOST 203. Hospitality Operations Cost Control

3 Credits (3)

Management of Food & Beverage facilities using cost control techniques. Functional training in menu analysis and development with all phases of product flow through a Food & Beverage organization explored. Restricted to: Community Colleges only.

HOST 204. Promotion of Hospitality Services

3 Credits (3)

Organization of hotel marketing functions; developing a marketing plan to sell the varied services of the hotel/motel property. Restricted to: Community College campuses only.

HOST 205. Housekeeping, Maintenance, and Security

3 Credits (3)

Function of housekeeping departments, including personnel, sanitation, maintenance, and materials. A survey of security procedures to include guest protection and internal security of hotel/motel assets. Restricted to: Community College campuses only.

HOST 206. Travel and Tourism Operations

3 Credits (3)

Transportation, wholesale and retail operations, attractions, the traveler, tourism development, and operational characteristics of tourism business. Restricted to: Community College campuses only.

HOST 207. Customer Service for the Hospitality Industry

3 Credits (3)

Concepts of service and the customer, integrating the need for service quality, and the continuing efforts to maximize returns for the operation. Classic service styles as well as more modern service techniques are covered. Students gain in-depth managerial knowledge, planning skills, and hands-on techniques for consistently delivering quality and service in a variety of operations. Restricted to: Community College campuses only.

HOST 208. Hospitality Supervision

3 Credits (3)

Strategies for directing, leading, managing change and resolving conflict. Prepares students to meet expectations of management, guests, employees, and governmental agencies. Restricted to: Community College campuses only.

HOST 209. Managerial Accounting for Hospitality

3 Credits (3)

Prepares students to make effective business decisions based on financial report information; forecasting, budgeting, cost analysis. Restricted to: Community College campuses only.

Prerequisite(s): BOT 120 or ACCT 2110.

HOST 210. Catering and Banquet Operations

3 Credits (3)

Teaches the basics of catering and banquet operations, including computer coordination, planning, set up, service, and completion. Restricted to Community Colleges campuses only.

HOST 214. Purchasing and Kitchen Management

3 Credits (3)

Technical purchasing concepts, product selection, and specifications. Safety and sanitation as they relate to food service establishments. Prepares student for work with HACCP programs. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HOST 203.

HOST 216. Event, Conference and Convention Operations**3 Credits (3)**

The ability to successfully plan, organize, arrange, and execute special events is critical to the success of many hospitality organizations. This course gives the student a grounding in the skills necessary to achieve success in this area. A variety of events are discussed and the similarities and differences with conferences and conventions are explored. Students are taught to organize and plan events of varying type and durations. Sales, logistics, and organizing skills are emphasized. Restricted to: Community College campuses only.

HOST 219. Safety, Security and Sanitation in Hospitality Operations**3 Credits (3)**

It is the responsibility of the manager to provide appropriate security, sanitation, and safety precautions in hospitality operations. Preparation for internal and external disasters is an important task for the Hospitality Manager. This course uses the National Restaurant Association ServSafe® training material. Restricted to: Community College campuses only.

HOST 221. Internship I**1-3 Credits (1-3)**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEHS, HOST majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

HOST 222. Cooperative Experience II**3 Credits (3)**

Continuation of HOST 221. Restricted to majors. Graded: S/U. Restricted to: Community College campuses only. Restricted to HOST majors.

Prerequisite(s): HOST 221.

HOST 239. Introduction to Hotel Management**3 Credits (3)**

This course covers basic management functions in hotels, resorts, Boutique Hotels, Bed & Breakfast establishments, and other lodging operations. All aspects of the operation are covered including guest management, operations, and sales and marketing. Restricted to: Branch campuses only.

HOST 255. Special Topics**3 Credits (3)**

Specific subjects to be announced in the Schedule of Classes. May be repeated up to 9 credits. Restricted to Community Colleges campuses only.

HOST 298. Independent Study**1-3 Credits (1-3)**

Individual studies directed by consenting faculty with prior approval of department chair. May be repeated for a maximum of 3 credits. Restricted to: Community College campuses only.

Prerequisite(s): Minimum 3.0 GPA and sophomore standing.

HRTM-HOTEL/RESTRNT/TOURISM MGT (HRTM)

HRTM 1120G. Introduction to Tourism**3 Credits (3)**

Survey of travel and tourism development and operating characteristics.

Learning Outcomes

1. Define tourism and related terms. Identify and explain the role of the elements of the destination mix. Identify the potential socio-cultural, economic and environmental impacts of tourism.
2. Identify and describe the role of key governmental and nongovernmental organizations in tourism.
3. Describe basic tourism planning and development principles.
4. Discuss the unique challenges of tourism marketing and standard marketing methods.
5. Describe the components of the tourism distribution system.
6. Demonstrate a basic understanding of traveler behavior including motivations and barriers to travel. Identify major factors that influence traveler flows. 1Describe the role of major modes of transportation in the tourism system.
7. 1Identify and describe the three pillars of sustainable tourism development. 1Explain personal and social responsibility as it relates to sustainable tourism development. 1Demonstrate effective communication and critical thinking skills.

HRTM 1130. Introduction to Hospitality Management**3 Credits (3)**

Overview of the major segments of the hospitality industry, with a focus on basic management principles.

Learning Outcomes

1. Understand the concept of management contracts and franchising.
2. Recognize and understand needed leadership qualities to achieve organizational objectives.
3. Understand the hospitality industry within the global environment.
4. Identify company and industry trends.
5. Understand the functions of all departments in a hospitality organization (restaurant, hotel, club, etc.).
6. Apply the concepts of convention management, meeting and event planning, and casino management.
7. Understand the concepts of quick and institutional/contract foodservice management.
8. Understand the principles of bar management and compare and contrast wines, beers and distilled spirits.
9. Manage the process of service delivery.
10. 1Identify and solve managerial problems
11. 1Manage a diverse workforce and develop positive employee relations to reduce turnover.

HRTM 2110. Safety, Sanitation and Health in the Hospitality Industry**1 Credit (1)**

Addresses public health, HACCP, and food safety responsibilities in the hospitality industry. Sanitation certification test allows students to receive national ServSafe Food Protection Manager Certification. Restricted to Las Cruces campus only.

Learning Outcomes

1. Identify the hazards to safe food and the foods at risk in a foodservice operation.
2. Identify and discuss the Hazard Analysis Critical Control Point (HACCP) system and be able to design a HACCP flowchart.
3. Demonstrate knowledge of how to protect food during purchasing, receiving, storing, preparing, holding, and serving.
4. Discuss the procedures for ensuring sanitary equipment, facilities, and food-handling practices.
5. Explain how to set-up cleaning, safety, pest control, crisis management, and training programs.

HRTM 2120. Food Production and Service Fundamentals**3 Credits (1+4P)**

Basic overview of food service systems including menu management, purchasing and production. The course includes basic principles of food fabrication and production. Topics include knife skills, culinary terminology, product identification, quality standards, nutritional cooking theory and application of food preparation techniques. The course includes laboratory aspects and demonstration of basic food production techniques, service styles, practices and procedures in food service operations including culinary math. This course provides students with an understanding of food service sanitation and culinary nutrition. Completion of a national certification examination is required. Students who have not completed HRTM 2110 before enrolling in the course must have proof of valid ServSafe Food Protection Manager certificate. Restricted to Las Cruces campus only. Prerequisite(s)/

Corequisite(s): HRTM 2110

Prerequisite(s): HRTM 1130 or FSTE 2110G.

Learning Outcomes

1. Demonstrate use of standard recipes and how to reduce and increase their yields.
2. Demonstrate basic culinary knife cuts, basic fabrication and mise en place
3. Demonstrate basic cookery techniques of dry, moist and a combination of heat
4. Demonstrate the proper plating and garnishing of foods
5. Describe proper personal behaviors required for the safe handling of food
6. Identify and properly operate kitchen equipment.
7. Pass the ServSafe Exam
8. Describe the three forms of food contaminants and preventative measures.
9. Demonstrate how to properly "set" a table for service
10. 1Demonstrate how to provide dining room service with proper etiquette
11. 1Demonstrate safe work habits, identify safety hazards, and employ preventative safety measures.
12. 1Maintain positive relations with fellow students and faculty through teamwork.
13. 1Exhibit appropriate work habits and attitudes; demonstrate a willingness to compromise.
14. 1Demonstrate a positive attitude, conversation skills, personal hygiene and work attire.

HRTM 2130. Hotel Operations I**3 Credits (3)**

Analysis of hotel operations to include: guest services, reservations, reception, guest/city ledger and the night audit. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Prerequisite(s): HRTM 1130.

Learning Outcomes

1. Outline the history, magnitude and culture of the hotel industry
2. Define and identify hotel ownership and operational structures
3. Outline the organization and structure of a hotel and resort.
4. Describe and calculate the components and processes of room reservation forecasting, pricing and revenue management.
5. Outline and explain the flow of the guest from pre-arrival through arrival, room occupancy and departure.
6. Demonstrate the procedures and processes for Guest Accounting, the City Ledger, Guest Credit and the Night Audit.
7. Discuss problem solving and guest service associated with the front office and other departments of the hotel and resort.
8. Forecast impacts of technology to the guest services and hotel operations
9. Describe the day to day activities and responsibilities of a Hotel Front Office Manager or a Hotel Assistant General Manager (AGM).

HRTM 2996. Special Topics**1-4 Credits**

Specific subjects and credits to be assigned on a semester basis for both lecture and laboratory assignments. May be repeated for a maximum of 4 credits.

Prerequisite: consent of instructor.

Learning Outcomes

1. Varies

HVAC-HEATING/AC/REFRIGERATION (HVAC)

HVAC 100. EPA Clean Air Act: Section 608**1 Credit (1)**

Refrigerant certification preparation to include basics of refrigerant bearing equipment, ozone depletion and the new legislation, technician categories covered and the certification examination.

HVAC 101. Fundamentals of Refrigeration**4 Credits (3+2P)**

Refrigeration cycle and the various mechanical components. Use of special tools, equipment, and safety precautions.

HVAC 102. Fundamentals of Electricity**4 Credits (3+2P)**

Introduction to electricity theory, OHM s Law, circuits, AC/DC, and practical applications.

HVAC 103. Electrical and Mechanical Controls I**4 Credits (3+2P)**

Applications of basic electrical and mechanical controls. Reading and drawing diagrams of simple refrigerating equipment. Safe use of testing equipment.

Prerequisites: HVAC 101 and HVAC 102, or consent of instructor.

HVAC 110. Professional Development and Leadership**1 Credit (1)**

As members and/or officers of various student professional organizations, students gain experience in leadership, team building, and community service. Students competing in Skills USA are required to register for the course. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: HVAC majors. Graded: S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

HVAC 113. Job Shadowing**1 Credit (1)**

Course will expose students to actual HVAC/R field work and provide them knowledge of the expectations of field work as they shadow an HVAC/R technician. Consent of instructor required. Restricted to: Community colleges only.

HVAC 205. Commercial Refrigeration Systems**4 Credits (3+2P)**

Service and maintenance of commercial refrigeration equipment to include evacuation and charging procedures, electrical diagrams, and compressors and accessories.

Prerequisites: HVAC 103 or consent of instructor.

HVAC 207. Residential Air Conditioning Systems**4 Credits (3+2P)**

Applications and types of equipment used in comfort cooling. Preventive maintenance, service, and repairs common to evaporative coolers and refrigerated air conditioning systems. Air properties and psychometrics.

Prerequisite: HVAC 103 or consent of instructor.

HVAC 209. Residential Heating Systems**4 Credits (3+2P)**

Gas and electric systems used in comfort heating. Maintenance procedures, safety, troubleshooting, and servicing malfunctions in equipment.

Prerequisite: HVAC 103 or consent of instructor.

HVAC 210. Commercial Air Conditioning and Heating Systems**4 Credits (3+3P)**

Covers troubleshooting mechanical and electrical problems associated with HVAC equipment in commercial buildings. Includes gas, electric, and heat pump systems. Restricted to Community Colleges campuses only.

Prerequisite(s): HVAC 103 or consent of instructor.

HVAC 211. Heat Pump Systems**4 Credits (3+2P)**

Reverse cycle refrigeration systems utilized in comfort heating and cooling. Troubleshooting mechanical electrical problems associated with heat pumps. HVAC 103 or consent of instructor.

HVAC 213. Practicum**3 Credits (3)**

Working in the field with journeymen service technicians. Develop and apply job skills. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: HVAC majors. Restricted to Community Colleges campuses only.

Prerequisite(s): HVAC 113 and Consent of instructor.

HVAC 220. Introduction to Sheet Metal Fabrication**4 Credits (3+2P)**

Introduction to sheet metal fabrication to include hands-on practical laboratory applications, cutting and forming procedures, identifying types and gauges. Design and layout techniques.

Prerequisite: OETS 118 or equivalent math or consent of instructor.

HVAC 225. New Mexico Mechanical Codes: HVAC**1-4 Credits**

Principles and regulations developed for HVAC, sheet metal, and plumbing occupations to include terminology, ventilation air supply, exhaust systems, duct systems, combustion air, chimneys and vents, boilers/water heaters, refrigeration, panel and hydronic panel heating, fuel gas piping, storage systems, solar systems, and workmanship standards. May be repeated for a maximum of 12 credits.

HVAC 255. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

HVAC 290. Special Problems**1-4 Credits**

Individual studies related to heating, air conditioning, and refrigeration.

Prerequisites: HVAC 101, HVAC 102, and consent of instructor.

I E-INDUSTRIAL ENGINEERING (I E)

I E 151. Computational Methods in Industrial Engineering**3 Credits (3)**

History, social implications, and application of computers and an introduction to computer programming, word processing, and database management systems. Satisfies General Education computer science requirement.

Prerequisite: MATH 1220G.

I E 200. Special Problems-Sophomore**1-3 Credits**

Directed individual projects. May be repeated for a total of 3 credits.

Prerequisite: consent of faculty member.

I E 217. Manufacturing Processes**3 Credits (3)**

Introduction to manufacturing and processing, including: casting, forming, and machining. Emphasis on creating products with the appropriate techniques. Crosslisted with: E T 217.

Prerequisite: E T 110 and MATH 1220G.

Learning Outcomes

1. Various

I E 217 L. Manufacturing Processes Laboratory**1 Credit (3P)**

Laboratory associated with I E 217. May be repeated up to 1 credits.

Prerequisite(s): E T 110.

Corequisite(s): I E 217.

INMT - INDUSTRIAL MAINTENANCE (INMT)

INMT 133. Process Technology and Systems**4 Credits (4)**

Provides instruction in the use of common process equipment. Students will use appropriate terminology and identify process equipment components such as piping and tubing, valves, pumps, compressors, turbines, motors, engines, heat exchangers, heaters, furnaces, boilers, filters dryers and other miscellaneous vessels. Included are the basic functions, scientific principles and symbols. Students will identify components on typical Process Flow Diagrams and Process and Instrument Diagrams. Restricted to Carlsbad campus only.

INMT 134. Maintenance Principles**4 Credits (4)**

The course is an introduction to the maintenance of equipment utilizing mechanical, electrical and instrumentation concepts. Topics include: hand tools, bearing fundamentals, equipment lubrication, material handling, electrical safety, battery systems, diagrams, electrical production and distribution, transformers, breakers, switches, AC and DC motors, motor controllers and operations, and introduction to automation and instrumentation control. Restricted to Carlsbad campus only.

INMT 165. Equipment Processes**4 Credits (4)**

This course introduces power transmission equipment and machinery components, including belt/chain driven equipment, speed reducers, variable speed drives, couplings, clutches, and conveying equipment. Students will learn the operation, maintenance, and troubleshooting for these types of equipment. The course also includes Overhead Crane Certification and Safety. Restricted to Carlsbad campus only.

INMT 205. Programmable Logic Controllers and Applications**4 Credits (4)**

Students learn about programmable logic controllers; architecture; programming, interfacing, and applications. Hands-on experience on modern commercial PLC units is the main component. Restricted to Carlsbad campus only.

Prerequisite(s): BCIS 1110.

INMT 223. Electrical Repairs**4 Credits (4)**

This course outlines for students the types of problems that occur in electrical machinery and systems. The course covers trouble-shooting and diagnosis, preventative maintenance, and how to make necessary repairs. Restricted to Carlsbad campus only.

INMT 235. Mechanical Drives I**4 Credits (4)**

This course teaches the fundamentals of mechanical transmission systems used in industrial, agricultural, and mobile applications. Students will learn industrial relevant skills including how to: operate, install and analyze performance, and design basic transmission systems using chains, feed-belts, spur gears, bearings, and couplings. Vibration analysis will be used to determine when to perform maintenance of power transmission components. The course also covers power transmission safety, and introduction to belt and chain drives (applications, installations, and tensioning), and introduction to gear drives, coupling, and bearing, basic troubleshooting, blueprint and print reading, learning the basics of electrical drives and PDM and PM. Restricted to Carlsbad campus only.

INMT 237. Hydraulics I**2 Credits (2)**

This course teaches fundamentals of hydraulic systems used in industry mobile application. Students learn the basic theory of application of hydraulic and electricity as it applies to hydraulics. Covered in the course are basic systems, principles of flow, pressure, viscosity, filtration, and colling. Also covered are basic components such as motor, pumps, cylinders, piping and control and relief valves. Troubleshooting strategies are discussed, along with blueprint and print reading, and PDM and PM. Industry, relevant skills including how to operate, install, analyze performance, and design basic hydraulic systems, reviewing intermediate hydraulic components and system applications. Restricted to Carlsbad campus only.

INMT 261. Pump Operations I**4 Credits (4)**

This course teaches how to select, operate, install, maintain and repair the many types of pumps used by industry. Students learn the theory and practical application of all types of processed pumps and pipe systems. It covers types, components, and systems operation. It also covers troubleshooting for flow loss and cavitation. Students learn how to select, operate, install, maintain and repair the many types of pumps used by industry. Other topics covered include: Net Positive Suction Head, pump flow/head measurement, pressure head conversion, pressure flow characteristics, cavitation, series/parallel pump operation, mechanical seal/stuffing box maintenance, multi stage operation and construction, positive displacement pumps, turbine, diaphragm, peristaltic, piston, gear, and magnetic pump systems. Restricted to Carlsbad campus only.

INMT 262. Piping Systems**2 Credits (2)**

This course teaches students how to install, maintain and troubleshoot fluid systems such as how to select, size, identify, install a variety of types of piping, fittings, and valves. Measurement techniques from basic to precision measurement, gauging, including the fundamentals of demonsioning and tolerancing will taught. Restricted to Carlsbad campus only.

INMT 263. Mechanical Drives II**4 Credits (4)**

This course teaches the bearings and gears used in heavy duty mechanical transmission systems. This course will emphasize linear access drives, clutches, and brakes. In addition, this course teaches how to set up, operate and apply laser shaft alignment to a variety of industrial applications. This course is a study of the basic concepts and procedures for the maintenance and operations of pumps, turbines, seals, bearings, and compressors. The course will provide the student with the knowledge and skills necessary to perform proper maintenance, repair, replacement and selection of pumps, turbines, seals, bearings and compressors. Also covered are advanced gearbox, coupling and bearings, precision alignment (shaft, flange, and sheave), as well as basic vibration analysis and thermography as troubleshooting and RCA aids. Restricted to Carlsbad campus only.

INMT 264. Rigging**2 Credits (2)**

This course teaches how to safely move loads of different shapes and sizes using a variety of different methods. Students will lift loads and demonstrate how to move it. Students will use hoists, slings, ropes and fittings to learn how to safely lift a wide variety of loads. Included are weight estimation, lifting rules, load ratings (sling, wire, ropes and hoists). Restricted to Carlsbad campus only.

INMT 265. Hydraulics II**2 Credits (2)**

This course teaches advanced hydraulics systems. The student will learn operation of advanced hydraulic systems applications, equipment installation, performance analysis of motors and pumps, accumulators, control, relief and check valve, equipment maintenance, and system design. The course covers accumulators, sequence valves, pilot circuits and unloader valves. Students learn more troubleshooting, hydraulic drives and other applications. Restricted to Carlsbad campus only.

INMT 267. Pump Operations II**2 Credits (2)**

This course teaches the student the disassembly, inspection and reassembly of centrifugal and positive displacement pumps. This course allows the student to identify and replace worn or broken components of pumps, and learn predictive and preventive maintenance principles. Lockout of the pump will be performed in addition to measurements and alignment. Restricted to Carlsbad campus only.

INST-INSTRUMENT & CONT TECH

INST 133. Process Technology and Systems**4 Credits (4)**

Provides instruction in the use of common process equipment. Students will use appropriate terminology and identify process equipment components such as piping and tubing, valves, pumps, compressors, turbines, motors, engines, heat exchangers, heaters, furnaces, boilers, filters dryers and other miscellaneous vessels. Included are the basic functions, scientific principles and symbols. Students will identify components on typical Process Flow Diagrams and Process and Instrument Diagrams. Restricted to: Instrumentation and Control Technology majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. Explain the different pieces of equipment used in moving fluids through a process plant such as piping, valves, pumps, compressors, motors, engines, turbines, and power transmission devices. Explain the purpose of each component. Understand the applications for the different types of equipment in each classification and their operating principles. Explain the different types of heat exchangers and cooling towers used in the Process Industry as well as their components. Describe their operating principles and the operator's role in their operation. Explain the different types of boilers and furnaces as well as their components. Describe their operating principles and the operator's role in their operation. Explain the function of filters and dryers along with their principles of operation and the operator's role in their operation. Explain the different types of vessels used in the process industry and well as their components and auxiliary systems. Define what happens internally in the different vessels. Demonstrate reading Process Flow Diagrams and Piping and Instrumentation Diagrams. Apply terms used when describing the various pieces of equipment

INST 165. Equipment Processes**4 Credits (4)**

This course introduces Thermal Energy and Mechanical alignment in equipment and machinery components. Students will learn the operation, maintenance, and troubleshooting of these types of equipment. Consent of Instructor required. Restricted to: Instrumentation and Control majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. Explain how Thermal Process System works.
2. Identify parts of Thermal System and Steam machines.
3. Identify troubleshooting of thermal machine.
4. Explain the steps of how to operate the Thermal Systems

INST 205. Programmable Logic Controllers and Applications**4 Credits (4)**

This learning system is set up in a self-directed format where students can proceed forward at their own pace. The directions are provided in a series of Learning Activity Packets (LAPs), which include text and lab activity directions. LAPs book will be handed out at the start of every class day and must be returned before the class day begins. This learning system can be used as a stand-alone teaching learning system within any class to give hands-on experience in electrical systems. Computer Literacy and internet literacy is required to enroll in this course. Restricted to: Instrumentation and Control Technology majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. Explain the basics of PLCs.
2. Describe how PLCs are used in industrial environments.
3. Demonstrate ability to program a PLC unit to solve a problem

INST 251. Instrumentation and Measurement**5 Credits (5)**

The overall aim of this course is to present the students with the basic principles and techniques required for the design and analysis of measurement systems. The course introduces the theory of measurement as well as the sensors and instruments typically used for measuring various physical quantities. Restricted to: Instrumentation and Control Technology majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. Understand measurement principles and apply them within measurement systems Select and specify suitable instrumentation for measurement of physical quantities Analyze and interpret experimental data Perform analog and digital signal processing Identify various sensor technologies and their use in measurement systems

INTEGRATED NATURAL SCIENCES (NSC)

NSC 131. General Sciences**3 Credits (2+2P)**

Designed for Allied Health students to explore the fundamentals of physical and life sciences.

JAPN-JAPANESE

JAPN 1110. Japanese I**4 Credits (4)**

This course focuses on the basics of the Japanese language with a balanced approach to the development of four skills: listening, speaking, reading and writing. The course is designed to teach students to communicate with Japanese socially and to utilize culturally appropriate manners to engage in Japanese daily life. While conversational skills are emphasized, the student will also be introduced to the various Japanese scripts.

Learning Outcomes

1. Become introduced to the sound system of the Japanese language.
2. Gain a basic understanding of Japanese scripts.
3. Learn and utilize vocabulary needed for basic conversation.
4. Converse and write on topics related to immediate personal needs, greetings, introductions, personal data, daily routines and school.
5. Comprehend both artificial and authentic written and aural texts of short length on familiar topics.
6. Comprehend and use essential grammar concepts.
7. Identify patterns of cultural behavior or customs in Japan, including gestures, greetings, and body language.
8. Gain the ability to converse using Japanese idiomatic expressions.

JAPN 1120. Japanese II**4 Credits (4)**

This course focuses on building upon the basics of the Japanese language with a balanced approach to the development of four skills: listening, speaking, reading and writing. The course is designed to teach students to communicate with Japanese socially and to utilize culturally appropriate manners to engage in Japanese daily life. Along with further developing conversational skills, the student will also continue to learn about and utilize various Japanese scripts.

Prerequisite: grade of C or better in JPNS 1110 or consent of instructor.

Learning Outcomes

1. Understand and utilize in more depth the sound system of the Japanese language.
2. Gain a greater understanding of Japanese scripts.
3. Utilize expanded vocabulary in conversation.
4. Converse and write on topics related to personal, social, geographical, and political life.
5. Comprehend both artificial and authentic written and aural texts of longer, but still brief length, such as personal letters, messages, journals, and narrative accounts.
6. Comprehend and use essential and more complex grammatical concepts.
7. Continue to develop a sense of culturally appropriate conduct.
8. Build upon the ability to converse using Japanese idiomatic expressions.

JAPN 2110. Japanese III**3 Credits (3)**

This course is designed for students who have completed 12 credit hours or the equivalent of Japanese study. This course continues to expand vocabulary, grammar and 209 Kanji to deal with daily activities. Its objective is to teach students to communicate in a meaningful way using all four language skills: speaking, listening comprehension, reading and writing. Students will be able to manage not-complicated daily situation. Students will attain ACTFL intermediate-low level in four skills.

Prerequisite: grade of C or better in JPNS 1120 or consent of instructor.

Learning Outcomes

1. Participate in conversations on familiar topics, such as applying part-time job, gift giving/receiving,
2. planning a trip, lost and found, using sentences and short series of sentences.
3. Handle short social interactions in everyday situations by asking and answering a variety of questions.
4. Usually say what they want to say about themselves and their everyday life.
5. Write on a variety of familiar topics in Japanese characters using connected sentences.
6. Understand the main idea in messages and presentations in Japanese on a variety of topics related to everyday life and personal interests and studies.
7. Sometimes understand the main idea of conversations that they overhear.
8. Understand the main idea of texts in Japanese characters related to everyday life and personal interests or studies.
9. Describe and make comparisons between cultures about beliefs, behaviors and cultural artifacts in Japan.

JAPN 2120. Japanese IV**3 Credits (3)**

This course is designed for students who have completed 15 credit hours or the equivalent of Japanese study. This course continues to expand vocabulary, grammar and 271 Kanji to deal with not-complicated daily situation with ease. Also students acquire a competence for Japanese pragmatic usage. This course follows ACTFL language guidelines, integrating the five C's: communication, cultures, connections, comparisons and communities, to offer the student a well- rounded classroom experience. Students will attain ACTFL intermediate-mid level in four skills.

Prerequisite: grade of C or better in JPNS 2110 or consent of instructor.

Learning Outcomes

1. Participate with ease and confidence in conversations on familiar topics, such as relationships, par-time job, shopping with a variety of request, meeting socially superiors.
2. Usually describe people, places, and things, and talk about events and experiences in various time frames.
3. Handle social interactions in everyday situations, sometimes even when there is an unexpected complication.
4. Write about topics related to school, work, and community in a generally organized way in Japanese characters.
5. Write some simple paragraphs in Japanese characters about events and experiences in various time frames.
6. Easily understand the main idea in messages and presentations on a variety of topics related to everyday life and personal interests and studies.
7. Usually understand a few details of what they overhear in conversations, even when something unexpected is expressed.
8. Sometimes follow what they hear about events and experiences in various time frames.
9. Understand the main idea of texts in Japanese characters with topics related to everyday life, personal interests, and studies, as well as sometimes follow stories and descriptions about events and experiences in various time frames.
10. 1Describe and make comparisons between cultures about beliefs, behaviors and cultural artifact in Japan.
11. 1Start using languages in a culturally appropriate way based on the understanding of cultural similarities and differences, including the use of "honorific" and "humble" expression.

JOUR-JOURNALISM (JOUR)

JOUR 102. Grammar for Journalists**2 Credits (2)**

Instruction of basic grammar, spelling and punctuation. Required for all journalism students with an ACT English score below 25, SAT Verbal below 570, or students who have not taken ACT/SAT tests. Restricted to Las Cruces campus only.

JOUR 105G. Media and Society**3 Credits (3)**

Functions and organization of the mass media system in the United States; power of the mass media to affect knowledge, opinions, and social values; and the impact of new technologies.

JOUR 110. Introduction to Media Writing**3 Credits (2+2P)**

Preparation of copy for broadcasting, print, advertising, and public relations. Introduction to Web applications. May be repeated up to 3 credits.

Prerequisite(s): JOUR 102 or ACT score of 25 and above or SAT score of 570 and above.

JOUR 201. Introduction to Multimedia**3 Credits (3)**

Provide students with the basic skills to produce multimedia packages using text, photos, audio and video, as well as social media for professional purposes. Intensive hands-on class using editing software such as Adobe Premiere. Adobe Audition and Photoshop. May be repeated up to 3 credits.

JOUR 210. Newswriting & Reporting**3 Credits (2+2P)**

Intensive laboratory practice in writing and field reporting news for print and Internet. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

Prerequisite(s): JOUR 102 or ACT score of 25 and above or SAT score of 570 and above and JOUR 110.

L SC-LIBRARY SCIENCE (L SC)

L SC 100. Introduction to Libraries**3 Credits (3)**

Overview of libraries, including history and development, responsibilities of library personnel, types of libraries and services, and technology and trends. Restricted to Dona Ana campus only.

L SC 110. Reference and Information Resources I**3 Credits (3)**

Overview of reference services. Introduction to, and evaluation of, basic types of information resources (both print and electronic) and their application in libraries.

L SC 111. Introduction to Information Literacy in an Electronic Environment**3 Credits (3)**

Introduction to the basics of the research process; the organization, location and evaluation of information using print, non-print and electronic resources. Restricted to: Community Colleges only.

L SC 120. Cataloging Basics I: Descriptive Cataloging**3 Credits (3)**

Introduction to descriptive cataloging. Restricted to: Dona Ana campus only.

L SC 130. Introduction to Technical Services in Libraries**3 Credits (3)**

Introduction to technical services in libraries, including acquisitions, bindery, cataloging, gifts, and serials. Restricted to Dona Ana campus only.

L SC 140. Multimedia Materials and Presentations in Libraries**3 Credits (3)**

Overview of media formats and equipment. Introduction to desktop publishing, presentations, and web-page creation applications in libraries. Restricted to: Community Colleges only.

L SC 160. Introduction to Public Services in Libraries**3 Credits (3)**

Introduction to public services in libraries, including circulation, inter-library loan, reference, media services, special collections, and government documents. Restricted to Dona Ana campus only.

L SC 175. Civic Involvement in Library Science**1-3 Credits**

Involvement in an organized community service project or group with a library or information technology component. Promotes awareness of volunteer and community service opportunities. May be repeated for a maximum of 6 credits. Graded: S/U. Restricted to: Dona Ana campus only.

L SC 200. Collection Management and Development in Libraries**3 Credits (3)**

Principles of identifying, selecting, acquiring, managing, and evaluating resources for libraries. Restricted to Dona Ana campus only.

L SC 203. School Library Media Specialist**3 Credits (3)**

Principles and practice of managing the school library media center, with an emphasis on its specific educational mission. Topics may include collection development, classes and lesson plans, public relations, administrative procedures, and use of technology. Restricted to Dona Ana campus only.

L SC 210. Technology Planning in Libraries**3 Credits (3)**

Overview of computer applications in libraries. Topics may include automated systems and electronic resources, introduction to evaluation of technology, and writing a technology plan. Restricted to Dona Ana campus only.

L SC 221. Experiential Learning I**1-3 Credits**

Student is employed (paid or non-paid) in an approved work site and evaluated by their supervisor. Each credit requires a specified number of hours of on-the job work experience. Consent of Instructor required. Graded: S/U Grading (S/U, Audit). Restricted to Dona Ana campus only.

Prerequisite(s): Consent of instructor.

L SC 230. Issues and Ethics in Libraries**3 Credits (3)**

Discussions of current and continuing challenges to effective library service. Topics may include copyright, censorship, intellectual freedom, Internet filtering, problem patrons, security, or other current issues. Restricted to Dona Ana campus only.

L SC 240. Internet Resources and Research Strategies**3 Credits (3)**

Introduction to retrieving and evaluating information found on the Internet and in selected Internet-accessible databases. Restricted to: Dona Ana campus only.

L SC 255. Special Topics**1-3 Credits**

Special topics to be announced in Schedule of Classes. May be repeated for a maximum of 12 credits. Restricted to: Dona Ana campus only.

L SC 270. Library Science Capstone**3 Credits (3)**

A culmination of all technical courses that are required to receive an Associate of Applied Science from the program centering around the completion of a library related project. Discussions on the role of paraprofessionals in libraries. Restricted to: Dona Ana campus only.

L SC 296. Multicultural Books for Children and Youth**3 Credits (3)**

This course explores a wide range of multicultural children's literature including: African American, Native American, Latino, Asian, Jewish, and Middle Eastern. Topics covered include: nonfiction of the cultures, historical fiction of the cultures, and contemporary literature of the cultures. Restricted to: Community Colleges only.

L SC 298. Independent Study**1-3 Credits**

Individual studies directed by consenting faculty with prior approval of department chair. May be repeated for a maximum of 12 credits. Restricted to: Dona Ana campus only.

LANG-LANGUAGE (LANG)

LANG 111. Beginning Language I**4 Credits (4)**

Developing language skills through study abroad for languages not offered at NMSU main campus. Specific languages to be identified with course subtitles. Main campus only.

Prerequisite: Language placement exam or consent of the instructor.

LAWE-LAW ENFORCEMENT (LAWE)

LAWE 180. Public Safety First Line Supervisor**3-6 Credits (3-6)**

This course is designed to enhance public safety personnel's human resource management and reduce organizational liability. Consent of Instructor required. Restricted to Community Colleges campuses

Learning Outcomes

1. Describe and explain police administration.
2. Explain and discuss the various leadership and management theories.
3. Define and discuss the various types of leadership skills and management styles.
4. Express and discuss the role of the police administrator and police administration.
5. Explain the leadership required of police administrators for an effective Law Enforcement administration.
6. Describe and interpret the "quality approach to managing community relations"
7. Explain and discuss the necessities of introducing organizational change.
8. Explain and discuss the planning, programming and budgetary process including: variables that affect the decision-making process.
9. Analyze and discuss the role of effective communications in a police organization including negotiations and conflict resolution.
10. 1 Explain and analyze the role of human resources in the organization including: their role in the recruitment and selection process; training; performance evaluations; promotions; and assessment centers.
11. K) Discuss the role of police unions and explain their significance in labor relations.

LAWE 201. Introduction to Juvenile Delinquency**3 Credits (3)**

An introductory overview of the juvenile justice system of due process, custody, detention and release. Note: course does not meet upper division requirements towards completion of Bachelor of Science in Criminal Justice. Restricted to: Community Colleges Only.

LAWE 202. Police Patrol Procedures**3 Credits (3)**

A critical review of police procedures and the influences on police behavior; policy development, including the police role; discretion; police community interaction and arrest, search and seizure. Restricted to: Community Colleges only.

LAWE 203. Introduction to Police Supervision**3 Credits (3)**

An introductory overview of police supervision and concerns as it applies to law enforcement. (Note: Course does not meet upper division requirements toward completion of Bachelor of Science in Criminal Justice.) Restricted to: Community Colleges only.

LAWE 204. Introduction to Homeland Security**3 Credits (3)**

A historical perspective of international and domestic terrorist threats and the need to develop cohesive response policies and practices in the interest of National Security. [Course does not meet requirements towards completion of Bachelor of Science in Criminal Justice.] Restricted to: Community Colleges only.

Prerequisite(s): CJUS 1110G.

LAWE 205. Practical Field Investigations**4 Credits (3+3P)**

Incorporates the current methods and techniques for the management of the crime scene, includes documentation, collection and preservation of evidence and case presentations. [Course does not meet requirements towards completion of Bachelor of Science in Criminal Justice.] Restricted to Community Colleges campuses only.

Prerequisite(s): CJUS 1110G and CJUS 2140.

LAWE 206. Traffic Enforcement and Crash Investigations**3 Credits (3)**

History and development of traffic laws and regulations, including basic elements of traffic violations, detection, apprehension, impaired drivers and guidelines and procedures for effective crash investigations and reporting. Restricted to: Community Colleges only.

LAWE 207. Legal Aspects of Law Enforcement**3 Credits (3)**

An evaluation of police authority including responsibilities, civil liability, liability implications, legal obligations, legal restraints, laws of arrest, and search and seizure. Restricted to: Community Colleges only.

LAWE 221. Law Enforcement Internship**3 Credits (3)**

Application of knowledge, skills and abilities, in an agency as an intern and integrated member of a law enforcement affiliated agency.

Prerequisite: consent of instructor.

LAWE 233. Practical Approach to Terrorism**3 Credits (3)**

Gives responders an overall safety approach in recognizing and responding to incidents involving terrorism. Presents and overview in types of harm, explosive weapons, chemical weapons, biological weapons and radiological weapons. [Course does not meet requirements towards completion of Bachelor of Science in Criminal Justice.] Restricted to: Dona Ana campus only. Crosslisted with: FIRE 233

LAWE 255. Special Topics**1-3 Credits (1-3)**

Introductory special topics of lower division level work that provides a variety of timely subjects and content material. Specific subjects to be announced in the Schedule of Classes. A passing grade of C- or better is required. May be repeated up to 6 credits. Consent of Instructor required. Restricted to Community Colleges campuses

Learning Outcomes

1. Obtaining foundational skills in the administration of justice by differentiating the role of police and corrections in contemporary America.
2. Competence in the legal elements of constitutional, criminal, and substantive law, rules of evidence, search and seizure, and the role of the courts in the adjudication of the law in America.
3. Ability to identify, analyze, and synthesize knowledge from discipline-specific courses in criminalistics, legal aspects, homeland security, terrorism, and patrol operations to effectively conduct a practical field investigation and traffic crash investigation.
4. Ability to develop a criminal justice ethical perspective consistent with 21st century America to, effectively and ethically, perform a criminal justice role in law enforcement or corrections.
5. Basic crime scene management, crime scene note-taking techniques, collection of evidence, and case presentations.
6. An application of knowledge, skills, and abilities, as an intern or integrated member of a criminal justice affiliated agency.

LAWE 298. Independent Study**3 Credits (3)**

Individual studies directed by the consenting faculty with prior approval of the department chair. A passing grade of C- or better is required. May be repeated up to 6 credits. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s): Sophomore standing with a 3.0 or better GPA.

Learning Outcomes

1. Obtaining foundational skills in the administration of justice by differentiating the role of police and corrections in contemporary America.
2. Competence in the legal elements of constitutional, criminal, and substantive law, rules of evidence, search and seizure, and the role of the courts in the adjudication of the law in America.
3. Ability to identify, analyze, and synthesize knowledge from discipline-specific courses in criminalistics, legal aspects, homeland security, terrorism, and patrol operations to effectively conduct a practical field investigation and traffic crash investigation.
4. Ability to develop a criminal justice ethical perspective consistent with 21 st century America to, effectively and ethically, perform a criminal justice role in law enforcement or corrections.
5. Basic crime scene management, crime scene note-taking techniques, collection of evidence, and case presentations.
6. An application of knowledge, skills, and abilities, as an intern or integrated member of a criminal justice affiliated agency.
7. Effective communication, orally and in writing, using appropriate references and technologies.
8. Analytical and critical thinking skills when solving complex issues in criminology and the criminal justice system.
9. Competence using and applying appropriate criminological theories on crime causation.
10. 1 Competence in understanding and describing how gender, race, ethnicity, age, social class, and sexuality contribute to differing experiences in the criminal justice system.
11. 1 Competence in understanding how the inter-dependence of the major components of the criminal justice system (i.e., police, courts, correctional agencies) affect victims, offenders, justice professionals, and society.
12. 1 Competence in understanding and applying the fundamental elements of both criminal and constitutional law.
13. 1 Competence in the legal foundation of criminal justice and the importance of due process.

LIBR-LIBRARY SCIENCE

LIBR 1110. Introduction to Research**1 Credit (1)**

The goal of this course is to provide students with techniques and tools to become better researchers. This course introduces students to the research process, and the organization, location, and evaluation of information.

Learning Outcomes

1. Develop a research plan based on an information need.
2. Find information efficiently and effectively using a variety of search tools.
3. Evaluate the reliability of an information resource.
4. Practice ethical behavior in using information.

LIBR 1111. Introduction to Information Literacy in an Electronic Environment**3 Credits (3)**

Introduction to the basics of the research process; the organization, location and evaluation of information using print, non-print and electronic resources; and techniques of effective personal information management in a computerized setting. Uses a combination of active and hands-on learning methods as well as lectures.

Learning Outcomes

1. Develop a discipline-specific research guide based on an established subject area. Select appropriate information sources and use them to find information efficiently. Evaluate information and its sources. Practice ethical behavior in using information.

LING-LINGUISTICS (LING)

LING 2110G. Introduction to the Study of Language and Linguistics

3 Credits (3)

This course presents an introduction to the study of language through the basic aspects of linguistic analysis: the sound system (phonetics and phonology), the structure of words and sentences (morphology and syntax), and the ways in which language is used to convey meaning (semantics and pragmatics). In addition, the course will investigate how language is acquired and stored in the brain, and how differences in speech styles and dialects reflect different social and cultural backgrounds of individual speakers.

Learning Outcomes

1. Understand the basic concepts and terminology associated with phonetics, phonology, morphology, syntax, semantics, and pragmatics.
2. Comprehend how language evolves over history and over an individual's lifespan.
3. Describe some common, but mistaken, beliefs about language and to distinguish between descriptive and prescriptive approaches to language.
4. Describe the social, psychological, geographic and historical influences that lead to language dominance or language endangerment.
5. Be aware of the relations among various languages in the world, between dialects and slang, and between human and non-human languages.
6. Apply methods of linguistic analysis as introduced in the course.
7. Critically engage with the works of linguistic researchers.
8. Stimulate curiosity about language and what it reveals about the human mind.

M E-MECHANICAL ENGINEERING (M E)

M E 159. Graphical Communication and Design

2 Credits (1+3P)

Sketching and orthographic projection. Covers detail and assembly working drawings, dimensioning, tolerance specification, and design projects.

Prerequisite(s)/Corequisite(s): MATH 1250G.

M E 210. Electronics and System Engineering

3 Credits (2+3P)

Introduction to microcontrollers, measurement systems, motion actuators, sensors, electric circuits, and electronic devices and interfacing. Students required to work individually and in teams to design and test simple electromechanical systems. Restricted to Las Cruces campus only.

Prerequisite: MATH 1521G or MATH 1521H or ENGR 190.

Learning Outcomes

1. Ability to apply knowledge of mathematics, science, and engineering;
2. Ability to design and conduct experiments, as well as to analyze and interpret data;
3. Ability to design a system, component or process to meet desired needs within realistic constraints;
4. Ability to identify, formulate, and solve engineering problems;
5. Ability to use the techniques, skills and modern tools necessary for engineering practice.

M E 222. Introduction to Product Development

3 Credits (2+3P)

Introduction to modern methods used in the realization of products. Traditional manufacturing processes, such as metal stamping, turning, milling, and casting are reviewed. Modern methods of rapid prototyping and model making are discussed in context of computer-aided design. Techniques for joining metals, plastics, and composites are discussed. Role of quality control is introduced. May be repeated up to 3 credits. Restricted to: exclude majors.

Prerequisite(s): M E 159 or E T 110.

M E 228. Engineering Analysis I

3 Credits (3)

Introduction to engineering analysis with emphasis on engineering applications. Topics include ordinary differential equations, linear algebra, and vector calculus with focus on analytical methods. Restricted to Las Cruces campus only.

Prerequisite(s): MATH 2530G.

M E 234. Mechanics-Dynamics

3 Credits (3)

Kinematics and dynamic behavior of solid bodies utilizing vector methods.

Prerequisite(s)/Corequisite(s): MATH 2530G. Prerequisite(s): C E 233.

M E 236. Engineering Mechanics I

3 Credits (3)

Force systems, resultants, equilibrium, distributed forces, area moments, friction, and kinematics of particles. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): PHYS 1310G. Prerequisite(s): MATH 1521G or MATH 1521H.

M E 237. Engineering Mechanics II**3 Credits (3)**

Kinetics of particles, kinematics and kinetics rigid bodies, systems of particles, energy and momentum principles, and kinetics of rigid bodies in three dimensions. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 2530G. Prerequisite(s): M E 236.

M E 240. Thermodynamics**3 Credits (3)**

First and second laws of thermodynamics, irreversibility and availability, applications to pure substances and ideal gases.

Prerequisite: PHYS 1310G.

M E 261. Mechanical Engineering Problem Solving**3 Credits (2+3P)**

Introduction to programming syntax, logic, and structure. Numerical techniques for root finding, solution of linear and nonlinear systems of equations, integration, differentiation, and solution of ordinary differential equations will be covered. Multi function computer algorithms will be developed to solve engineering problems.

Prerequisite: MATH 1521G or MATH 1521H or ENGR 190.

Learning Outcomes

1. Ability to apply knowledge of mathematics, science, and engineering;
2. Ability to identify, formulate, and solve engineering problems;
3. Ability to use the techniques, skills and modern tools necessary for engineering practice.

M SC-MILITARY SCIENCE (M SC)

M SC 110. Introduction to Military Science**2 Credits (2+1P)**

Introduction to the Army, the Profession of Arms, and critical thinking. Students will examine the Army Profession and what it means to be a professional in the U.S. Army. The overall focus is on developing basic knowledge and comprehension of the Army Leadership Requirements Model while gaining a complete understanding of the Reserve Officers' Training Corps (ROTC) program, its purpose in the Army, and its advantages for the student. Cadets also learn how resiliency and fitness supports their development as an Army leader. Includes a weekly lab facilitated by MSL III Cadets and supervised by Cadre. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

M SC 110 L. Introduction to Military Science Lab**1 Credit (1P)**

Planning, coordination, execution and evaluation of training and activities in a collaborative training environment with both basic and advanced course students from within the ROTC program. Students develop and refine leadership skills in positions of responsibility. Restricted to Las Cruces campus only.

Prerequisite(s): MSC 110.

M SC 111. Introduction to Leadership**2 Credits (2+1P)**

Introduction to the personal challenges and competencies that are critical for effective leadership. Students learn how the personal development of life skills such as critical thinking, time management, goal setting, and communication contribute to effective leadership. Students learn the basics of the communications process and the importance for leaders to develop the essential skills to effectively communicate in the Army. Students will begin learning the basics of squad level tactics that will be reinforced during a weekly lab facilitated by MSL III Cadets and supervised by Cadre. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

M SC 111 L. Introduction to Leadership Lab**1 Credit (1P)**

Planning, coordination, execution and evaluation of training and activities in a collaborative training environment with both basic and advanced course students from within the ROTC program. Students develop and refine leadership skills in positions of responsibility. Restricted to Las Cruces campus only.

Prerequisite(s): MSC 111.

M SC 210. Self/Team Development**3 Credits (3+1P)**

A focus on leadership and decision making. The course adds depth to the student's understanding of the Adaptability Army Learning Area. Outcomes are demonstrated through Critical and Creative Thinking and the ability to apply Troop Leading Procedures (TLP) to apply Innovative Solutions to Problems. The Army Profession is also stressed through leadership forums and a leadership self-assessment. Students are then required to apply their knowledge outside the classroom in a hands-on performance-oriented environment during a weekly lab facilitated by MSL III Cadets and supervised by Cadre and three physical fitness sessions per week. Restricted to Las Cruces campus only.

M SC 210 L. Self/Team Development Lab**1 Credit (1P)**

Planning, coordination, execution and evaluation of training and activities in a collaborative training environment with both basic and advanced course students from within the ROTC program. Students develop and refine leadership skills in positions of responsibility. Restricted to Las Cruces campus only.

Prerequisite(s): MSC 210.

M SC 211. Leadership in Action and Team Building**3 Credits (3+1P)**

A focus on Army doctrine and team development. The course begins the journey to understand and demonstrate competencies as they relate to Army doctrine. Army Values, Teamwork, and Warrior Ethos and their relationship to the Law of Land Warfare and philosophy of military service are also stressed. The ability to lead and follow is also covered through Team Building exercises at squad level. Students are then required to apply their knowledge outside the classroom in a hands-on performance-oriented environment during a weekly lab facilitated by MSL III Cadets and supervised by cadre and three physical fitness sessions per week. Restricted to Las Cruces campus only.

M SC 211 L. Leadership in Action and Team Building Lab**1 Credit (1P)**

Planning, coordination, execution and evaluation of training and activities in a collaborative training environment with both basic and advanced course students from within the ROTC program. Students develop and refine leadership skills in positions of responsibility. Restricted to Las Cruces campus only.

Prerequisite(s): MSC 211.

M SC 225. Directed Studies**1-3 Credits**

Individual directed studies under supervision of the Professor of Military Science. May be repeated up to 12 credits. Restricted to Las Cruces campus only.

Prerequisite(s): GPA 2.5 or better.

MAT-AUTOMATION & MANUFACTURING (MAT)

MAT 102. Print Reading for Industry**3 Credits (2+2P)**

Reading, interpretation, and revisions of industrial technical drawings common to manufacturing, Aerospace, machine parts, electrical, hydraulic, and Pneumatic drawings. Interpretation of engineering drawings and related shop calculations. Introduced Crosslisted with: AERT 113. Restricted to: Community Colleges only.

MAT 105. Introduction to Manufacturing**3 Credits (2+2P)**

Introduction to manufacturing evolution from basic assembly process to modern automated processes. Covers history, employability, soft skills, quality measurements, teamwork concept, production requirements, and considerations in plan layout and design. Minimum math proficiency of CCDM 114 required or math placement into MATH 1215 or higher. Restricted to: Community Colleges only. Crosslisted with: AERT 112

MAT 106. Applied Manufacturing Practices**3 Credits (2+2P)**

Course will illustrate how various products are manufactured along with associated process. Mechanical behavior such as bending, cold worked, strained, work hardened, and heat transfer will be emphasized as well. In lab, students will learn how to make selected products starting from prints to complete projects including quality control. Crosslisted with: AERT 114. Restricted to: Community Colleges only.

MAT 110. Machine Operation and Safety**3 Credits (2+2P)**

Introduction to the operation and safety aspects of various types of machinery and equipment, including both mechanical and electrical machines, Rigid Tubing, and Flexible Lines. Maintenance and safety operation of industrial equipment will also be covered. Restricted to: Community Colleges only. Crosslisted with: AERT 115

MAT 130. Applied Industrial Electricity I**4 Credits (3+2P)**

Electrical safety, AC and DC circuits, use and care of common measuring instrumentation, schematic and wiring diagrams, electromagnetism, National Electric Code branch circuits. Restricted to: Community Colleges only.

Prerequisite(s): MATH 1215 or ELT 120 or OETS 118.

MAT 135. Applied Industrial Electricity II**4 Credits (3+2P)**

Relationship between motor power, speed, and torque, basic application of relay circuits, motor control circuits, inductance and capacitance factors, transformers, solid state devices circuits and applications. Restricted to: Community Colleges only.

Prerequisite(s): MAT 130.

MAT 145. Electromechanical Systems for Non-Majors**4 Credits (3+3P)**

Electromechanical system interfacing. Principles and applications of preventive and corrective maintenance procedures on automated industrial production machines using system technical and maintenance manuals to develop troubleshooting procedures using systems block and schematic diagrams.

Prerequisite: consent of instructor.

MAT 221. Cooperative Experience I**1-6 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and rated by employer and instructor. Student meets in a weekly class. Graded S/U.

Prerequisite: consent of instructor.

MAT 234. Industrial Electricity Maintenance**3 Credits (2+2P)**

Introduction into electrical systems, theory and uses for the different types of motors used in the industry and related industrial safety practices. DC, AC stepper and servo motors, motor speed and torque, motor performance, and efficiency, motor control fundamentals using variable frequency drives, vector controls, servo and stepper drives. Restricted to: Community Colleges only.

MAT 265. Special Topics**1-6 Credits**

Course subtitled in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

MATH-MATHEMATICS (MATH)

A student may not receive credit for a lower-division mathematics course if it serves as a prerequisite to a lower-division math course that the student had previously passed with a grade of C- or better.

Students without adequate placement to enroll in MATH 1134, MATH 1215 or MATH 1130G can gain admission to the course by earning a C- or better in CCDM 114 N at an NMSU Community College campus, or in A S 103.

Students wishing to enroll in MATH 1220G, MATH 1430G, MATH 1511G, MATH 1521G, or MATH 1350G must satisfy one of the following:

1. have passed the stated prerequisite course or an equivalent transfer course with a C- or better
2. have placed into the course with an adequate ACT Math score or through the Mathematics Placement Examination (MPE), the results of which will be made available to the student's advisor. The MPE is given daily in Walden Hall when school is in session and during new student orientation programs.

MATH 1130G. Survey of Mathematics**3 Credits (3)**

This course will develop students' ability to work with and interpret numerical data, to apply logical and symbolic analysis to a variety of problems, and/or to model phenomena with mathematical or logical reasoning. Topics include financial mathematics used in everyday life situations, statistics, and optional topics from a wide array of authentic contexts. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in CCDM 113 N or CCDM 114 N or A S 103 or higher

Learning Outcomes

1. Construct and analyze graphs and/or data sets: Gather and organize information; Understand the purpose and use of various graphical representations such as tables, line graphs, tilings, networks, bar graphs, etc.; Interpret results through graphs, lists, tables, sequences, etc.; Draw conclusions from data or various graphical representations.
2. Use and solve various kinds of equations: Understand the purpose of and use appropriate formulas within a mathematical application; Solve equations within a mathematical application; Check answers to problems and determine the reasonableness of results.
3. Understand and write mathematical explanations using appropriate definitions and symbols: Translate mathematical information into symbolic form; Define mathematical concepts in the student's own words; Use basic mathematical skills to solve problems.
4. Demonstrate problem solving skills within the context of mathematical applications; Show an understanding of a mathematical application both orally and in writing; Choose an effective strategy to solve a problem; Gather and organize relevant information for a given application.

MATH 1134. Fundamentals of Elementary Mathematics I**3 Credits (3)**

Numbers and the four operations of arithmetic. Understanding and comparing multiple representations of numbers and operations, in particular how these representations build from whole numbers to integers to fractions and decimals. Applying properties of numbers and operations in contextual situations. Reasoning, communicating, and problem solving with numbers and operations. Applications to ratio, and connections with algebra. Taught primarily through student activities and investigations. Restricted to: EDUC,EPAR,E ED,ECED majors. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in MATH 1215 or higher

Learning Outcomes

1. As future elementary teachers you will be teaching mathematics to children.
2. In order to teach a subject well you need not only to know the material that you will teach, but you need to know more than what you will teach, and know it well, in order to be able to answer questions, understand student reasoning, give alternate explanations when your students do not understand something, and be able to adjust to changes in the mathematical curriculum.
3. Furthermore, even if you hope to teach a given grade, you should be prepared to teach a variety of grades since what a person ends up teaching is often not what they planned to do.
4. We will explore ideas of arithmetic in a way to help you improve your mathematical ability, gain confidence in your ability, introduce to you different ideas and models, and to see a variety of mathematical activities that are appropriate for people of all ages.
5. Everything we study will be done with the aim of developing your ability to relate to the mathematics of elementary school and to help children develop mathematical understanding

MATH 1215. Intermediate Algebra**3 Credits (3)**

A study of linear and quadratic functions, and an introduction to polynomial, absolute value, rational, radical, exponential, and logarithmic functions. A development of strategies for solving single-variable equations and contextual problems. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in CCDM 113 N or CCDM 114 N or A S 103 or higher

Learning Outcomes

1. Students will build on their knowledge of linear and quadratic functions and will begin to build an understanding of absolute value, polynomial, rational, power, radical, exponential and logarithmic functions in the following contexts: Demonstrate appropriate use of basic function language and notation; Convert between equivalent forms of algebraic expressions; Solve single-variable equations of the types listed above; Interpret and communicate algebraic solutions graphically and numerically; Demonstrate contextual problem-solving skills that include setting up and solving problems, and interpreting solutions in context; Apply appropriate problem solving methods from among algebraic, graphical, and numerical.

MATH 1217. General Supplemental Instruction I**1 Credit (2P)**

Collaborative workshop for students enrolled in Intermediate Algebra. Graded: S/U Grading (S/U, Audit). Corequisite(s): MATH 1215

Learning Outcomes

1. Intermediate Algebra Workshop provides time for students to work on problems from Intermediate Algebra under the guidance of their Intermediate Algebra instructor

MATH 1220G. College Algebra**3 Credits (3)**

The study of equations, functions and graphs, reviewing linear and quadratic functions, and concentrating on polynomial, rational, exponential and logarithmic functions. Emphasizes algebraic problem solving skills and graphical representation of functions. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in MATH 1215 or higher

Learning Outcomes

1. Use function notation; perform function arithmetic, including composition; find inverse functions.
2. Identify functions and their transformations given in algebraic, graphical, numerical, and verbal representations, and explain the connections between these representations.
3. Graph and interpret key feature of functions, e.g., intercepts, leading term, end behavior, asymptotes.
4. Solve equations algebraically to answer questions about graphs, and use graphs to estimate solutions to equations.
5. Solve contextual problems by identifying the appropriate type of function given the context and creating a formula based on the information given.
6. Communicate mathematical information using proper notation and verbal explanations.

MATH 1221. General Supplemental Instruction II**1 Credit (1+2P)**

Collaborative workshop for students enrolled in College Algebra. Graded: S/U Grading (S/U, Audit).

Corequisite(s): MATH 1220G.

Learning Outcomes

1. College Algebra Workshop provides time for students to work on problems from College Algebra under the guidance of their College Algebra instructor

MATH 1250G. Trigonometry & Pre-Calculus**4 Credits (3+2P)**

Trigonometry & Pre-Calculus includes the study of functions in general with emphasis on the elementary functions: algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions. Topics include rates of change, limits, systems of equations, conic sections, sequences and series, trigonometric equations and identities, complex number, vectors, and applications. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in MATH 1220G or higher

Learning Outcomes

1. (Trigonometry) Students will be able to define and evaluate the trigonometric functions as functions of angle in both degree and radian measure using the definitions in terms of x , y , and r ; as the ratio of sides of a right triangle; using the unit circle; using reference angles, commonly used (0° , 30° , 45° , 60° , 90°) angles and using a calculator.
2. (Trigonometry) Students will be able to solve right triangles. They will be able to draw a sketch in an applied problem when necessary.
3. (Trigonometry) Students will be able to solve non-right triangles using the law of sines and the law of cosines.
4. (Trigonometry) Students will be able to prove trigonometric identities and apply addition and subtraction, double-angle, half-angle and power reduction formulas.
5. (Trigonometry) Students will be able to graph the six trigonometric functions, their transformations and their inverses.
6. (Trigonometry) Students will be able to use algebraic methods, including the use of identities and inverses, to solve trigonometric equations and demonstrate connections to graphical and numerical representations of the solutions.
7. (Trigonometry) Students will be able to add and subtract vectors in two dimensions. They will be able to use the dot product to project one vector onto another and to determine the angle between two vectors. They will be able to solve a variety of word problems using vectors.
8. (Trigonometry) Students will be able to work with polar coordinates; this includes graphing in polar coordinates and transforming an equation with polar coordinates into one with rectangular coordinates, and vice versa.
9. (Trigonometry) Students will be able to work with the trigonometric form of complex numbers, including using De Moivre's formula.
10. 1 (Pre-Calculus) Functions: Reinforce recognizing a function from its graph and from its algebraic expression; Reinforce identification of a one-to-one function graphically and from its algebraic expression; Reinforce identification of inverse functions graphically and algebraically; Reinforce combining functions arithmetically and compositionally; Be able to calculate the average rate of change of a function using the difference quotient and depict it graphically; Be able to find a limiting value of a function and be able to identify and use the notation that describes this.
11. (Pre-Calculus) Graphing: Reinforce using key characteristics of functions to graph them; Be able to graph conic sections from their key characteristics such as foci, eccentricity and asymptotes; Be able to identify all functions mentioned from their graphs, describing their key aspects.
12. (Pre-Calculus) Solving: Exponential/Logarithmic equations using the rules of exponents and logarithms; Systems of linear equations by elimination; Non-linear systems algebraically and graphically.
13. (Pre-Calculus) Applications: Modeling with functions with an emphasis on exponential and logarithmic functions, growth and decay.
14. (Pre-Calculus) Sequences and series: Understand the concept and notation of a sequence; Understand the concept and notation of a series; Be able to find limits of basic sequences; Be able to find sums of basic series.

MATH 1350G. Introduction to Statistics**3 Credits (3)**

This course discusses the fundamentals of descriptive and inferential statistics. Students will gain introductions to topics such as descriptive statistics, probability and basic probability models used in statistics, sampling and statistical inference, and techniques for the visual presentation of numerical data. These concepts will be illustrated by examples from a variety of fields. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in MATH 1215 or higher

Learning Outcomes

1. Explain the general concepts of statistics: Explain and evaluate statistics used in the real world (from a news article, research project, etc.); Use statistical vocabulary appropriately; Distinguish between descriptive and inferential statistics; Distinguish between qualitative and quantitative data; Distinguish between populations and samples, and parameters and statistics; Give examples of independent and dependent variables.
2. Presentation and description of data: Present data graphically using histograms, frequency curves and other statistical graphs; Interpret graphs of data, including histograms and shapes of distributions.
3. Summarize data using measures of central tendency and variation: Calculate and interpret the mean, median, and mode to describe data; Calculate and interpret range, variance, and standard deviation to describe data.
4. Present the concepts of probability: Interpret basic probabilities; Calculate probabilities using compound probability rules and the binomial distribution; Calculate probabilities using the standard normal distribution and relate them to areas under the curve; Determine if the binomial distribution can be approximated with the normal distribution; Describe the relationship between the sampling distribution and the population distribution; Use the central limit theorem to approximate the probability distribution and calculate probabilities.
5. Compute point and interval estimates: Determine the confidence interval for a parameter; Interpret the confidence level and margin of error; Determine whether a statistical technique is appropriate under stated conditions.
6. Perform hypothesis tests: Determine whether a statistical test is appropriate under stated conditions; Identify null and alternative hypothesis; Perform and interpret statistical tests (e.g. z-test, t-test, one-tailed and two-tailed, one-sample, two-sample) and determine whether data is statistically significant; State the conclusion of a hypothesis test; Interpret a p-value as compared to a significance level; Explain why a test can lead us to reject a null hypothesis, not accept one; Distinguish between Type I and Type II errors.
7. Analyze data using regression and correlation: Explain the difference between correlation and causation; Construct and interpret scatter plots; Calculate and interpret the linear correlation coefficient; Determine and use the equation of a least-squares regression line between two variables to make predictions; Interpret the meaning of the coefficient of determination.
8. Optional topics: Inter-quartile range, box-plots, stem-and-leaf plots; Combinations and permutations; The Poisson distribution; Statistical power; Chi-square; Analysis of variance

MATH 1430G. Applications of Calculus I**3 Credits (2+2P)**

An algebraic and graphical study of derivatives and integrals, with an emphasis on applications to business, social science, economics and the sciences. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in MATH 1220G or higher

Learning Outcomes

1. Find limits algebraically and graphically, and use limits to analyze continuity.
2. Find the derivative of a function by applying appropriate techniques (limit of the difference quotient, general derivative rules, product rule, quotient rule, chain rule, and higher order derivatives).
3. Perform implicit differentiation. Use implicit differentiation to solve related rate application problems.
4. Use the derivative to describe the rate of change and slope of a curve in general and at particular points. Compare and contrast average rates of change to instantaneous rates of change.
5. Find the maxima, minima, points of inflections, and determine concavity of a function by applying the first and second derivatives. Use these results to sketch graphs of functions and to solve optimization problems in context.
6. Find the antiderivative and indefinite integral functions to include integration by substitution. Apply the Fundamental Theorem of Calculus in computing definite integrals of functions.
7. Approximate the area under the curve using Riemann sums.
8. Use the integral to determine the area under a curve and to find the accumulated value of a function in context.
9. Solve contextual problems by identifying the appropriate type of function given the context, creating a formula based on the information given, applying knowledge of algebra and calculus, and interpreting the results in context.
10. 1Communicate mathematical information using proper notation and verbal explanations.

MATH 1435. Applications of Calculus I**3 Credits (3)**

Intuitive differential calculus with applications to engineering.

Prerequisite(s): C- or better in MATH 1250G.

Learning Outcomes

1. Find limits algebraically and graphically, and use limits to analyze continuity.
2. Find the derivative of a function by applying appropriate techniques (limit of the difference quotient, general derivative rules, product rule, quotient rule, chain rule, and higher order derivatives).
3. Learn derivative rules for polynomial, exponential, logarithmic, trigonometric and inverse trigonometric functions.
4. Perform implicit differentiation. Use implicit differentiation to solve related rate application problems.
5. Find the maxima, minima, points of inflections, and determine concavity of a function by applying the first and second derivatives. Use these results to sketch graphs of functions and to solve optimization problems in context.
6. Find partial derivatives and find maxima, minima in three dimensions.
7. Find the linear approximation of a function.
8. Find Maclaurin and Taylor series.
9. Find limits via L'Hospital's rule.
10. 1 Communicate mathematical information using proper notation and verbal explanations.

MATH 1440. Applications of Calculus II**3 Credits (3)**

Topics in this second course of Applications of Calculus include functions of several variables, techniques of integration, an introduction to basic differential equations, and other applications.

Prerequisites: C or better in MATH 1435 or in MATH 1521G, or in MATH 1521H.

Learning Outcomes

1. Find definite and indefinite integrals using integration by parts, integral tables, and numerical integration.
2. Analyze multivariable functions using partial derivatives and double integrals, and apply these techniques to applications such as optimization, least squares, and volumes.
3. Solve differential equations graphically, numerically, and algebraically using separation of variables, and apply differential equations in context.
4. Apply differentiation and integration to other areas, for example to Taylor polynomials and Taylor series, probability, trigonometric functions, etc.

MATH 1511G. Calculus and Analytic Geometry I**4 Credits (4)**

Limits and continuity, theory and computation of derivatives, applications of derivatives, extreme values, critical points, derivative tests, L'Hopital's Rule.

Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in MATH 1250G or higher

Learning Outcomes

1. The goals are to present the concepts of calculus, stressing techniques, applications, and problem solving, and emphasizing numerical aspects such as approximations and order of magnitude.
2. Overall, the goals are to illustrate the power of calculus as a tool for modeling situations arising in physics, science, engineering and other fields.
3. In fulfillment of these goals, this and later courses will stress topics such as polynomial approximation, setting up integrals, as well as the use of appropriate technology

MATH 1521G. Calculus and Analytic Geometry II**4 Credits (4)**

Riemann sums, the definite integral, antiderivatives, fundamental theorems, techniques of integration, applications of integrals, improper integrals, Taylor polynomials, sequences and series, power series and Taylor series.

Prerequisite(s): C or better in MATH 1511G.

Learning Outcomes

1. Recognize the interplay between Riemann sums and definite integrals
2. Use the Fundamental Theorem of Calculus to compute definite and indefinite integrals
3. Demonstrate an understand of the relationship between the derivative and the definite integral
4. Evaluate integrals numerically using standard rules (midpoint, trapezoid, Simpson's)
5. Evaluate integrals analytically using standard methods (substitution, integration by parts, trigonometric substitution and identities, inverse functions and partial fractions
6. Use integration to solve problems in geometry, physics, science, engineering and other fields
7. Use appropriate methods such as L'Hopital's Rule to evaluate improper integrals
8. Approximate functions using Taylor polynomials
9. Apply standard tests to determine convergence or divergence of sequences and series
10. 1Find a power series representation for a function and determine where it converges
11. 1Identify and evaluate first order differential equations

MATH 1521H. Calculus and Analytic Geometry II Honors**4 Credits (3+1P)**

A more advanced treatment of the material of MATH 1521G with additional topics. Consent of Instructor required. Restricted to Las Cruces campus only. Consent of Department.

Learning Outcomes

1. Recognize the interplay between Riemann sums and definite integrals
2. Use the Fundamental Theorem of Calculus to compute definite and indefinite integrals
3. Demonstrate an understand of the relationship between the derivative and the definite integral
4. Evaluate integrals numerically using standard rules (midpoint, trapezoid, Simpson's)
5. Evaluate integrals analytically using standard methods (substitution, integration by parts, trigonometric substitution and identities, inverse functions and partial fractions
6. Use integration to solve problems in geometry, physics, science, engineering and other fields
7. Use appropriate methods such as L'Hopital's Rule to evaluate improper integrals
8. Approximate functions using Taylor polynomials
9. Apply standard tests to determine convergence or divergence of sequences and series
10. 1Find a power series representation for a function and determine where it converges
11. 1Identify and evaluate first order differential equations

MATH 1531. Introduction to Higher Mathematics**3 Credits (3)**

Logic; sets, relations, and functions; introduction to mathematical proofs.

Prerequisite(s): C- or better in MATH 1521G or MATH 1521H.

Learning Outcomes

1. The primary objective of this course is to serve as a bridge between the calculus courses you have taken, where the focus is on computations and solving problems, to more abstract mathematics courses.
2. In particular, we will discuss logical reasoning, definitions, proofs, and certain basic building blocks such as sets, functions, and relations.
3. By the end of the course, you should be able to understand and construct well-written proofs of basic mathematical arguments involving simple properties of the real numbers, integers, sets, functions, and relations using universal and existential quantifiers, absolute values and inequalities, modular arithmetic, and proof by induction.

MATH 1996. Topics in Mathematics**1-3 Credits**

Topics to be announced in the Schedule of Classes. Maximum of 3 credits per semester. Total credit not to exceed 6 credits. Community Colleges only.

Prerequisite: consent of instructor.

Learning Outcomes

1. Varies

MATH 2134G. Fundamentals of Elementary Math II**3 Credits (3)**

Geometry and measurement. Multiple approaches to solving problems and understanding concepts in geometry. Analyzing and constructing two- and three-dimensional shapes. Measurable attributes, including angle, length, area, and volume. Understanding and applying units and unit conversions. Transformations, congruence, and symmetry. Scale factor and similarity. Coordinate geometry and connections with algebra. Reasoning and communicating about geometric concepts. Taught primarily through student activities and investigations.

Prerequisite(s): C or better in MATH 1134.

Learning Outcomes

1. The primary objectives are mathematical: to understand some of the basic
2. concepts of geometry, and measurement with an appropriate level of rigor; to appreciate the historical, cultural and educational contributions and potential applications in real life situations; and to gain problem solving skills using these concepts.
3. The secondary goal is to appreciate the importance of this material in the elementary school curriculum.

MATH 2234. Fundamentals of Elementary Mathematics III**3 Credits (3)**

Probability, statistics, ratios, and proportional relationships. Experimental and theoretical probability. Collecting, analyzing, and displaying data, including measurement data. Multiple approaches to solving problems involving proportional relationships, with connections to number and operation, geometry and measurement, and algebra. Understanding data in professional contexts of teaching. Taught primarily through student activities and investigations.

Prerequisite(s): C or better in MATH 2134G.

Learning Outcomes

1. In order to teach a subject well you need not only to know the material that you will teach, but you need to know more than what you will teach, and know it well, in order to be able to answer questions, give alternate explanations when your students do not understand something, and be able to adjust to changes in the mathematical curriculum.
2. Furthermore, even if you hope to teach a certain grade, you should be prepared to teach anything between kindergarten and 8th grade.
3. You also need to be aware of where a student is coming from in order to make adjustments in their curriculum.
4. A strong elementary school teacher must understand where his/her students are headed in order to most effectively direct them there.
5. This is especially true in mathematics, where students continue to build on the concepts they learn each year.

MATH 2350G. Statistical Methods**3 Credits (3)**

Exploratory data analysis. Introduction to probability, random variables and probability distributions. Concepts of Central Limit Theorem and Sampling Distributions such as sample mean and sample proportion. Estimation and hypothesis testing single population parameter for means and proportions and difference of two population parameters for means and proportions. Analysis categorical data for goodness of fit. Fitting simple linear regression model and inference for regression parameters. Analysis of variance for several population means. Techniques in data analysis using statistical packages. Prerequisite(s): adequate scoring on the Mathematics Placement Exam, or any ACT/SAT and GPA combination that is considered equivalent, or a C- or better in MATH 1215 or higher

Learning Outcomes

1. Summarize Data through graphs and Descriptive statistics: Define qualitative and quantitative data; Provide examples of a population, a sample, independent and dependent variables, parameters and statistics; Construct and interpret histograms, stem plots, bar charts, and boxplot; Summarize distributions with numerical measures such as mean, median, standard deviation, percentiles, interquartile range.
2. Present the concepts of probability: Explain related to probability axioms (e.g. mutually exclusive events and independent events); Apply applications of probability rules; Apply Conditional probability and Bayes Rule.
3. Distinguish between discrete and continuous random variables: Calculate probabilities using Binomial and Poisson distributions; Calculate probabilities using the standard normal distribution by finding the area underneath the curve.
4. Explain the Central Limit Theorem: Introduce the concept of a sampling distribution; Discuss the distribution of the sample mean and sample proportion under repeated sampling; Generate and interpret a sampling distribution using repeated sampling; Determine if the Binomial and Poisson distribution can be approximated with the normal distribution.
5. Estimate a population parameter: Determine confidence interval for population mean, proportion, difference of means, and difference of proportions; Interpret the confidence interval and margin of error; Explain the dependence of margin of error on sample size and confidence level.
6. Perform hypothesis tests for population parameters (population mean, proportion, difference of means, and difference of proportions); Describe the logic and framework of the inference of hypothesis testing; Make a decision using a p-value and draw an appropriate conclusion; Distinguish between Type I and Type II errors; Explain power of the test.
7. Perform Hypothesis Tests for Categorical data: Determine and analyze Chi-square test for Independence; Determine and analyze Chi-square test for Goodness of fit.
8. Analyze data using regression and correlation: Construct scatterplots and analyze the scatter plots; Calculate the linear correlation coefficient and determine whether a linear relationship exists between two variables; Fit the least-squares regression line between two variables; Predict the response variable from the regression line; Apply statistical inference to regression parameters.
9. Perform analysis of variance: State hypotheses for the test of several population means; Construct the AVOVA Table; Explain the significance of multiple comparisons.
10. Demonstrate the appropriate use of technology (e.g., Excel, an appropriate graphing calculator or other software (Minitab, SAS))

MATH 2415. Introduction to Linear Algebra**3 Credits (3)**

Systems of equations, matrices, vector spaces and linear transformations. Applications to computer science.

Prerequisite(s): Grade of C- or better in MATH 1521G or MATH 1521H.

Learning Outcomes

1. Use row reduction and echelon forms of a matrix to solve linear systems of equations.
2. Use matrix operations, inverse matrices, and matrix factorizations to solve matrix equations.
3. Study the properties of vector spaces and subspaces (e.g., the null and column spaces of a matrix); linear transformations, isomorphisms and kernels; linear independence, bases, and dimension.
4. Apply appropriate matrix manipulations to perform a change of basis.
5. Understand determinants and their properties.
6. Find eigenvalues and eigenvectors and use them to diagonalize matrices.
7. Understand inner product spaces and apply them to real-world problems.

MATH 2530G. Calculus III**3 Credits (3)**

The purpose of this course, which is a continuation of Calculus II, is to study the methods of calculus in more detail. The course will cover the material in the textbook from Chapters 10-14. Vectors in the plane and 3-space, vector calculus in two-dimensions, partial differentiation, multiple integration, topics in vector calculus, and complex numbers and functions.

Prerequisite(s): Grade of C- or better in MATH 1521G or MATH 1521H.

Learning Outcomes

1. Perform the algebra operations on vectors in the plane.
2. Describe lines, planes, and surfaces in 3-space.
3. Compute the tangent and normal vectors to space curves.
4. Compute tangential and normal components of acceleration.
5. Sketch functions of several variables.
6. Compute the tangent plane to a surface.
7. Describe and use the chain rule.
8. Compute extreme values of functions of several variables.
9. Compute multiple integrals.
10. 1Compute surface area, mass, and moments.
11. 1Compute line integrals and test for independence of path.
12. 1State and use Green's, Stokes' and Divergence Theorem.
13. 1Solve first and second order differential equations.

MATH 2992. Directed Study**1-3 Credits**

May be repeated for a maximum of 6 credits. Graded S/U.

Prerequisite: consent of the instructor.

Learning Outcomes

1. Varies

MGMT-MANAGEMENT

MGMT 2110. Principles of Management**3 Credits (3)**

An introduction to the basic theory of management including the functions of planning, organizing, staffing, leading, and controlling; while considering management's ethical and social responsibilities.

Learning Outcomes

1. Explain the major functions of management including planning, organizing, communications, controlling, motivating, leading, and staffing.
2. Recognize major developments in the history of management thought.
3. Describe the basic managerial processes including decision-
4. making and other key skills necessary for managers to perform their roles.
5. Identify an organization's stakeholders and the importance of social and ethical responsibility of managers.
6. Explain the formulation and implementation of strategic planning, including the relationship between goals, plans, vision statements, and mission statements.
7. Describe the strategies managers use to help organizations adapt to changing internal and external environments.
8. Explain organizational change, forces for change, sources of resistance to change, and the techniques managers can use to implement and facilitate change.

MKTG-MARKETING (MKTG)

MKTG 1210. Advertising

3 Credits (3)

A survey of currently available advertising media. A psychological approach to consumer persuasion; applied techniques in media selection, layout mechanics, production methods, and campaign structures.

Prerequisite: MKTG 2110.

Learning Outcomes

1. Define advertising and the relevant application of psychology in delivering the message. Explain the importance of various advertising media in the marketing mix. Identify and explain the social, ethical and legal issues advertisers must consider. Describe the significance of the marketing function in business. Explain the importance of advertising and other marketing communication tools. Demonstrate application of the planning process as it applies to marketing and advertising. Describe the factors that are weighted when considering the use of radio and television in the creative advertising mix. Describe the relationship between market segment, consumer behavior and selection of advertising campaign types. List the alternative means of reaching a target market and the technical challenges of each.

MKTG 1220. Small Business Marketing

3 Credits (3)

An overview of public relations principles, practices and purposes as applied to small business. Topics include basics of news release writing, media awareness, development and maintenance of a positive public image, branding, ethical marketing, and the relationships of public relations with advertising and marketing. Methods and practices used in small business are explored.

Prerequisite: MKTG 2110.

Learning Outcomes

1. Explain the importance of creating and sustaining a positive public awareness and image. Identify public relations practices as they relate to the management and marketing processes. Define branding and discuss its importance for small business. Describe the value of business event management and promotion for small business. Discuss how media relations, public relations, advertising and marketing efforts are interrelated and the importance of each.

MKTG 180. Level 1, PGA's PGM Education Program (Part 1)

3 Credits (3)

Level 1 Part 1 of the PGA PGM Education Program. Introduction to the Policies and Procedures of the PGA Golf Mgt. Program and the PGA of America. Students will complete the PGA Qualifying Level, Facility Management 1A (Tournament Ops A, Rules of Golf B, and Career Enhancement B), and the corresponding Work Experience Activities. Additional course fee required. Consent of Instructor required. Restricted to: MKTG majors.

MKTG 181. Level 1, PGA's PGM Education Program (Part 2)

3 Credits (3)

Level 1 Part 2 of the PGA PGM Education Program. This class will focus on Teaching and Coaching 1, the corresponding PGA Work Experience Activities, and PGA Teaching Seminars. Additional course fee required. Consent of Instructor required. Restricted to: MKTG majors.

Learning Outcomes

1. Know how students learn and process golf knowledge and skills, and identify the implications for teaching Know how to define and distinguish between learning and performance Understand how juniors learn golf knowledge and skills, and identify implications for teaching Conduct a physical evaluation of a junior golfer and create developmentally appropriate exercise and training programs Establish student/teacher relationships that promote greater student learning and enjoyment Develop a communication style that fits the student and increases instructional effectiveness Analyze student's instructional needs and set clear, purposeful learning and practice goals Know the format for an effective golf lesson Deliver effective explanations and demonstrations during a golf lesson 1Engage in self-assessment of teaching skills and competencies 1Recognize the appropriate clubhead path and clubface position information to improve a golfer's performance 1Conduct appropriate assessments to determine the short game skill level of the golfer 1Gain understanding of the short game elements to help lower scores and improve the player 1Define club performance terms and specifications, including lie angle and clubface angle or position, and describe their effect on ball flight and player performance: Define what information is require to properly assess a player's golf equipment 1Define club performance terms and specifications, including lie angle and clubface angle or position, and describe their effect on ball flight and player performance: Observe a player's swinging motion, ball flight, and equipment to evaluate the effectiveness of their equipment

MKTG 2110. Principles of Marketing**3 Credits (3)**

Survey of modern marketing concepts and practices focusing on the marketing mix: product, pricing, promotion, and distribution strategies. Topics include: the marketing environment, consumer behavior, marketing research, target marketing, and the ethical and social responsibilities of marketers. May be repeated up to 3 credits.

Prerequisite(s): BUSA 1110.

Learning Outcomes

1. Describe the professional, ethical, and social responsibilities of marketers.
2. Explain the role of the product in the marketing mix, including the product life cycle, the relevance of product innovation, and product classifications.
3. Illustrate the role of promotion in the marketing mix, including the communication process and the promotional mix.
4. Explain the role of price in the marketing mix, including pricing objectives, pricing policies, and pricing methods.
5. Describe the operation of channels of distribution and supply chains, including functions of intermediaries and degrees of coverage.
6. Define the concepts of target markets and market segmentation with respect to elements of the marketing mix.
7. Explain the importance of market research and information systems in supporting marketing decision making.
8. Describe the dynamic environment(s) in which marketing decisions must be made.

MKTG 2220. Digital Marketing**3 Credits (3)**

This course focuses on planning to create and market a website. Internal marketing topics such as registering with search engines, increasing traffic, segmenting and targeting markets, establishing an online presence, developing a marketing plan and reshaping business for the Web market are covered.

Prerequisite: MKTG 2110.

Learning Outcomes

1. Describe how search engines work. (Use knowledge to make recommendations to a website on how it can improve its organic search rankings - perform search engine optimization). Describe the various methods of online display advertising. Determine the appropriate key performance indicators (KPIs) for any type of website. Describe and implement best practices in marketing to a database of current and potential customers via email. Utilize knowledge of social media tactics to design an effective social media campaign. Implement online reputation management tactics to improve the online reputation of a brand. Develop and present a digital marketing plan for a small, local business.

MKTG 280. Level 1, PGA's PGM Education Program (Part 3)**3 Credits (3)**

Level 1 Part 3 of the PGA PGM Education Program. This class will focus on Facility Management 1B (Business Planning A, Customer Relations A, Golf Car A, Merchandising A, Turfgrass A), Level 1 Checkpoint Exams, and the corresponding PGA Work Experience Activities. Students will also be required to provide an internship evaluation report. Additional course fee required. Consent of Instructor required. Restricted to: MKTG majors.

MKTG 281. Level 2, PGA's PGM Education Program (Part 1)**3 Credits (3)**

Level 2 Part 1 of the PGA PGM Education Program. This class will focus on Teaching and Coaching 2, Teaching and Coaching Seminars, and the corresponding PGA Work Experience Activities. Additional course fee required. Consent of Instructor required. Restricted to: MKTG majors.

Learning Outcomes

1. Explain how students learn golf knowledge and skills, and identify the implications for teaching Explain how students process information when learning golf skills Identify and explain the principles of effective practice Explain how juniors learn golf knowledge and skills, and identify the implications for teaching Structure an effective golf lesson Analyze student's instructional needs and set clear, purposeful learning and practice goals Deliver effective explanations and demonstrations during a golf lesson Engage in self-assessment of teaching skills and competencies Recognize and apply the appropriate clubhead path and clubface position information to improve a golfer's performance 1Conduct appropriate assessments to determine the skill level of the golfer 1Demonstrate basic knowledge of anatomy and physiology, and conduct a physical observation to identify movement capabilities and limitations that may affect a golfer's performance 1Define club performance terms and specifications, and describe their effect on ball flight and player performance

MUSC-MUSIC

MUSC 1110G. Music Appreciation: Jazz

3 Credits (3)

This course explores the ideas of music in society and its cultural relevance and is designed to increase the students' appreciation of music as well as to enhance their listening skills. Students are introduced to various periods, styles, and composers of music and become acquainted with knowledge and appreciation of Jazz from various cultures and times.

Learning Outcomes

1. Develop a vocabulary of musical terms, and be able to describe music using those terms
2. Demonstrate knowledge of composers, their music and their relationship to historical periods
3. Recognize how music played and plays a political, social, and cultural function
4. Identify well-known pieces and the historical and social context in which they were composed
5. Demonstrate basic understanding of music notation and musical communication

MUSC 1130G. Music Appreciation: Western Music

3 Credits (3)

This course explores the ideas of music in society and its cultural relevance and is designed to increase the students' appreciation of music as well as to enhance their listening skills. Students are introduced to various periods, styles, and composers of music and become acquainted with knowledge and appreciation of Western music from various cultures and times.

Learning Outcomes

1. Develop a vocabulary of musical terms, and be able to describe music using those terms
2. Demonstrate knowledge of composers, their music and their relationship to historical periods
3. Recognize how music played and plays a political, social, and cultural function
4. Identify well-known pieces and the historical and social context in which they were composed
5. Demonstrate basic understanding of music notation and musical communication

MUSC 1210. Fundamentals of Music for Non-majors

3 Credits (3)

A beginning course in the fundamentals of music, this course includes notation, scales, key signatures and intervals. Aural comprehension is introduced through singing intervals, scales and triads and dictating simple rhythmic and melodic patterns and students explore the basic components of music. Traditional Grading with RR.

Learning Outcomes

1. Demonstrate and apply standard notation of pitch, rhythm, scales, intervals, key signatures, triads, and simple melodic and harmonic composition
2. Develop and improve basic aural skills
3. Read musical notation
4. Improve and expand understanding of fundamental musical techniques and concepts

MUSC 1310. Recital Attendance

0.5 Credits (.5+1P)

This course is for music students to attend and participate in a good number of convocation, concert, and recital performances, creating a wider appreciation for the performing arts. May be repeated up to 4 credits. Restricted to: Music and Music Education majors. S/U Grading with RR. Restricted to Las Cruces campus only.

Learning Outcomes

1. Encourage student observation of serious music
2. Provide opportunities for public performances
3. To create a greater sense of community within the student body

MUSC 1410. Introduction to Music Education**2 Credits (2)**

This course is an overview of teaching in the music classroom through readings and observations. Students will be introduced to the skills needed to become a reflective educator, develop observation techniques, and demonstrate knowledge of the current state of the profession. Restricted to Las Cruces campus only.

Learning Outcomes

1. Make observations and analyze the current state of musical education in public schools
2. Describe characteristics of good teaching in music
3. Articulate a personal philosophy of music education
4. Reflect on personal strengths and weaknesses as a teacher of music

MUSC 1440. Class Voice I**1 Credit (1)**

Group instruction in voice and vocal pedagogy for instrumental Music Education majors, offering basic principles of healthy vocal production with particular attention to diction, development of vocal range, and the ability to impart that knowledge to elementary, junior and/or high school age students. Restricted to: Music Education majors. Traditional Grading with RR. Restricted to Las Cruces campus only.

Learning Outcomes

1. Provide the basic understanding of healthy vocal production. Including, but is not limited to, the
2. following topics: Expanding vocal range; Learning how to practice and learn songs effectively and efficiently; Provide basic understanding of vocal pedagogy; Introduction to diction
3. Aims to equip students with the ability to impart that knowledge to elementary, junior and/or high school age students.

MUSC 1450. Ear Training I**1 Credit (1)**

To develop the ability to accurately hear, identify, sing and notate musical elements including rhythm, melody, intervals and harmony Traditional Grading with RR. Restricted to Las Cruces campus only.

Prerequisite(s): Passing the Theory Placement exam or making a C or better in MUSC 1210.

Learning Outcomes

1. Counting rhythms at sight using the Eastman Counting System
2. Singing melodies at sight using solfege syllables
3. Writing out rhythmic patterns
4. Writing out melodic patterns
5. Identifying and singing intervals
6. Identifying and singing chord / triad qualities

MUSC 1451. Ear Training II**1 Credit (1)**

To develop the ability to accurately hear, identify, sing and notate musical elements including rhythm, melody, intervals and harmony Restricted to Las Cruces campus only.

Prerequisite(s): Grade of C- or better in MUSC 1450.

Learning Outcomes

1. Counting rhythms at sight using the Eastman Counting System
2. Singing melodies at sight using solfege syllables
3. Writing out rhythmic patterns
4. Writing out melodic patterns
5. Identifying and singing intervals
6. Identifying and singing chord / triad qualities

MUSC 1460. Music Theory I**3 Credits (3)**

Introduction to vocabulary and syntax of 4-voice 18th c. chorale music through study and harmonic analysis.

Prerequisite(s): Passing the Theory Placement exam or making a C or better in MUSC 1210.

Learning Outcomes

1. To learn the vocabulary and syntax of 4-voice 18th c. chorale music through study and harmonic analysis

MUSC 1461. Music Theory II**3 Credits (3)**

Expansion of vocabulary and syntax of 4-voice 18th c. chorale music through study, harmonic analysis, and part writing.

Prerequisite(s): Grade of C or better in MUSC 1460.

Learning Outcomes

1. To expand and apply the vocabulary and syntax of 4-voice, 18th c. chorale music through study, harmonic analysis, and part writing.

MUSC 1470. Functional Piano I**2 Credits (2)**

Scales, chords, memorization. Harmonization of simple melodies with the ability to play simple melodies and rhythms. May be taken for unlimited credit.

Restricted to music majors. No S/U option.

Learning Outcomes

1. 5 finger hand position in all keys
2. I-IV-I-V7-I cadences in all keys
3. One octave scales with hands together in C, G, D and F (major and minor)
4. Root position cross--over triads, solid and broken (major and minor)
5. Simple sight reading, harmonizing and transposition
6. Prepared pieces from the textbook
7. Simple improvisation
8. Play 2 simple vocal exercises
9. Identify intervals, key signatures and chords
10. 1Correct posture and hand position
11. 1Musical issues such as phrasing, slurs and dynamics
12. 1Good practice habits and techniques

MUSC 1471. Functional Piano II**2 Credits (2)**

Scales, chords, memorization. Harmonization of simple melodies with the ability to play simple melodies and rhythms. May be taken for unlimited credit.

Restricted to music majors. No S/U option.

Prerequisite: MUSC 1470 or consent of instructor.

Learning Outcomes

1. Two octave scales with hands separate in C, G, D, A, E, B and F (major and minor)
2. I-IV-I-V-V7-I cadences in above mentioned keys in root position and 1st inversion
3. Simple sight reading, harmonization and transposition
4. Prepared pieces from the book
5. Simple improvisation
6. Identify intervals, key signatures and chords
7. Correct posture and hand position
8. Musical issues such as phrasing, slurs and dynamics
9. Good practice habits and techniques

MUSC 1472. Functional Piano III**2 Credits (2)**

For music majors preparing for the Piano Proficiency Examination. May be taken for unlimited credit. Restricted to music majors. No S/U option.

Prerequisite: MUSC 1471 or consent of instructor.

Learning Outcomes

1. Keys learned in previous semesters, adding F# and C# (D flat)
2. Secondary dominant chords added to cadence patterns
3. Two-octave, , root position arpeggios, major and minor
4. Intro to chord charts, harmonization
5. More difficult sight--reading and transpositions
6. More difficult prepared pieces
7. Accompany a piece for any instrument on the Mid-Term Recital (required)

MUSC 1992. Applied Music**1-2 Credits**

Private or group instruction for non-music majors, secondary instruments, and music majors preparing for 200-level applied music. May be taken for unlimited credit.

Learning Outcomes

1. Varies

MUSC 2110. Chamber Ensemble**1 Credit (1)**

This course is an exploration of chamber ensembles, allowing students to develop their abilities with their instruments in a group setting. Students will gain a broader understanding of chamber ensemble through study of musical history, as well as various practice exercises and performances. May be repeated up to 16 credits. Restricted to Las Cruces campus only.

Prerequisite(s): by audition only.

Learning Outcomes

1. Improve performance skills
2. Develop and improve performance skills in a group setting
3. Develop understanding and interpretation within the context of music history
4. Refine and improve technical ability
5. Demonstrate proper technique and usage

MUSC 2120. Major Ensemble**1 Credit (1)**

This course is an exploration of major ensembles, allowing students to develop their abilities with their instruments in a group setting. Students will gain a broader understanding of major ensemble through study of musical history, as well as various practice exercises and performances. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): by audition only.

Learning Outcomes

1. Improve performance skills
2. Develop and improve performance skills in a group setting
3. Develop understanding and interpretation within the context of music history
4. Refine and improve technical ability
5. Demonstrate proper technique and usage

MUSC 2130. Jazz Ensemble**1 Credit (1)**

This course is an exploration of jazz ensembles, allowing students to develop their abilities with their instruments in a group setting. Students will gain a broader understanding of jazz ensemble through study of musical history, as well as various practice exercises and performances. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): By audition only.

Learning Outcomes

1. Improve performance skills
2. Develop and improve performance skills in a group setting
3. Develop understanding and interpretation within the context of music history
4. Refine and improve technical ability
5. Demonstrate proper technique and usage
6. Develop and improve improvisation skills

MUSC 2132. Percussion Ensemble**1 Credit (1)**

Study and performance of contemporary percussion ensemble literature. May be repeated up to 5 credits. Restricted to Las Cruces campus only.

Prerequisite(s): by audition only.

Learning Outcomes

1. Improve performance skills
2. Develop and improve performance skills in a group setting
3. Develop understanding and interpretation within the context of music history
4. Refine and improve technical ability
5. Demonstrate proper technique and usage

MUSC 2151. An Introduction to World Music, Jazz and Music Research**3 Credits (3)**

Introduces world music and jazz within a historical and cultural context, considering significant musical figures, forms, genres, styles, and representative works. A major component will be the development of effective research and scholarly writing skills for the music major or minor. May be repeated up to 3 credits. Restricted to: Music majors and minors. Restricted to Las Cruces campus only.

Learning Outcomes

1. This course will cover fundamental concepts and styles associated with world music (ethnomusicology), jazz and popular music, an overview of the Western European tradition, and an intense focus on research and writing about music.
2. Emphasis will be placed on writing skills as they apply to the college experience in general and the world of music education and performance in particular.
3. Students will become acquainted with the diverse ways cultures create and are affected by their respective musical arts.
4. Focus will be on style evolution, forms, genres, composers, literature, and, where appropriate, performers

MUSC 2210. Diction I**2 Credits (2)**

This course is designed to prepare students for singing in multiple languages using concepts of the International Phonetic Alphabet. Students will work to master the basics of phonetic singing to improve their overall musical abilities. Restricted to Las Cruces campus only.

Learning Outcomes

1. Correctly and consistently form vowel and consonant sounds when speaking and singing in multiple languages
2. Correctly and consistently transcribe texts in multiple languages using the International Phonetic Alphabet
3. Understand and explain the International Phonetic Alphabet's usage and symbols
4. Develop and apply the concept of lyric diction to singing
5. Gain fluency, accuracy, and confidence in pronunciation of sung text

MUSC 2220. Diction II**2 Credits (2)**

This course serves as a continuing study in the concepts of the International Phonetic Alphabet. Students will continue to improve and practice their diction to develop their singing and musical abilities in order to begin the mastery of lyric diction. Restricted to music majors. Restricted to Las Cruces campus only.

Prerequisite: MUSC 2210 or consent of instructor.

Learning Outcomes

1. Correctly and consistently form vowel and consonant sounds when speaking and singing in multiple languages
2. Correctly and consistently transcribe texts in multiple languages using the International Phonetic Alphabet
3. Understand and explain the International Phonetic Alphabet's usage and symbols
4. Develop and apply the concept of lyric diction to singing.
5. Gain fluency, accuracy, and confidence in pronunciation of sung text.
6. Demonstrate ability to notate song texts according to IPA standards

MUSC 2240. Music History and Literature: Antiquity through Baroque**3 Credits (3)**

Surveys Western art music within a historical and cultural context, considering significant musical figures, forms, genres, styles, and representative works from antiquity through the end of the Baroque era. An additional emphasis will be given to effective research and scholarly writing skills. Restricted to: M ED, MUSC majors.

Prerequisite(s): A grade of C- or better in MUSC 1450, 1460, and 2151.

Learning Outcomes

1. The purpose of the course is to survey the beginning history of music from the earliest ancient times through the Baroque period, ca. 175

MUSC 2310. Sound and Music Technology**1 Credit (1)**

This course serves as an overview of current technologies and principles for the recording and production of sound, and the use of computer-based technologies for the production of music. Restricted to: MUSC,M ED majors. Traditional Grading with RR. Restricted to Las Cruces campus only.

Prerequisite(s): MUSC 1460.

Learning Outcomes

1. Demonstrate fundamental knowledge of techniques and practices of music recording and production
2. Demonstrate ability to properly use computer-based technologies to produce and record music
3. Demonstrate ability to create music recordings
4. Work with a variety of recording, production, and sound reinforcement tools
5. Apply basic and mixed editing techniques
6. Use audio editing and file management techniques
7. Demonstrate knowledge of music technology vocabulary
8. Explain and understand the development of various music technologies

MUSC 2451. Ear Training III**1 Credit (1)**

Continuation of MUSC 1451, advanced sight singing, dictation. Restricted to Las Cruces campus only.

Prerequisite(s): Grade of C- or better in MUSC 1451.

Learning Outcomes

1. Count rhythms at sight using the Eastman Counting System
2. Sing melodies at sight and prepared using Solfege syllables
3. Write out rhythmic patterns
4. Write out melodic patterns
5. Identify and singing intervals
6. Identify and sing chord / triad qualities
7. Write out harmonic dictation

MUSC 2452. Ear Training IV**1 Credit (1)**

Continuation of MUS 2451, advanced sight singing, dictation. Restricted to Las Cruces campus only.

Prerequisite(s): Grade of C or better in MUSC 2451 and MUSC 2460.

Learning Outcomes

1. Count rhythms at sight using the Eastman Counting System
2. Sing scales and sequences as assigned for the level
3. Sing melodies at sight using solfege syllables
4. Write out rhythmic patterns in both simple and compound meters
5. Write out melodic patterns in both major and minor tonalities
6. Identify, label and sing intervals
7. Identify, label and sing chords and extended harmonic qualities, i.e. V7 and inversions
8. Write out harmonic progressions in both two and four part forms including secondary dominants and modulations.
9. Accurately detect melodic and rhythmic errors in dictation examples.

MUSC 2460. Music Theory III**3 Credits (3)**

Analysis of Baroque and Classical Music. Vocabulary and syntax of 18th and 19th c. Western art music through study, chordal/formal analysis, and composition. Restricted to Las Cruces campus only.

Prerequisite(s): Grade of C or better in MUSC 1461.

Learning Outcomes

1. To learn and apply the vocabulary and syntax of 18th and 19th c. Western art music through study, chordal/formal analysis, and composition.
2. Topics covered include: Two-Voice Eighteenth Century Counterpoint; Fugue; Borrowed Chords; Neapolitan 6th Chords; Augmented 6th Chords; Sonata Form; Rondo Form.

MUSC 2461. Music Theory IV**3 Credits (3)**

Analysis of Romantic, Post-Romantic, Impressionist, and Twelve-Tone Music. Vocabulary and syntax of late 19th and early 20th c. Western art music through study, micro/macro analysis, and composition. Restricted to Las Cruces campus only.

Prerequisite(s): Grade of C or better in MUSC 2460.

Learning Outcomes

1. To learn and apply the vocabulary and syntax of late 19th and early 20th c. music through study, micro/macro analysis, and composition.

MUSC 2470. Functional Piano IV**2 Credits (2)**

For music majors preparing for Piano Proficiency Examination. May be taken for unlimited credit. Restricted to music majors. No S/U option.

Prerequisite: MUSC 1472 or consent of instructor.

Learning Outcomes

1. Keys learned in previous semesters, adding A flat, E flat, and B flat
2. Secondary dominant chords added to cadence patterns, all inversions
3. Arpeggios, all inversions
4. More difficult sight-reading and transpositions
5. More difficult prepared pieces
6. Four part pieces (hymns)
7. Accompany a piece for any instrument on the Mid-Term Recital (required) Score reading and transposition

MUSC 2510. Applied Music I**1-4 Credits**

Individual instruction to develop technique, musicianship, performance and improvisational skills, as well as knowledge of significant repertoire. May be repeated up to 16 credits. Consent of Instructor required. Restricted to: Music and Music Education majors. Traditional Grading with RR. Restricted to Las Cruces campus only.

Prerequisite(s): Audition.

Learning Outcomes

1. Varies

MUSC 2993. Opera Workshop**1 Credit (1)**

Study, translation, analysis, rehearsal and performance of opera. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): by audition only.

Learning Outcomes

1. Varies

MUSC 2996. Special Topics I**1-3 Credits**

Emphasis on special areas of music; designed for highly motivated students. May be taken for unlimited credit.

Learning Outcomes

1. Varies

NA - NURSING ASSISTANT (NA)

NA 101. Nursing Assistant Theory and Lab

6 Credits (5+2P)

Nurse aide skills with emphasis on a bio-psychosocial-cultural approach to client care. Practice of these skills is provided in the laboratory as well as at a clinical site. Successful completion of the course prepares and qualifies the student to take the NACES certification examination. Requires a C or better to pass. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Apply theoretical knowledge associated with nursing assisting in providing basic healthcare services. Perform essential clinical skills within the nursing assistant scope of practice in long-term, acute care, and ambulatory care settings. Recognize factors that affect procedures and results, and take appropriate actions within predetermined limits when indicated, including resident/patient compromise or complications. Demonstrate professional conduct and interpersonal communication skills with patients, other health care professionals, and with the public. Recognize the responsibilities of other health care personnel and interact with them with respect for their healthcare roles and resident/patient care. Apply basic scientific principles and evidenced-based practice in learning new techniques and procedures. Relate vital signs, point-of-care testing, and physical psychological findings to common disease processes. Evaluate occupational exposures, environmental safety hazards, high risk situations, and emergency responses related to health care professions. Demonstrate soft skills related to assisting with patient assessment, mobility, safety, nutrition, and care of the environment. 1 Demonstrate professionalism when interacting with patient populations across the lifespan; including patient education and emergent situations. 1 Explain legal and ethical considerations, including HIPAA and scope of practice related to healthcare settings.

NA 102. Sterile Processing Technician

4 Credits (3+3P)

This course will prepare the student to work as a Sterile Processing Technician, performing critical functions that support both the hospital and Operating Room. The student will learn about infection control, instrument reprocessing, decontamination, disinfection, and sterilization. All critical aspects of sterile processing will be covered to include applicable standards and regulations. This field is constantly evolving and those desiring to work in this profession must ensure that they stay abreast of the science behind the discipline. Restricted to Community Colleges campuses

Prerequisite(s): CCDE 110 N General Composition Placement exam scores, or specific course work.

Learning Outcomes

1. Summarize the legal responsibilities, ethical standards, and safety practices related to Sterile Processing Control and eliminate the spread of microorganisms Articulate standards and regulations as well as recommendations by professional organizations Properly clean, decontaminate, disinfect, and sterilize basic surgical instrumentation Prepare and assemble surgical trays and kits to include packaging and quality assurance indicators Utilize various sterilization modalities

NA 104. Nursing Assistant Fundamentals

3 Credits (3)

This course prepares students for employment as a Nursing Assistant in a Long Term Care Facility. Theory and basic nursing care skills will be taught with an emphasis being placed on the psychosocial-cultural approach to client care. Students will learn communication skills, basic anatomy and physiology, growth and development, infection control, body mechanics, basic nutrition, client/resident elimination needs, the client/resident unit, vital signs, range of motion exercises, bed making, rehabilitation and restorative care, client admission and discharge, common health problems, dealing with death and dying, and basic medical terminology. NA 104 and NA 104L (laboratory) must be successfully completed with a C- or better in order to continue to NA 105 Nursing Assistant Clinical. NA 105 must also be successfully completed with a C- or better to be eligible to take the state certification competency examination. Attendance is required to meet the federal requirements for training hours and content prior to direct contact with a patient/resident and the state competency examination. Students must test out of all CCDE and CCDE courses and eligible to take ENGL 1110G to enroll in this course. Restricted to Community Colleges campuses only.

Corequisite(s): NA 104 L.

NA 104 L. Nursing Assistant Fundamentals Lab

1 Credit (3P)

This course prepares students for employment as a Nursing Assistant in a Long Term Care Facility. Students will learn and demonstrate personal care skills including bathing, grooming, dressing, toileting, assisting with eating and hydration, skin care, transfers and positioning. Students will also learn and demonstrate the use of assistive devices, and how to maintain resident safety, dignity and privacy. NA 104 & NA 104L must be successfully completed with a C- or greater in order to continue to NA 105 Clinical. NA 105 must be successfully completed with a C- or greater to be eligible to take the state certification competency examination.

Prerequisite(s)/Corequisite(s): NA 104. Prerequisite(s): English COMPASS score of 35 or greater or CCDE 110N, and reading COMPASS score of 55 or greater or CCDE 105N. Restricted to Community Colleges campuses only.

NA 105. Nursing Assistant Clinicals

4 Credits (3+3P)

Extension of basic fundamentals of personal care, including theory, skills and clinical experience leading to the certified Nursing Assistant Examination at the conclusion of the semester. Continuation of NA 104. Requires a C or better to pass. Restricted to: Community Colleges only.

Prerequisite(s): C or better in NA 104 or consent of instructor.

NA 109. Phlebotomist Basic**4 Credits (2+4P)**

This course provides the latest information, techniques, skills, and equipment for blood and specimen collection based on the standards of the Clinical and Laboratory Standards Institute, Needlestick Prevention Act, Joint Commission 2008 National Patient Safety Goals, OSHA and CDC. An advanced skills lab is included in the course to provide a "hands-on" practice experience and a 30 hour practicum in a supervised work environment collecting blood and specimens on actual patients for laboratory tests. Attendance is mandatory. Prepares students for employment as a phlebotomist in health care settings. Requires a "C" or better to pass. Upon successful completion of the course, student has the opportunity to test for National Healthcareer Certification. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): BIOL 1130 or BIOL 2225. Restricted to Community Colleges campuses only.

NA 110. Electrocardiogram Technician Basic**4 Credits (3+2P)**

Prepares students for employment as an Electrocardiogram Technician. Includes basic theory of the cardiovascular system, cardiac rhythm interpretation, 12 lead ECG lead placement, and ECG equipment trouble shooting. The course includes an advanced skills laboratory for "hands-on" practice and 16 hours of supervised clinical in the work environment assisting with ECG testing. Attendance is mandatory. Course requires a grade of "C" or better to pass. Upon successful completion of course, student has the opportunity to test for National Healthcareer Certification. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Perform ECG's, including patient preparation, electrode placement, recording ECG's, mounting upload of ECG to patient's chart. Calculate a patient's heart rate and identify the heart rhythm from an ECG tracing. Identify artifacts; waveform elements of the cardiac cycle, including variances related to ischemia, injury or infarction; as well as, major classifications of arrhythmias. Prepare and monitor patient's for Holter monitoring and telemetry. Prepare, conduct and monitor patients during stress testing. Recognize factors that affect procedures and results, and take appropriate actions within predetermined limits when indicated, including patient compromise or complications. Demonstrate professional conduct and interpersonal communication skills with patients, other health care professionals, and with the public. Recognize the responsibilities of other health care personnel and interact with them with respect for their jobs and patient care. Apply basic scientific principles in learning new techniques and procedures. 1 Relate electrocardiogram findings to common disease processes.

NA 111. Alzheimer/Dementia Care Focus**3 Credits (3)**

Students will learn respectful care of Alzheimer/Dementia persons while ensuring their dignity, maximizing safe independence focusing on strengths and abilities.

Prerequisite(s)/Corequisite(s): NA 104 or NA 101. Restricted to: Community Colleges only.

NA 113. Sterile Processing Practicum**5 Credits (1+4P)**

This course will allow students to get hands on training in the Sterile Processing Department. They will perform critical functions learned in the Sterile Processing Technician course. They will apply principles of medical asepsis and infection control and by the end of the practicum be able to independently function in all work areas of the Sterile Processing Department. This field is constantly evolving and those desiring to work in this profession must ensure that they stay abreast of the science behind the discipline. Restricted to Community Colleges campuses

Prerequisite(s)/Corequisite(s): NA 102. Prerequisite(s): CCDE 110 N.

Learning Outcomes

1. Utilize equipment safely in the Sterile Processing Department Apply concepts of infection control and medical asepsis Effectively demonstrate professional ethical concepts Demonstrate proper cleaning, decontamination, disinfection, and sterilization practices Properly prepare and assemble surgical trays and kits to include packaging and quality assurance indicators Validate sterilization loads to ensure patient safety

NA 115. Phlebotomist Technician**6 Credits (3+6P)**

Basic theory and skills of phlebotomy following OSHA and Center for Disease Control guidelines. Prepares students for the requirements of testing for the ASCP certification exam and employment in a healthcare organization as a phlebotomist in licensed settings. Laboratory hours include infection control skills & practice, patient assessment & teaching, and practice in venipuncture. Clinical time includes clinical laboratory processes and operations, patient assessment, venipuncture, and exposure to clinical policies and procedures. Upon successful completion students are workforce ready. Requires C or better to pass. Restricted to Community Colleges campuses only.

Learning Outcomes

1. Collect and process biological specimens for analysis. Recognize factors that affect procedures and results, and take appropriate actions within predetermined limits when corrections are indicated. Monitor quality control within predetermined limits. Perform preventative and corrective maintenance of equipment and instruments or refer to appropriate source for repairs. Demonstrate professional conduct and interpersonal communication skills with patients, laboratory personnel, other health care professionals, and with the public. Recognize the responsibilities of other laboratory and health care personnel and interact with them with respect for their jobs and patient care. Apply basic scientific principles in learning new techniques and procedures.

NA 204. Patient Care Technician**4 Credits (3+3P)**

This course will prepare Certified Nursing Assistants (CNAs) to work in the acute care setting through an expansion of their existing basic skill set. Students will acquire expanded acute care skills, critical thinking skills, and knowledge in caring for patients of all ages. Currently CNA certified. Restricted to Community Colleges campuses only.

Prerequisite(s): (NA 104, NA 105, NA 109, NA 110, AHS 120, and (BIOL 1130 or (BIOL 2210 & BIOL 2225))).

Corequisite(s): NA 205.

NA 205. Patient Care Technicians Practicum**4 Credits (1+9P)**

This course will prepare Certified Nursing Assistants (CNAs) to work in the acute care setting through an expansion of their existing basic skill set. Students will acquire expanded acute care skills, critical thinking skills, and knowledge in caring for patients of all ages. Students will go to acute care settings to practice newly acquired skills. Must have a "C" or better to pass. Restricted to Community Colleges campuses only.

Prerequisite(s): (NA 104, NA 105, NA 109, NA 110, AHS 120, & (BIOL 1130 or (BIOL 2210 & BIOL 2225))) Currently CNA Certified.

Corequisite(s): NA 204.

NA 209. Phlebotomy Laboratory Technician**4 Credits (2+4P)**

A continuation of NA 109, Phlebotomy Basic. This course furthers the experience, knowledge and skills of the phlebotomist by providing advanced specimen collection techniques, skills to assist with lab management, patient data processing, quality control measures, and customer service. Completion of thirty clinical hours and fifty successful venipunctures are required. Attendance is mandatory. Requires a final grade of "C" or better to pass. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s)/Corequisite(s): ENGL 1110G or ENGL 1110H or ENGL 1110M. Prerequisite(s): (BIOL 1130 or BIOL 2310 & BIOL 2225), and AHS 120, and NA 109.

Learning Outcomes

1. Students will learn and demonstrate advanced specimen collection techniques. Students will learn and demonstrate advanced laboratory processing skills. Students will effectively employ skills required for patient information processing. Students will employ concepts of medical asepsis and infection control. Students will apply knowledge and skills required for quality control measures in the laboratory setting. Students will demonstrate professional and appropriate communication, in addition to soft skills. Students will learn and practice blood collection techniques in preparation for the PBTASCP national certification exam.

NA 210. Administrative Procedures for Medical Assistants**4 Credits (4)**

This course will provide students with the administrative procedures needed for a medical assistant. Skills will include creating a welcoming environment, cultural considerations, office safety, opening and closing procedures, computer operation and management, written and telephonic communications, financial procedures, patient scheduling, medical record management, and medical insurance, billing, and coding. Restricted to Community Colleges campuses

Prerequisite(s)/Corequisite(s): NA 212. Prerequisite(s): MATH 1215, and ENGL 1110G, and AHS 120, and BIOL 1130 or BIOL 2225.

Learning Outcomes

1. Create and maintain a medical facility environment
2. Demonstrate professional business communications in writing, via telephone, and email.
3. Demonstrate patient scheduling, screening calls, and check-in.
4. Create a patient chart and demonstrate medical record management.
5. Demonstrate the use and management of an electronic health record.
6. Identify insurance and billing terminology.
7. Identify the different characteristics of third party medical payer sources.
8. Collect information for billing, and precertification for services.
9. Identify common procedure codes for diseases and procedures
10. 1 Complete billing and coding forms.
11. 1 Demonstrate office financial practices, managing patient accounts, and tracking, collecting payments, documentation, and performing banking procedures.
12. 1 Performing inventory, and purchasing of supplies.
13. 1 Identify billing and collection procedures.
14. 1 Demonstrate office accounting practices.
15. 1 Apply laboratory regulations for safety and quality in the medical laboratory
16. 1 Identify legal considerations in the management of a medical office.

NA 212. Medical Assistant Capstone Course**6 Credits (6)**

This course provides the student with entry-level theory and limited "hands-on" training in basic and routine clinical office tasks. The course will equip the Medical Assistant (MA) student with the competencies required to perform in a medical office under the direct supervision of a physician. The graduate will be able to assist the physician with physical exams, ECGs, phlebotomy, and minor surgical procedures. CNA Certification within the last 5 years.

Prerequisite(s): NA 105, NA 110, NA 109, AHS 120, BIOL 1130, BOT 208, HIT 228, HIT 248.

NA 214. Medical Assistant Practicum**6 Credits (1+6P)**

This course is the practicum for NA 212 Medical Assistant Fundamentals Capstone Course. Students will prepare for a career as a medical assistant in medical offices and clinics. During practicum students will observe and participate in 180 hours in a supervised work environment using knowledge and skills learned in NA 212. This course includes weekly post-practicum conferences with the instructor. The student will be evaluated by both the employer and the instructor. Requires a "C" or better to pass. Upon successful completion the student may be eligible to test for National Certification. Students who have been CNA Certified within the last 5 years can use this to enroll into this course. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): NA 212. Prerequisite(s): NA 105, NA 110, NA 109, AHS 120, BIOL 1130, BOT 208, HIT 228, HIT 248. Restricted to Las Cruces campus only.

NAV-NAVAJO (NAV)

NAV 101. Introduction to Navajo Studies**3 Credits (3)**

Covers geography, demography, institutions of modern Navajo society with historical overview. Restricted to: Community Colleges only.

NAV 111. Elementary Navajo I**4 Credits (4)**

Navajo for beginners with emphasis on speaking skills.

Prerequisite: not open to Navajo-speaking students except by consent of instructor.

NGEC-NATURAL GAS ENGINE COMP

NGEC 133. Natural Gas Engine Repair Technology**5 Credits (5)**

This course will cover the engine fundamentals, cylinder head and valve trains, engine block, engine servicing, lubrication and cooling Systems. Restricted to: Natural Gas Engine Compression majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. A basic knowledge about engine operation.
2. Practice shop safety, ability to identify potential hazards, tool identification, proper rigging and crane operation.
3. Ability to identify specific components of a natural gas engine and their function.
4. Locate and identify various components on and off an engine.
5. Safely start large stationary industrial natural gas engines.
6. List the steps of preventive maintenance on natural gas engines.
7. Completely disassemble a natural gas engine, clean and organize parts, and measure critical clearances using appropriate precision measuring tools.
8. Replace or repair any defects that are found on assigned engine, compile a list of parts needed to make repairs, assemble engine correctly, and start and run the engine.

NGEC 175. Natural Gas Compression Technology I**4 Credits (4)**

This course delivers an introduction to the theory, application, rotary, and centrifugal natural gas compressor including operating principles, maintenance, and repair of the reciprocating, identification of the component parts and their functions, methods of balancing, and lubrication systems, and design characteristics. This course will also include calculations of gas flow, compressor sizing, rod loads, compressor analysis charts and horsepower ratings. In addition, this course will cover safety, precision measurement, use of the manuals, use of tools, and proper adjustments will be included with overhaul exercises. Restricted to: Natural Gas Engine Compression majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. Identify and analyze the re-usability of basic compressor parts.
2. Accurately diagnose failure of key core components of basic compressors.
3. Identify basic preventive maintenance tasks on natural gas compressors.
4. Identify the key concept of troubleshooting of natural gas compressors by applying failure analysis techniques to arrive at the root cause of the failure.
5. Demonstrate safety procedures in the workshop and follow appropriate steps to work with the compressor.

NGEC 185. Natural Gas Compression Technology II**4 Credits (4)**

This course delivers the principles of operation for natural gas engines and compressors. It includes process of startup and shutdown of natural gas compressor skid. Restricted to: Natural Gas Engine Compression majors. Restricted to Carlsbad campus only.

Prerequisite(s): Grade of C or better in NGEC 175.

Learning Outcomes

1. Demonstrate a hub alignment.
2. Describe start up procedures.
3. Describe shutdown procedures.
4. Demonstrate proper bolt torquing with appropriate tools.
5. Demonstrate proper valve removal.
6. Demonstrate proper safety procedures including lockout and tag-out.

NGEC 245. Natural Gas Engine Management and Control Technology**5 Credits (5)**

This course delivers operational and application studies of Engine Management System Fundamentals, Sensors, Engine Inspection, and Engine Management Fault Investigation. Restricted to: Natural Gas Engine Compression majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. Identify specific components of a natural gas engine and their function.
2. Explain the four major systems of a natural gas engine.
3. Identify specific components of a natural gas engine and their function.
4. List the steps of preventive maintenance on natural gas engines.

NGEC 246. Fuel and Emissions Technology**5 Credits (5)**

This course delivers operational and application studies of fuel components and emissions control system. Restricted to: Natural Gas Engine Compression majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. Identify specific components of a natural gas engine and their function.
2. List the steps of preventive maintenance on natural gas engines.
3. Know the fuel components and operation
4. Locate and identify various components on and off an engine.
5. Safely start stationary industrial natural gas engines.

NGEC 295. Special Topics**2 Credits (2)**

Topics are to be announced in the Schedule of Classes. The topic and project are to be discussed and implemented between faculty member and student. Student gives presentation to class at the end of the term of study. All-Natural Gas Compression Technology classes in the NGEC Program must be completed or in progress before enrolling in this course. Restricted to: Natural Gas Engine Compression majors. Restricted to Carlsbad campus only.

Learning Outcomes

1. The student should provide an overall meaning during the individual time in the NGEC Program for this final project.

NURS-NURSING (NURS)

NURS 110. Pre-Nursing Freshman Seminar

1 Credit (1)

This Freshman seminar provides an introduction to the university and its resources, an orientation to the pre-nursing curriculum, and overview of concepts for professional nursing practice. Emphasis is placed on exploring the nurse's role as an integral member of the healthcare team across multiple contexts and settings, and developing a professional identity. Consent of Instructor required.

NURS 120. Introduction to Pharmacology

3 Credits (3)

General principles of pharmacology including methods of administration, effect on the body, interactions with other drugs, and classification of drugs. Focus on the health care provider's role in safe pharmacologic intervention. May be repeated up to 3 credits. Crosslisted with: HIT 120. Restricted to Community Colleges campuses only.

NURS 130. Foundations of Pharmacology

3 Credits (3)

This course provides the nursing student with an introduction to the foundations of pharmacology including: science of drug action, principles of medication administration, accurate calculation of drug doses, medication therapy across the lifespan, application of medications to treat health alterations, normal and adverse responses by the client to medication therapy, medication safety, medication regulation, national patient safety goals, and appropriate nursing interventions to achieve the desired goals of medication therapy. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: Community Colleges only.

Corequisite(s): NURS 147 & NURS 149. Restricted to: NUR majors.

NURS 134. Foundation of Nursing Skills and Assessment

3 Credits (1+6P)

This course provides nursing students with introductory nursing knowledge related to performance of nursing skills and assessment including: techniques of fundamental nursing care, basic and intermediate nursing skills, and foundational physical assessment techniques associated with care across the lifespan. Open to students who have been accepted into the nursing program. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 136 & NURS 137 or permission of the Program Director.

NURS 136. Foundations of Nursing Practice

6 Credits (4+6P)

This course will introduce the nursing student to foundational theoretical concepts of professional nursing practice, the nursing process, and foundational nursing skills. It includes developmental concepts related to clients across the lifespan. Clinical experiences in the simulation lab, long-term care, the community, and rehabilitation settings will provide the student with the opportunity to apply learned skills to provide total care to meet needs of one adult client and to develop care planning skills related to actual problems. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 134, NURS 137.

NURS 137. Care of Geriatric Patient

3 Credits (3)

This course will introduce the nursing student to foundational concepts of age-appropriate/specific care of the older adult who represents the largest population of individuals placing demands on the healthcare system. It includes basic and complex concepts and issues related to care of the older client across the care continuum, provision of cost-effective care in a resource sparse environment. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the nursing program to enroll in this course. Restricted to: NURS majors. Restricted to Community Colleges campuses only.

Corequisite(s): NURS 134 & NURS 136.

NURS 140. Pathophysiology for Allied Health Professionals

3 Credits (3)

Introduction to the nature of disease and its effect on body systems. Deals with the disease processes affecting the human body via an integrated approach to specific disease entities. Includes a review of normal functions of the appropriate body systems. Diseases are studied in relationship to their etiology, pathology, physical signs and symptoms, diagnostic procedures, complication, treatment modalities, and prognosis. Restricted to Allied Health and Health Information Technology majors. Restricted to: Community Colleges only.

NURS 146. Common Health Deviations

6 Credits (4+6P)

Common health deviations and the manner by which they alter various body functions are explored. The role of the licensed practical nurse in assisting clients with common health deviations is presented. Ethical and legal implications and the role of the practical nurse are also considered. The licensed practical nursing student will utilize the application of knowledge to client care situation both in the subacute and acute care settings. The nursing process is presented as guide for coordinating client care. Grade of C or better. May be repeated up to 6 credits. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 156, NURS 154, NURS 157, and NURS 210 or consent of program director.

NURS 147. Adult Health I**6 Credits (4+6P)**

This course focuses on application of the nursing process and theoretical concepts of care for adults with commonly occurring health problems. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to continue development of: prioritization skills, proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, care planning skills related to patient actual, psychosocial, and potential problems in the delivery of total nursing care to meet needs of one adult client. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Corequisite(s): NURS 130, NURS 147 lab, & NURS 149.

NURS 149. Mental Health Nursing**3 Credits (2+3P)**

This course will allow the nursing student to develop skills necessary to provide nursing care for clients with mental health problems in various health care settings including: common mental health disorders, psychosocial dysfunction, psychosocial safety/substance abuse issues, violence, suicide, restraints, developmental age related pathophysiology, psychopharmacology, cultural/religious considerations, grief/loss, promotion of mental health, and therapeutic communication. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to develop ability to develop: proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, care planning skills related to patient actual, psychosocial, and potential problems in the delivery of total nursing care to meet needs of one client across the life span with acute/chronic mental health needs. Students must be concurrently enrolled in both the lecture and lab sections of this course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program in order to enroll in the course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 130, NURS 147, & NURS 149L.

NURS 150. Medical Terminology**3 Credits (3)**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as OEHO 120 and BOT 150. May be repeated up to 3 credits. Crosslisted with: BOT 150, AHS 120 and HIT 150.

NURS 153. Medication and Dosage Calculation**1 Credit (1)**

Techniques of dosage calculation for medication and fluid administration. RR applicable. Students must meet NMSU basic skills requirement in mathematics to enroll in this course.

Corequisite(s): NURS 156 and NURS 154.

NURS 154. Physical Assessment**2 Credits (2)**

Beginning techniques of physical assessment by systems will be presented using the nursing process as a guide for providing safe client centered care throughout the life span. Grade of C or better is required. May be repeated up to 2 credits. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite(s): BIOL 1130 or BIOL 2210.

Corequisite(s): NURS 153, NURS 156.

NURS 155. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes.

NURS 156. Basic Nursing Theory and Practice**6 Credits (4+6P)**

Introduction to the nursing profession and the beginning skills of nursing practice as it relates to normalcy. The nursing process is presented as a means of guiding the student in providing safe client centered care. Ethical and legal aspects of nursing practice are also included. Basic clinical nursing skills will be presented and practiced in the nursing lab. The student will perform these skills with clients in an actual health care setting. May be repeated up to 6 credits. Consent of Program Director requires. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Corequisite(s): NURS 153, NURS 154.

NURS 157. Maternal/Child Health Deviations**8 Credits (6+6P)**

This course introduces the student to the concepts and principles of nursing care of the family from conception to adolescence. Utilizing the assessment, analyzing, planning, and implementation phases of the nursing process (the Care map), the student focuses on the supportive-educative nursing system to assist members of the family in meeting self-care requisites and how they are affected by the health deviations common to each developmental level beginning with conception and ending with adolescence. Knowledge gained in theoretical instruction is then applied to the patient care situation. After an introduction to the necessary clinical skills in the campus laboratory setting, students will participate in clinical experiences with the focus on the family from conception to adolescence. The assessment, analysis, planning, and implementation phases of the nursing process are emphasized as a tool to assist patients in meeting universal and developmental self-care requisites. Utilizing the nursing process, the student provides safe, client-centered care to diverse clients and families. Theoretical instruction is applied to client care situations. Students collaborate with clients, families, and the interdisciplinary team in meeting health care needs. Experiences may occur in the physician's office, local health department, day care centers, schools, or the hospital. Grade of C or better required. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite: NURS 156, NURS 153, and NURS 154.

Corequisite: NURS 210.

Learning Outcomes

1. Determine how values of clients, families and medical personnel impact the involvement of clients in their health care related to maternal/child and pediatric clients. Implement individualized client care utilizing an evidenced based approach related to maternal/child and pediatric clients. Choose health protection, health promotion, and disease prevention strategies in the care of maternal/child and pediatric clients. Apply the scope, risk factors, physiologic processes, and clinical management strategies to maternal/child and pediatric clients. Choose resources for continuity of client care related to maternal/child and pediatric clients. Give examples of significant information to report to other disciplines. Apply the principles of delegation in the provision of client care with maternal/child and pediatric clients. Utilize evidenced based information to implement a plan of care and employ nursing interventions for maternal/child and pediatric clients. Use the principles of ethical practice in the delivery of nursing care for maternal/child and pediatric clients. 1 Apply policies, procedures and standards of care related to maternal/child and pediatrics in the provision of client care. 1 Apply nursing interventions to reduce risk of harm to self and others related to maternal/child and pediatric clients. 1 Choose available technology for delivery of nursing care related to maternal/child and pediatric clients.

NURS 201. Special Topics**1-4 Credits**

Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 10 credits. Restricted to: Community Colleges only.

Prerequisite: admission to the nursing program.

NURS 209. Independent Study**1-4 Credits**

Individual studies to meet identified student needs. May be repeated for a maximum of 10 credits. Restricted to: Community Colleges only.

Prerequisite: admission to the nursing program.

NURS 210. Pharmacological Requisites of the Childbearing Family**1 Credit (1)**

Basic concepts of pharmacology including pharmacokinetics, pharmacodynamics, and pharmacotherapeutics, and their relationship to nursing care will be discussed focusing on medications commonly utilized with the childbearing family. Medication classes to be discussed include labor and delivery, analgesic, vitamins, respiratory, gynecological, endocrine, and anti-microbial/anti-infective drugs. Grade of C or better required.

Prerequisite(s): NURS 153, NURS 154 and NURS 156.

Corequisite(s): NURS 157.

Learning Outcomes

1. Effective communication skills in reading, writing, listening, and speaking. Basic critical thinking skills including problem identification, evidence acquisition, evidence evaluation, and reasoning/conclusion. An understanding of personal and social responsibility. An ability to apply the fundamental concepts of quantitative reasoning in mathematics and science. Appropriate information and digital literacy, and skills for personal and professional use.

NURS 211. Pharmacological Requisites of Simple Health Deviations**1 Credit (1)**

Basic concepts of pharmacology including pharmacokinetics, pharmacodynamics, and pharmacotherapeutics, and their relationship to nursing care are addressed focusing on medications related to the psychiatric, gastrointestinal, musculoskeletal, gynecological, hematological, and anti-neoplastic client. Grade of C or better required. Restricted to: Carlsbad campus only.

Prerequisite(s): BIOL 2210 and BIOL 2225 and NURS 153, NURS 154, NURS 156, NURS 157 and NURS 210.

Corequisite(s): NURS 246 and NURS 258.

NURS 212. Pharmacological Requisites of Complex Health Deviations**1 Credit (1)**

Basic concepts of pharmacology including pharmacokinetics, pharmacodynamics, and pharmacotherapeutics, and their relationship to nursing care is examined focusing on medications related to complex health deviations. Drug classes to be discussed include cardiovascular, renal, endocrine, and neurological. Grade of C or better required.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 246, NURS 258, NURS 210 and NURS 211.

Corequisite(s): NURS 256 and NURS 260.

Learning Outcomes

1. Apply principles of teaching/learning in educating clients on the use, adverse effects and interactions of pharmacotherapeutic agents used to treat complex health deviations. Collaborate with members of the health care team in the delivery of pharmacotherapeutics to clients with complex health deviations. Give examples of commonly prescribed drugs used to treat clients with complex health deviations and related pharmacokinetics and pharmacodynamics. Discuss the relationship between the use of pharmacotherapeutics and the treatment of disease in clients with complex health deviations. Identify safety issues and minimize risk potential associated with pharmacotherapeutics.

NURS 224. Maternal Child Nursing**5 Credits (4+3P)**

This course provides the intermediate nursing student with an in-depth review of care of the childbearing woman, family structures and roles, and nursing care of the child from birth through adolescence. Emphasis includes the care of pre-partum, intra-partum and postpartum clients, the neonate and health deviations in pediatric clients. Clinical experiences in the simulation lab, the community, and acute care settings will provide the student with the opportunity to apply learned skills to provide total care to meet needs of up to two adult, neonatal, or pediatric clients and to apply care planning skills related to actual, psychosocial and potential problems. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 235, & NURS 236.

NURS 226. Adult Health II**6 Credits (4+6P)**

This course focuses on application of nursing process and theoretical concepts of care for adults with complex health alterations. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to apply: prioritization skills, maintain proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, and care planning skills related to patient actual, psychosocial, and potential problems in the delivery of nursing care to meet needs of three adult clients. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 224 & NURS 235.

NURS 235. Nursing Leadership and Management**1 Credit (1)**

This course introduces the intermediate nursing student to professional practice principles of nursing leadership and management including: health policy and politics, fiscal management & budgeting, conflict management, decision making, interdisciplinary practice, working with teams, roles in disaster planning and management, application of standards of care to risk management, organization of care delivery, health care systems, processes, and practice environments. May be repeated up to 1 credits. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Corequisite(s): NURS 224, NURS 226.

NURS 236. Nursing Preceptorship - Adult Health III**6 Credits (2+12P)**

This course is the final course involving care of the patient with acute or chronic illness. It focuses on care of patients with complex or multi-system problems allowing the graduating nursing student to discuss and apply all the skills learned in previous nursing courses. After successfully passing the HESI exam, students have clinical practice with preceptor in various health care settings. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to: organize care of a group of clients, maintain proficiency in performance of nursing skills, collaborate with clients, families, peers and health care team members, and support care planning skills related to patient actual, psychosocial, and potential problems in the delivery of nursing care to meet needs of the preceptors group of clients. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program and have successfully completed all level 1, 2 and 3 nursing courses may enroll in this course. Clinical may include inpatient or outpatient care, days, evenings, nights, or weekend experiences. Students are required to work the preceptors assigned schedule. NCLEX Review must be done concurrently. Students must be admitted into the Nursing Program to enroll in this course. Restricted to: NUR majors. Restricted to: Community Colleges only.

Corequisite(s): NURS 201.

NURS 246. Health Deviations I**7 Credits (4+9P)**

Introduction to medical/surgical clients, whose health care needs are routine and predictable. Focus is on simple health deviations, including concepts relative to health promotion and maintenance. The nursing process is utilized to provide evidenced based, safe client centered care. Students are expected to apply clinical judgment, communicate and collaborate with clients and the interdisciplinary team in providing care for a group of two to three clients. Grade of C or better required. May be repeated up to 7 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 156, NURS 154, NURS 157 and NURS 210.

Corequisite(s): NURS 211, NURS 258.

NURS 256. Health Deviations II**8 Credits (6+12P)**

Concepts and principles applied to clients with complex health deviations. Building upon knowledge gained in NURS 246, focus will be on acutely ill clients. The nursing process continues to serve as a guide to provide safe, client centered care. The student collaborates with the interdisciplinary team in all aspects of client care. Student experiences the role of the staff nurse under the guidance and direction of the nursing instructor. Grade of C or better required. May be repeated up to 8 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 210, NURS 211, NURS 246, and NURS 258.

Corequisite(s): NURS 212, NURS 260.

Learning Outcomes

1. Apply each step of the nursing process as a method of organizing the nursing care for patients with complex health deviations. Discuss the patient's health care needs that occur as a result of complex health deviations. Explain methods the nurse can employ in allowing the patient to assume the right and responsibility for his own care. Incorporate the concepts and principles derived from the biological, developmental, social, nutritional and computer sciences and nursing knowledge that relate to the nursing care of patients with complex health deviations. Explain the roles and functions of the members of the health care team including ancillary personnel as they relate to the care of patients with complex health deviations. Explain the rationale for the performance of the following technical skills: a. EKG monitoring; b. Rhythm strip interpretation; c. Hemodynamic monitoring and interpretation; d. Tracheal suctioning. Recognize the nurse's role in establishing a therapeutic relationship with patients experiencing complex health deviations.

NURS 258. Psychosocial Requisites: A Deficit Approach**3 Credits (2+3P)**

Nursing theory and practice as it relates to the care of the client experiencing psychosocial health deviations. The role of the nurse is discussed along with the ethical and legal aspects of care for the client with psychosocial disorders. Building upon the communication skills of listening and responding, the student develops the therapeutic skills of interpersonal relationships. Grade of C or better is required. May be repeated up to 3 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 210, and NURS 246.

Corequisite(s): NURS 211, NURS 246.

NURS 260. Management of Patients with Health Deviations**2 Credits (2)**

A capstone course to the nursing program in which principles in management and delegation to less prepared personnel is explored. A review of leadership roles, legal issues, quality initiatives, informatics and scope of practice is included. Preparation for the NCLEX is an integral portion of the course. Grade of C or better is required. May be repeated up to 2 credits. Restricted to: Nursing majors. Restricted to Carlsbad campus only.

Prerequisite(s): NURS 153, NURS 154, NURS 156, NURS 157, NURS 210, NURS 211, NURS 246, and NURS 258.

Corequisite(s): NURS 212, NURS 256.

Learning Outcomes

1. Discuss nursing practice concepts relevant to the practice of professional nursing. Evaluate principles of quality improvement and safety into nursing practice within healthcare organizations and systems. Apply leadership concepts through the application of policies that apply to healthcare delivery. Promote a culture of safety through anticipating and eliminating potentially harmful situations. Collaborate in systems analysis when clinical errors or near misses occur to reduce harm, minimize blame, and encourage transparency. Integrate evidence in determining best clinical practice. Demonstrate basic knowledge of healthcare policy, finance, and regulatory environments, including local, state, national, and global healthcare trends. Use an ethical framework to evaluate the impact of policies of healthcare, especially for vulnerable populations.

NUTR-NUTRITION

NUTR 2110. Human Nutrition

3 Credits (3)

This course provides an overview of nutrients, including requirements, digestion, absorption, transport, function in the body and food sources. Dietary guidelines intended to promote long-term health are stressed.

Learning Outcomes

1. Evaluate sources of nutrition information for reliability
2. Identify elements of a nutritious diet
3. Describe the digestion, transport, and absorption of nutrients
4. Describe the importance of nutrition in weight control and health
5. Identify nutritional needs as they relate to the life cycle and performance
6. Describe behavior modification techniques that promote good health
7. Evaluate popular nutrition trends for scientific accuracy and effectiveness
8. Develop skills in the planning and assessing of healthy meal plans
9. Describe the role of food choices in the development of chronic disease
10. 1Describe the role of food in the promotion of a healthful lifestyle

NUTR 2120. Seminar I - Becoming a Nutrition Professional

1 Credit (1)

This course will introduce students to the field experience, careers, and professions in nutrition. This course is required for students pursuing a Didactic Program in Dietetics verification statement. May be repeated up to 1 credits. Consent of Instructor required. Restricted to: HNDS majors.

Learning Outcomes

1. Describe career options within the fields of Nutrition Dietetics.
2. Outline the HNDS field experience process.
3. Explain the educational pathways in HNDS.
4. List requirements for admission into the HNDS Dietetics pathway.
5. Begin an HNDS student portfolio.
6. Discuss the importance of personal responsibility accountability

OATS-OFFICE ADMINISTRATION TECHNOLOGY SYSTEMS

OATS 101. Keyboarding Basics

3 Credits (2+2P)

Covers the skills necessary to touch type on the computer keyboard using correct techniques. This includes the development of speed, accuracy, and formatting of basic business documents. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Learning Outcomes

1. Demonstrate the correct operation of the alphabetic, numeric, symbol keys, space bar, shift keys, and return (enter) keys.
2. Have a thorough knowledge of correct hand position and posture for accurate keyboarding.
3. Keyboard words, sentences, and paragraphs smoothly, quickly, and accurately using the touch typing method.
4. Have the ability to keyboard with speed and accuracy.
5. Perform keyboarding and basic formatting functions to create professional business documents.

OATS 102. Keyboarding: Document Formatting

3 Credits (2+2P)

Designed to improve keyboarding speed and accuracy; introduce formats of letters, tables and reports. A speed and accuracy competency requirement must be met.

Prerequisite: OATS 101 or consent of instructor.

OATS 105. Business English**3 Credits (3)**

Training and application of the fundamentals of basic grammar, capitalization, punctuation, basic writing, sentence structure, and editing skills. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Learning Outcomes

1. Identify and apply the rules for each of the parts of speech.
2. Construct four basic sentence patterns.
3. Apply punctuation, capitalization and numbers style to writing proficiently.
4. Utilize proofreader's marks in the editing of business correspondence.
5. Make use of appropriate reference materials to locate answers to language questions.

OATS 106. Business Mathematics**3 Credits (2+2P)**

Mathematical applications for business. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): CCDM 103 N or adequate score on math placement exam.

Learning Outcomes

1. Apply fundamental concepts to personal and business math operations.
2. Maintain a checkbook.
3. Solve percent and percentage applications.
4. Calculate discounts, markups, and markdowns.
5. Calculate wages, salaries, deductions, and net pay.
6. Compare various borrowing options and identify the most cost effective option.
7. Interpret consumer loans and credit card accounts.
8. Compare various home ownership options.
9. Calculate taxes and identify insurance options.

OATS 110. Records Management**3 Credits (3)**

Principles, methods and procedures for the selection, operation and control of manual and automated records systems.

OATS 120. Accounting Procedures I**3 Credits (2+2P)**

Business accounting principles and procedures. Use of special journals, cash control, and merchandising concepts. Reports for sole proprietorships.

OATS 121. Accounting Procedures II**3 Credits (2+2P)**

Continuation of OATS 120, emphasizing accounting principles and procedures for notes and interest, depreciation, partnerships and corporations, cash flow and financial statement analysis. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 120 or ACCT 2110.

OATS 140. Payroll Accounting**3 Credits (2+2P)**

Payroll procedures including payroll tax forms and deposits. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): ACCT 2110 or OATS 120.

OATS 150. Medical Terminology**3 Credits (3)**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as NURS 150 and OEHO 120. May be repeated up to 3 credits. Crosslisted with: NURS 150, AHS 120 and HIT 150. Restricted to Community Colleges campuses only.

OATS 169. Spanish Grammar for Business Administration**3 Credits (3)**

Introductory course in Spanish grammar and practical business terms required for the proper application of fundamental oral and written business communication skills for Spanish speakers in the field of business administration. Restricted to Community Colleges campuses only.

Prerequisite(s): Spanish-speaking ability and computer keyboarding ability.

OATS 170. Office Communications in Spanish I**3 Credits (3)**

Develop oral and written communications skills of native or near-native speakers of Spanish. The student will learn basic letter writing skills, customer service techniques, and telephone etiquette in Spanish. Spanish speaking ability is required to enroll in this course. May be repeated up to 3 credits.

Consent of Instructor required. Restricted to Community Colleges campuses

OATS 171. Office Communications in Spanish II**3 Credits (3)**

Develop oral and written communications skills of native or near-native speakers of Spanish. Emphasis placed on learning the office assistant's role within the office environment. Compose complex business correspondence and learn to make international travel arrangements. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s): OATS 170, Spanish speaking ability.

OATS 191. Taking Minutes & Proofreading**3 Credits (3)**

Preparation and practice producing minutes suited for different meeting types and purposes. Provides strategies to prepare for meetings, to record proceedings, and to transcribe minutes while incorporating proofreading skills practice. Topics include legal requirements, meeting types, minute formats, and duties/expectations of the minute taker and the meeting chair. Graded: S/U. May be repeated up to 3 credits. Restricted to Community Colleges campuses

OATS 202. Keyboarding Document Production**3 Credits (2+2P)**

Further development of keyboarding speed and accuracy. Production of complex letters, memos, tables, reports and business forms. A speed and accuracy competency requirement must be met. Restricted to Community Colleges campuses

OATS 203. Office Equipment and Procedures I**3 Credits (2+2P)**

Office organization, telephone techniques, equipment and supplies, handling meetings, human relations, mail procedures, and travel. May be repeated up to 3 credits. Restricted to Community Colleges campuses

OATS 205. Accounting Software I**3 Credits (2+2P)**

Introduction to accounting software. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Working knowledge of computers and accounting or consent of instructor.

OATS 206. Accounting Software II**3 Credits (2+2P)**

Accounting software and office applications. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 121 or OATS 215.

OATS 207. Machine Transcription**3 Credits (2+2P)**

Creating office documents using transcribing equipment and word processing software. Emphasis on proofreading, editing and grammar. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): BOT 105.

OATS 208. Medical Office Procedures**3 Credits (2+2P)**

Current computerized and traditional administrative medical office procedures will be introduced. Practical knowledge on managing required record keeping in a medical office environment will be emphasized. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): HIT 150 or AHS 120, and computer keyboarding ability or consent of instructor.

OATS 209. Business and Technical Communications**3 Credits (3)**

Effective written communication skills and techniques for career success in the work place. Composition of letters, memos, short reports, forms, and proposals, and technical descriptions and directions.

Prerequisites: ENGL 1110G and computer keyboarding ability or consent of instructor.

OATS 211. Information Processing I**3 Credits (2+2P)**

Defining and applying fundamental information processing concepts and techniques using the current version of leading software. May be repeated up to 6 credits. Restricted to Community Colleges campuses

OATS 213. Word Processing I**3 Credits (2+2P)**

Operation and function of a word processor. Specific equipment to be announced in the Schedule of Classes.

Prerequisite: OATS 101 or keyboarding proficiency.

OATS 214. Word Processing II**3 Credits (2+2P)**

Advanced operation and functions of a word processor. Specific equipment to be announced in the Schedule of Classes.

Prerequisite: OATS 213 or consent of instructor.

OATS 215. Spreadsheet Applications**1-3 Credits**

Use of spreadsheets to include graphics and business applications. Same as OECS 215. May be repeated under different subtitles listed in the Schedule of Classes.

OATS 217. Powerpoint Presentation**3 Credits (3)**

Comprehensive, hands-on approach to learning and applying basic and advanced features of PowerPoint. These include text enhancements, objects, fills, colors, animation, charts, sound, video, and hyperlinks. Students demonstrate appropriate audience and communication tools to deliver presentations.

Prerequisites: OATS 211 or ability to demonstrate keyboarding and Windows proficiency.

OATS 218. Information Processing II**3 Credits (2+2P)**

Advanced information processing techniques using current version of leading software. May be repeated for a maximum of 6 credits.

Prerequisite: OATS 211 or consent of instructor.

OATS 220. Internship in Business Office Technology**2 Credits (2)**

Experience in a supervised office position. Student must work at least eight hours per week. May be repeated for a maximum of 4 credits.

Prerequisites: sophomore standing and consent of instructor.

OATS 221. Internship I**1-3 Credits**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. C- or better in the course is required. Consent of Instructor required. Restricted to: BOT, HIT. majors. Restricted to Community Colleges campuses

OATS 222. Internship II**1-3 Credits**

Continuation of OATS 221. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: OATS & HIT majors. Graded: S/U Grading (S/ U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 221 and consent of instructor.

OATS 223. Medical Transcription I**3 Credits (2+2P)**

Concepts in medical transcription are introduced on how to produce a variety of reports required in a medical office or facility utilizing accurate medical terminology, spelling, grammar, and document formatting. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 150 or AHS 120 and HIT 158 and OATS 209.

OATS 228. Medical Insurance Billing**3 Credits (2+2P)**

Comprehensive overview of the insurance concepts and applications required for successfully and accurately completing and submitting insurance claims and reimbursement processes for various insurance carriers, both private and government, will be emphasized. May be repeated up to 3 credits. Restricted to Community Colleges campuses

Prerequisite(s): HIT 150 or AHS 120.

OATS 233. Advanced Medical Transcription**3 Credits (2+2P)**

Builds upon the concepts introduced in Medical Transcription I providing greater understanding of how to produce advanced reports dictated by physicians with increasing speed and accuracy. Emphasis will be on proofreading and editing of operative reports, patient history and physicals, office notes, labor and delivery reports, consultation reports, discharge summaries, and other medical reports. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 223 and HIT 130.

OATS 239. Personal Development**3 Credits (3)**

Development of a marketable, employable office systems person, to include interview, voice, manners, and apparel.

OATS 240. Introduction to Individual Taxation**3 Credits (3)**

Overview of Individual Federal Taxation; awareness of tax problems pitfalls and planning opportunities; focus on individual personal financial concerns and tax planning. One semester of accounting principles/procedures is recommended.

OATS 241. Auditing and Business Issues**3 Credits (3)**

Introduction to basic auditing concepts, the purpose for the auditing process, and requirements of persons assisting with the audit process. The course will also deal with issues of business law including contracts, sales, torts, strict liability, and business ethics. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OATS 120 or ACCT 2110.

OATS 244. Tax Preparation**3 Credits (3)**

Introduces basic federal and state tax codes for preparing individual income tax returns. Emphasis on use of tax software.

Prerequisite: keyboarding proficiency.

OATS 250. Electronic Office Systems**3 Credits (2+2P)**

Management of the electronic office. Office use of computers, printers, fax machines, copiers, and scanner concepts will be covered.

Prerequisite: OATS 211.

OATS 255. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes.

OATS 260. Bookkeeping Simulation Capstone**3 Credits (2+2P)**

Refines the professional and technical skills students have learned while completing the Bookkeeping Assistant Option curriculum by demonstrating how coursework ties together. Designed as a bookkeeping assistant capstone course.

Prerequisite(s): OATS 121 or ACCT 2110, OATS 140, OATS 205, and OATS 244, or consent of instructor.

OATS 270. Office Administration Technology Capstone**3 Credits (2+2P)**

Refines professional skills learned in the BOT program and ties all BOT coursework together. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s): OATS 102 or OATS 129; and OATS 120; and OAT S 209 or ENGL 2210G; and OATS 211 or OECS 211.

Learning Outcomes

1. Construct professional, error-free business documents that demonstrate appropriate formats and ideas in clear, concise, and correct written and spoken language.
2. Utilize effective administration skills to enhance the productive operation of the workplace.
3. Demonstrate professional behaviors and workplace ethics for the professional office environment.
4. Demonstrate proficiency in the use of productivity software in business applications

OE BM-BIOMEDICAL TECHNOLOGY (OE BM)

OE BM 140. Applied Human Biology for Biomedical Technology**3 Credits (3)**

Essential human biology, anatomy, physiology and medical terminology for biomedical equipment technicians. Focus on the vocabulary necessary for effective communication in the hospital environment as part of the health care team. Restricted to: Community Colleges only.

OE BM 141. Medical Electronics and Safety in Healthcare**3 Credits (3)**

Introduction to the biomedical equipment technology field. Operation of common biomedical equipment to include pressure and temperature systems, infusion devices, patient monitors, and other physiologic and patient systems. Hospital safety and health regulations explained. Restricted to Community Colleges campuses only.

Prerequisite(s): OE BM 140.

OE BM 200. Biomedical Internship**1-4 Credits (3-12P)**

Practice working in industry as a biomedical electronics technologist. Students work on a variety of medical equipment and job tasks. An employer evaluation, student report, and a minimum of 100 work hours are required. May be repeated up to 8 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): OE BM 140 and OE BM 141.

OE BM 211. CBET Exam Preparation**1 Credit (1)**

An overview of the Certified Biomedical Equipment Technician exam. Topics include anatomy and physiology, electronics principles, safety issues, equipment operation, and equipment troubleshooting.

Prerequisite(s)/Corequisite(s): OE BM 241 AND OE BM 240. Restricted to Community Colleges campuses only.

OEBM 240. Medical Imaging Systems**3 Credits (3)**

The fundamentals of diagnostic radiography equipment will be explored. Principles of an x-ray system will be explained including the x-ray generation, image formation and film processing. Focus will be on both safety and quality. Restricted to Community Colleges campuses only.

Prerequisite(s): OEBM 140.

OEBM 241. Advanced Medical Electronics**3 Credits (3+1P)**

Advanced study in biomedical equipment to include cardiovascular, pulmonary, telemetry and other critical life support systems. Restricted to Community Colleges campuses only.

Prerequisite(s): OEBM 141.

OECS-COMPUTER TECHNOLOGY (OECS)

OECS 101. Computer Basics**1 Credit (1)**

Hands-on instruction to introduce computer use and commonly used software. Graded S/U.

OECS 105. Introduction to Information Technology**3 Credits (3)**

Examination of information systems and their impact on commerce, education, and personal activities. Utilization of productivity tools for communication, data analysis, information management and decision-making. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

OECS 110. Introduction to Power Point**1-3 Credits (1-3)**

An introduction to Power Point software to develop business presentations. Includes concepts of basic presentation methods and graphic design principles. Students will create and deliver presentations using text, charts, digitized images, and sound. Restricted to Community Colleges campuses only.

OECS 125. Operating Systems**1-3 Credits**

Installation, configuration and optimization of current operating systems. Restricted to: Community Colleges only.

OECS 128. Operating Systems Linux/Unix**3 Credits (3)**

Installation, configuration, and use of Linux/Unix operating system software and utilities including hardware management, file management, use of command line, and scripting. Restricted to: Community Colleges only.

OECS 140. Introduction to Game Production Industry**1-3 Credits (1-3)**

Students explore the business behind game production, understanding how game companies are organized and funded, positions within the game industry, and what skills game producers need. Restricted to Community Colleges campuses only.

OECS 141. Introduction to Interactive Game Programming**1-3 Credits (1-3)**

This introductory programming class reviews the basics of programming, including the object-oriented approach. Students will de-construct existing games, develop their own code, and gain an appreciation for coding strategies. May be repeated for a maximum of 6 credits. Restricted to Community Colleges campuses only.

OECS 145. Mobile Application Development**1-3 Credits (1-3)**

Introduction to elements of mobile application coding including concepts, design strategies, tools needed to create, test and deploy applications for mobile devices. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

OECS 155. Special Topics - Introductory Computer Technology**0.5-4 Credits (.5-4)**

Topics to be announced in the Schedule of Classes. May be repeated up to 8 credits.

OECS 185. PC Maintenance and Repair I**1-3 Credits**

Introduction to most common types of PC configurations, installations, and failures. This course will explore troubleshooting skills for maintaining and repairing common hardware and software related problems. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

OECS 192. C++ Programming I**3 Credits (3)**

Development of skills in programming using the C++ programming language. Restricted to: Community Colleges only.

OECS 195. Java Programming I**1-3 Credits**

Developing of skills in programming using the Java programming language. Restricted to: Community Colleges only.

OECS 200. Accounting on Microcomputers**3 Credits (3)**

Fundamental accounting principles using popular microcomputer soft ware to include G/L, A/R, A/P, purchase order, billing, inventory, and forecasting modules.

Prerequisite: ACCT 2110 or OATS 121.

OECS 204. Linux Operating System**1-3 Credits**

Install and configure the Linux operating system on X86 systems. Covers issues involved in maintaining operating system, networking, creating and managing users, and installing and updating software. General procedures for working with operating system includes maintaining disk space, preserving system security, and other related topics. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

OECS 205. Advanced Operating Systems: Administration**3 Credits (3)**

Examines operating systems designed for PC, minicomputers and mainframes. Covers maintaining operating systems, creating and managing users, and installing and updating software. General procedures for working with operating systems will include maintaining disk space, preserving system security, providing mail services, among other topics. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 128.

OECS 207. Windows**0.5-3 Credits**

Covers local installation, configuration of core local services, managing users, and the general local management and maintenance of Windows workstations. May be repeated up to 6 credits.

Prerequisite(s)/Corequisite(s): OECS 185. Restricted to Community Colleges campuses only.

OECS 208. Internet Applications**1-3 Credits**

Survey of the Internet to include e-mail, file transfer, current search techniques, the World Wide Web and basic Web page development. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

OECS 209. Computer Graphic Arts**1-3 Credits**

Basic graphics composition using computer programs to include editing and manipulating graphic images, clip-art, and printing of pictures. May be repeated for a maximum of 6 credits under different subtitles listed in the Schedule of Classes.

Prerequisite: OECS 105, BCIS 1110, or OECS 101.

OECS 211. Word Processing Applications**1-3 Credits**

Basic word processing to include composing, editing, formatting, and printing of documents. May be repeated under different subtitles listed in the Schedule of Classes for a maximum of 6 credits.

Prerequisites: BCIS 1110 or OECS 105.

OECS 215. Spreadsheet Applications**1-3 Credits**

Use of spreadsheets to include graphics and business applications. May be repeated for a maximum of 6 credits.

Prerequisites: BCIS 1110 or OECS 105.

OECS 220. Database Application and Design**1-3 Credits**

Creating, sorting, and searching of single and multifile databases to include report generation and programming database commands. May be repeated for a maximum of 6 credits under different subtitles listed in the Schedule of Classes. Restricted to: Community Colleges only.

Prerequisite(s): BCIS 1110 OR E T 120 OR E T 122 OR OECS 105.

OECS 221. Internship I**1-3 Credits**

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OECS majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of instructor.

OECS 222. Internship II**1-3 Credits**

Continuation of OECS 221. Each credit requires specified number of hours of on-the-job work experience. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OECS majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 221 and consent of instructor.

OECS 223. Web Design for Business**3 Credits (3)**

Design and create a website using HTML, CSS, web development tools and industry-recognized software while applying best practices in site management and business web presence.

Learning Outcomes

1. Students will identify and apply best practices for web design in a business setting. Students will create a basic web page utilizing WC3 principles. Students will explain the importance and impact of web presence in today's business environment. Students will determine and utilize web page features and techniques for a specific business. Students will create a web design management plan for business. Students will discuss web page tools for performance and web traffic analytics. Students will identify web design components for a motble society.

OECS 227. Computer Applications for Technicians**3 Credits (3)**

Computer applications for service technicians in various disciplines. Hardware and software applications explored. Includes operating systems, high level programming, and networking hardware and software.

OECS 230. Data Communications and Networks I**1-3 Credits**

Definition of data communication; survey of hardware applications and teleprocessor software; examination and design of networks. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 185.

OECS 231. Data Communications and Networks II**1-3 Credits**

Installation and application of popular microcomputer network software. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 230.

OECS 234. Linux Server**3-4 Credits (3-4)**

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Linux Server(s). It provides in-depth, hands-on training for planning, implementation, management and support of Linux networking services. May be repeated up to 8 credits.

Prerequisite(s)/Corequisite(s): OECS 204. Restricted to: OECS majors. Restricted to Community Colleges campuses only.

OECS 235. Structured Query Language (SQL)**1-3 Credits**

Installation, configuration, administration, and troubleshooting of SQL client/server database management system. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): OECS 220. Restricted to Community Colleges campuses only.

OECS 237. Windows Server**3-4 Credits (3-4)**

This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Microsoft Windows Server Active Directory Domain Services in medium to large businesses. It provides in-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows Active Directory services. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 207. Restricted to Community Colleges campuses only.

OECS 245. Game Programming I**3 Credits (3)**

Development of programming skills for games and animation using current programming languages and tools. May be repeated for a maximum of 6 credits.

Prerequisite: consent of instructor.

OECS 246. Game Programming II**3 Credits (3)**

Continuation of OECS 245. May be repeated for a maximum of 6 credits.

Prerequisite: OECS 245.

OECS 250. Systems Analysis and Design I**3 Credits (3)**

Analysis, configuration, design and testing of organizations' work flow as it relates to hardware, software, data, procedures and personnel. Systems Life Cycle approach matching end users' needs to feasible financial, technical and operational solutions. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 220.

OECS 253. Applied Data Analysis and Management**3 Credits (3)**

Applied use of advanced spreadsheet tools for data analysis and database tools for data and information management. Connect emerging topics in business to tools used in analyzing data and making raw data useful for business decision making.

Prerequisite: BCIS 1110.

Learning Outcomes

1. Manage, integrate, and analyze data with data tools. Generate and summarize data. Use tools for business projections, comparisons, trends, and informed decisions. Create advanced queries and enhance table design. Use form tools and create custom forms. Use automation tools for efficiency. Secure and maintain data. Plan, research, create, and revise spreadsheets and databases for a specific business application. Discuss emerging topics in business related to data analysis and management.

OECS 255. Special Topics**1-4 Credits**

Topics to be announced in the Schedule of Classes.

OECS 261. Introduction to Networks**3-4 Credits (3-4)**

Introduction to networking principles including the practical and conceptual skills for understanding basic networking, planning and designing networks, implementing IP addressing schemes, examining the OSI and TCP/IP layers, and performing basic configurations for routers and switches. Aligns to the first course of the Cisco Networking Academy CCNA curriculum. Restricted to Community Colleges campuses only.

OECS 262. Essentials of Routing and Switching**3-4 Credits (3-4)**

Examination of the architecture, components, and operations of routers and switches in a small network. Student will learn how to configure, verify and troubleshoot: routers and switches, static routing, default routing, VLANs, and ACLs. Aligns to the second course of the Cisco Networking Academy CCNA curriculum. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 261. Restricted to Community Colleges campuses only.

OECS 263. Network Fundamentals**3-4 Credits (3-4)**

Fundamentals of networking architecture, components, and operations including practical and conceptual skills using routers and switches. Student will learn how to configure, verify and troubleshoot static routing, default routing, VLANs, and ACLs. This course aligns to the third course of the Cisco Networking Academy CCNA curriculum. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 262. Restricted to Community Colleges campuses only.

OECS 264. Network Routing Protocols**3-4 Credits (3-4)**

Fundamentals of routing protocols for troubleshooting advanced network operations. Covers common networking issues such as RIP, OSPF, and EIGRP for IPv4 and IPv6 networks. This course aligns to the fourth course of the Cisco Networking Academy CCNA curriculum. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OECS 263. Restricted to Community Colleges campuses only.

OECS 269. Network Security**3-4 Credits (3-4)**

Fundamentals of design and implementation of network security solutions that will reduce the risk of system vulnerability. May be repeated up to 8 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 204 or OECS 207 or OECS 261 or consent of instructor.

OECS 275. PC Maintenance and Repair II**1-3 Credits**

Continuation of OECS 185. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 185.

OECS 280. Desktop Publishing I**3 Credits (3)**

Design and production of publication materials to fill the needs of business communities, using a microcomputer. May be repeated for a maximum of 6 credits. Same as OATS 280.

Prerequisites: either BCIS 1110, OECS 105.

OECS 290. Computer Technology Capstone**1-3 Credits**

Refines skills learned in the OECS program. Culminates in a review and practice of advanced software applications. May be repeated up to 3 credits. Restricted to: OECS & OECT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): (OECS 125, OECS 128, OECS 207, OR OECS 203) AND (OECS 185 OR E T 283).

OECS 299. Independent Study**1-3 Credits**

Specific subjects to be determined based on need. Restricted to: Community Colleges only.

OEEM- PARAMEDIC (OEEM)

OEEM 101. CPR for the Health Care Professional**1 Credit (1)**

Students learn identification and response to airway and circulation emergencies, including use of a SAED and accessing the EMS system. This course is taught using the American Heart Association guidelines for course completion. Required: grade of C or better.

OEEM 103. Heartsaver First Aid/CPR**1 Credit (1)**

Students learn how to identify and respond to airway, circulation and basic first aid emergencies, to include using a SAED and accessing the EMS system. This course is intended for students who are not Allied Health Majors and utilizes the American Heart Association guidelines for course completion. Restricted to: Community Colleges only.

OEEM 115. First Responder Prehospital Professional**3 Credits (2+3P)**

Provides training in prehospital medical and traumatic emergencies. Consent of instructor required. Requires a C or better to pass. Restricted to majors.

Corequisite(s): OEEM 101.

OEEM 120. Emergency Medical Technician Basic**6 Credits (6)**

EMT-Basic skills to include care of soft tissue and muscular/skeletal injuries, circulatory, nervous, general medical and respiratory emergencies. Requires a "C" or better to pass. May be repeated up to 6 credits. Consent of Instructor required.

Corequisite(s): OEEM 101, OEEM 120L, OEEM 121.

Prerequisite(s)/Corequisite(s): OEEM 153. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 120 L. Emergency Medical Technician Basic Lab**2 Credits (6P)**

EMT-Basic skills development with emphasis on assessment, skills competency and team-work in patient care in the prehospital setting. May be repeated up to 2 credits.

Corequisite(s): OEEM 101, OEEM 120, OEEM 121.

Prerequisite(s)/Corequisite(s): OEEM 153. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 121. Emergency Medical Technician Basic Field/Clinical**1 Credit (3P)**

Covers the patient care experience provided through assigned shifts in the hospital and/or ambulance setting. Requires a "C" or better to pass. May be repeated up to 1 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): OEEM 101, OEEM 120, OEEM 120L OEEM 153. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 122. Emergency Medical Technician Basic Advanced Field/Internship**2 Credits (6P)**

Expanded patient care experience provided through assigned shifts in the hospital and/or ambulance setting. May be repeated up to 2 credits. Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Current EMT-basic license and consent of instructor.

OEEM 150. Emergency Medical Technician Intermediate**5 Credits (5)**

Theory of the roles, responsibilities and scope of practice of the EMT-Intermediate. Assessment and management of respiratory, cardiac, trauma, environmental, behavior, reproduction, and childhood emergencies. May be repeated up to 5 credits. Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Current EMT-basic license, pretest and consent of instructor.

OEEM 150 L. Emergency Medical Technician Intermediate Lab**2 Credits (6P)**

EMT-Intermediate skills development with an emphasis on assessment, skills competency, and team work in patient care in the prehospital setting. Requires a C or better to pass.

Prerequisite(s)/Corequisite(s): OEEM 150, OEEM 151. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 151. Emergency Medical Technician Intermediate Field/Clinical**2 Credits (6P)**

Patient care experience provided through assigned shifts in the hospital and/or ambulance setting.

Prerequisite(s)/Corequisite(s): OEEM 150, OEEM 150 L. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

OEEM 153. Introduction to Anatomy and Physiology for the EMS Provider**3 Credits (3)**

To properly assess and manage a patient, a prehospital provider must have a solid foundation in human anatomy and physiology. This course provides a systematic approach to building this foundation. Grade of "C" or better is required to pass the course. Consent of Instructor required. Restricted to Community Colleges campuses only.

OEEM 155. Special Topics**1-6 Credits**

Specific topics to be listed in Schedule of Classes. May be repeated for a maximum of 10 credits.

OEEM 177. Emergency Medical Services Instructor**4 Credits (4)**

Theory of student learning, methodology, instructional components, evaluation, and course coordination for the EMS profession. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): Minimum of an EMT-Basic License required.

OEEM 201. Human Pathophysiology**3 Credits (2+3P)**

Overview of anatomy and physiology. Emphasis on human body pathophysiology including a medical illness component. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 120, OEEM 120 L.

OEEM 202. EMT-Paramedic Respiratory Emergencies**3 Credits (2+3P)**

Review anatomy, physiology and pathophysiology of the respiratory system. Assessment and management of respiratory emergencies and acute respiratory failure in the prehospital setting. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 212.

OEEM 203. EMT-Paramedic Trauma Emergencies**3 Credits (2+3P)**

Study of the effects of trauma on the human body. Assessment and management of trauma patients and scenes, including vehicular extrication. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 216.

OEEM 206. Introduction to Advanced Prehospital Care**3 Credits (2+3P)**

Overview of prehospital care including roles and responsibilities of EMT-P, EMS systems, medical, legal, ethical issues, stress management, medical terminology, medical report writing and communication. Includes ride-along with ambulance and dispatch observation. Requires a C or better to pass. Restricted to majors. Consent of instructor required. Restricted to: Community Colleges only. Restricted to OEEM majors.

Prerequisite(s): OEEM 120.

OEEM 207. Introduction to Pharmacology**3 Credits (2+3P)**

Drug actions, factors modifying drugs and dosages: characteristics of drug effects, and drug history and dosages. Prehospital protocol, transport, and common patient prescription medications. Restricted to majors. Requires a C or better to pass. Restricted to: Community Colleges only. Restricted to OEEM majors.

Prerequisite(s): OEEM 120.

OEEM 210. Cardiac Rhythm Interpretation**3 Credits (2+3P)**

Cardiac conduction system: electrophysiology, electrocardiogram, monitor, atrial, sinus, ventricular and junctional dysrhythmias, multiple lead EKG and 12 lead EKG interpretation. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEEM, OEMS majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 201, OEEM 206, OEEM 207.

OEEM 212. EMT-Paramedic Cardiovascular Emergencies**3 Credits (2+3P)**

Review anatomy, physiology, and pathophysiology of cardiovascular system. Assessment and management of cardiovascular emergencies in the prehospital setting. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 210.

OEEM 213. EMT-Paramedic: Medical Emergencies I**3 Credits (2+3P)**

Study of the disease process; assessment and management of neurological, endocrine, gastrointestinal, renal emergencies and infectious disease. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEEM, OEMS majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 212.

OEEM 214. EMT--Paramedic: Medical Environmental Emergencies II**3 Credits (2+3P)**

Study of disease process, assessment, and management of poisoning, drug and alcohol abuse, environmental, behavioral and geriatric emergencies. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 213.

OEEM 216. EMT-Paramedic: Reproductive and Childhood Emergencies**3 Credits (2+3P)**

Covers anatomy, physiology, disease processes, assessment and management of male and female reproductive system emergencies, childhood emergencies and growth and development. Restricted to majors. Requires a C or better to pass. Restricted to: Community Colleges only.

Prerequisite(s): OEEM 214 and consent of instructor.

OEEM 218. Pediatric Advance Life Support for the Healthcare Professional**1 Credit (1)**

Identify and respond to life threatening pediatric emergencies. Taught using the American Heart Association guidelines for course completion. Graded S/U.

Prerequisite: OEEM 101.

OEEM 219. Advance Cardiac Life Support for the Healthcare Provider**1 Credit (1)**

Identify and respond to life threatening cardiac emergencies. Taught using the American Heart Association guidelines for course completion. Graded S/U.

Prerequisite: OEEM 101.

OEEM 230. EMT-Paramedic Clinical Experience I**3 Credits (9P)**

Assigned clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Restricted to majors. Requires a C or better to pass.

Prerequisite: consent of instructor.

OEEM 231. EMT-Paramedic Clinical Experience II**3 Credits (9P)**

Assigned clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): OEEM 230. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

OEEM 240. EMT-Paramedic Field Experience I**3 Credits (9P)**

Advanced prehospital skills and knowledge. Successful completion of at least the minimum required hours and course objectives. Restricted to majors. Requires a C or better to pass.

Prerequisite: consent of instructor.

OEEM 241. EMT-Paramedic Field Experience II**3 Credits (9P)**

Continued focus on advanced prehospital skills and knowledge, with increasing responsibility for patient care. Successful completion includes meeting at least the minimum required hours and course objectives.

Prerequisite(s)/Corequisite(s): OEEM 240. Requires a C- or better to pass.

OEEM 242. EMT-Paramedic Field Internship**3 Credits (9P)**

Emphasis on total patient care responsibility and team leadership skills. Successful completion includes meeting the minimum hours required and course objectives. Pre/ Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 231, OEEM 241.

OEEM 243. EMT-Paramedic Preparation for Practice**2 Credits (2)**

Comprehensive final program testing to prepare for licensing examination. Requires a "C" or better to pass. May be repeated up to 2 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OEEM 242.

OEEM 253. Critical Care Emergency Medical Transport Program**6 Credits (5+6P)**

This course will provide further education to Paramedics, Registered Nurses and Registered Respiratory Therapists who wish to function as part of a critical care transport team. Consent of instructor required. Restricted to: Community Colleges only.

Prerequisite(s): Licensed Paramedic, Registered Nurse or Registered Respiratory Therapist with one or more years experience.

OEET- ELECTRICAL TRADES (OEET)

OEET 110. Basic Electricity and Electronics**4 Credits (3+3P)**

An introduction to electricity theory and practice, including electron theory, Ohm's law, construction of electrical circuits, direct and alternating currents, magnetism, transformers, and practical applications. Same as HVAC 102, ELT 105, OEPB 102.

OEET 120. Basic Motor Controls**5 Credits (2+6P)**

Developing schematics and wiring simple manual and electromechanical control devices.

Prerequisite: OEET 110 or consent of instructor.

OEET 151. Electrical Apprenticeship I**6 Credits (6)**

Apprenticeship responsibilities and benefits as well as first aid and CPR will be covered. Hand tools, electrical theory, and the regulations imposed by national codes and OSHA. Students will apply theory taught in their jobs.

Prerequisite: consent of instructor.

OEET 152. Electrical Apprenticeship II**6 Credits (6)**

Ohm's law circuit sizing and service panel sizing will be covered in detail. Other topics include low voltage systems, heating and air conditioning circuits, alarm systems and smoke detectors.

Prerequisites: OEET 151 and consent of instructor.

OEET 153. Electrical Apprenticeship III**6 Credits (6)**

Various electrical measuring devices will be covered in detail. Inductance, transformers, capacitance, and simple motors will be studied.

Prerequisites: OEET 152 and consent of instructor.

OEET 154. Electrical Apprenticeship IV**6 Credits (6)**

Theory and application of three-phase transformers and autotransformers. Electrical distribution using switchboards, panelboards, and circuit breakers.

Prerequisites: OEET 153 and consent of instructor.

OEET 205. National Electric Code**3 Credits (3)**

Interpretation and application of the National Electric Code.

Prerequisite: OEET 110.

OEET 251. Electrical Apprenticeship V**6 Credits (6)**

Commercial/industrial applications for electricians. Blueprint interpretation, commercial construction types and processes, wiring methods, wiring materials, and motor controls.

Prerequisites: OEET 154 and consent of instructor.

OEET 252. Electrical Apprenticeship VI**6 Credits (6)**

In-depth commercial applications to include commercial/industrial service calculations, mobile home parks, multi-family dwellings, and commercial fire/security systems.

Prerequisites: OEET 251 and consent of instructor.

OEET 253. Electrical Apprenticeship VII**6 Credits (6)**

Control devices in commercial/industrial applications; emphasis on logic in-line diagrams, time delay starters, reversing starters, and manual/magnetic solenoids.

Prerequisites: OEET 252 and consent of instructor.

OEET 254. Electrical Apprenticeship VIII**6 Credits (6)**

Miscellaneous topics for the journeyman electrician to include power distribution/transmission, solid state controls and relays, photoelectric and proximity controls and programmable controllers.

Prerequisites: OEET 253 and consent of instructor.

OEET 295. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes.

OEGR-DIGITAL GRAPHIC TECH (OEGR)

OEGR 221. Cooperative Experience I**1-3 Credits**

Student employed in approved work site; supervised and rated by employer and instructor. Each credit requires specified number of hours of on-the-job work experience. Restricted to majors. Graded S/U.

Prerequisite: consent of instructor.

OEGS-GEOGRAPHIC INFO SYS (OEGS)

OEGS 181. Introduction to Principles of Geographic Information Systems**4 Credits (3+3P)**

This course will introduce students to fundamental software capabilities of geographic information systems (GIS), along with the underlying conceptual framework. Topics include origins, development, and methods of cartography, components of a GIS, the nature and characteristics of spatial data, methods of data capture and sources of data, review of typical GIS operations and applications. Producing useful, aesthetically pleasing maps will be an integral part of the course. ArcGIS software will be used for this course. May be repeated up to 4 credits.

OEGS 187. GIS Data Acquisition and Management**4 Credits (3+3P)**

An introduction to defining data needs and evaluating whether a given dataset matches those needs. Students will explore some common geographic data formats used in ArcGIS and learn about sources of data and maps that can be incorporated into a GIS project. The student will learn the advanced functionality and versatility of using geodatabases. The student will demonstrate how to design and build a geodatabase, migrate existing data to a geodatabase and edit data stored in a geodatabase. Methods for georeferencing scanned maps, aerial photos and computer aided drafting files will be explored and discussed. May be repeated up to 4 credits.

Prerequisite(s): OEGS 181.

OEGS 291. Special Topics in Geographic Information Systems**1-3 Credits (1-3)**

Topics to be announced in the Schedule of Classes. May be repeated up to 12 credits. Restricted to Community Colleges campuses only.

OETS-TECHNICAL STUDIES (OETS)

OETS 100. Industrial/Construction Safety**2 Credits (2)**

Covers safety issues such as PPE, BBP, ladder safety,, RTK, HazCom, MSDS and information about safety organizations such as OSHA, NIOSH, NFPA, National Safety Council. Community Colleges only. Restricted to Dona Ana and Carlsbad campuses.

OETS 102. Career Readiness Certification Preparation**1 Credit (1)**

This course is designed to prepare students to successfully obtain Career Readiness Certifications in all areas and at the appropriate levels for their program of study. Graded: S/U Grading (S/U, Audit). May be repeated up to 3 credits. S/U Grading (S/U, Audit).

OETS 103. Technical Career Skills**4 Credits (4)**

This course will be project-based and will encompass writing, presentation, math, reading, and critical thinking skills applied in a technical environment. Restricted to: Community Colleges only.

OETS 104. Basic Mathematics for Technicians**4 Credits (4)**

Fundamental mathematical concepts and computations including measurement, ratio and proportions, and pre-algebra as it relates to technical programs.

Prerequisite: appropriate placement test score.

OETS 117. Writing for Technicians**3 Credits (3)**

Instruction in the skills for developing clear, written descriptions of processes and procedures used by technicians in various fields. Emphasis on correct grammar, logical organization, and receiving audience. Focuses on clarity, structure, and concise writing methods. Does not substitute for ENGL 111G. Restricted to: Community Colleges only.

OETS 118. Mathematics for Technicians**3 Credits (2+2P)**

Analysis and problem solving of technical problems using measuring instruments and techniques of arithmetic, algebra, geometry, and trigonometry. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of "C-" or better in OETS 104 or CCDM 103 N, or appropriate placement test score.

OETS 120. Business Fundamentals**3 Credits (3)**

Instruction in the skills for basic business concepts used by technicians in various fields. Emphasis placed on basic business concepts; business ownership including marketing, management, accounting, and customer services; interpersonal communication; and basic computer concepts including word processing, spreadsheets, and presentation software. Restricted to Community Colleges campuses only.

OETS 255. Special Topics Technical Studies**1-6 Credits**

Topics to be announced in the Schedule of Classes. Restricted to: Community Colleges only.

Prerequisite(s): Consent of instructor.

PHED-PHYSICAL EDUCATION

PHED 1110. Dance:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1230. Individual Sport:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1290. Team Sport:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1310. Swim I:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1320. Aqua Fit:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1410. Yoga:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1430. Pilates:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1510. Training:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1620. Fitness:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1630. Career Fitness:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation.

Learning Outcomes

1. Varies

PHED 1670. Aerobics:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1710. Martial Arts:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 1830. Running:**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation.

Learning Outcomes

1. Varies

PHED 1910. Outdoor Experience**1 Credit (1)**

Individual sections vary based on topic content; "audience"; type or level of participation. May be repeated up to 6 credits.

Learning Outcomes

1. Varies

PHED 2996. Special Topics**1-3 Credits**

Specific subjects to be announced in the Schedule of Classes. Each offering will carry appropriate subtitle. May be repeated for a maximum of 6 credits.

Learning Outcomes

1. Varies

PHIL-PHILOSOPHY (PHIL)

PHIL 1115G. Introduction to Philosophy

3 Credits (3)

In this course, students will be introduced to some of the key questions of philosophy through the study of classical and contemporary thinkers. Some of the questions students might consider are: Do we have free will? What is knowledge? What is the mind? What are our moral obligations to others? Students will engage with and learn to critically assess various philosophical approaches to such questions.

Learning Outcomes

1. Comprehend and differentiate between various philosophical approaches to questions within fields such as metaphysics, epistemology, ethics, and aesthetics.
2. Critically evaluate various philosophical arguments and positions.

PHIL 1120G. Logic, Reasoning, & Critical Thinking

3 Credits (3)

The purpose of this course is to teach students how to analyze, critique, and construct arguments. The course includes an introductory survey of important logical concepts and tools needed for argument analysis. These concepts and tools will be used to examine select philosophical and scholarly texts.

Learning Outcomes

1. Comprehend components of arguments.
2. Acquire a general understanding of the essential logical concepts needed for argument analysis, such as validity, soundness, deduction, and induction.
3. Critically assess arguments with an aim toward identifying what constitutes effective and reasonable argument strategies.
4. Learn to identify common logical fallacies.
5. Apply knowledge of argumentation principles to philosophical and scholarly texts

PHIL 1140G. Quest for God

3 Credits (3)

An effort to understand the religious life; a consideration of some of the traditional approaches to God and what it means to be religious.

Learning Outcomes

1. Identify and describe theories regarding religion
2. Develop and enhance your critical thinking skills, particularly in the evaluation of arguments about the truth or applicability of particular religious or secular viewpoints.
3. Analyze the teachings of world religions by describing their similarities and differences.
4. Explain the beliefs, practices, and ethical standards of the major world religions as well as emerging religious movements.
5. While traditional expressions of each faith are emphasized, students will learn how each religion evolved historically and spiritually as well as the contemporary ideas and practices of each religion.

PHIL 1145G. Philosophy, Law, and Ethics

3 Credits (3)

An introduction to practical problems in moral, social, political, and legal philosophy. Topics to be discussed may include ecology, animal rights, pornography, hate speech on campus, same-sex marriage, justice, abortion, terrorism, treatment of illegal immigrants, and New Mexican Aboriginal Peoples' land claims.

Learning Outcomes

1. The aim of this course is to familiarize students with some of the ethical and philosophical issues that arise in connection with laws/legality in general and criminal and constitutional law in the U.S. in particular.
2. It examines issues in moral philosophy, political philosophy, and philosophy of law.
3. A question to which we repeatedly return is whether the law does and/or ought to have some necessary relation to the demands of justice and morality. Among the topics we'll cover are: What is a law? Natural law vs. positive law and legal positivism vs. natural law theory; Utilitarian, divine command, Kantian, and natural law theories of moral rightness/wrongness; The distinction between the normative and the non-normative; Is there a moral duty to obey the law? Plato's Crito and R.P. Wolff's "philosophical anarchism."; J.S. Mill and classical liberalism; Mill's "harm principle" ("the state should restrict the liberty of competent adults via the criminal law only to prevent them from wrongfully harming other persons"); Legal paternalism. Should the state make it harder for citizens to smoke tobacco and/or marijuana, for their own good?; Should voluntary euthanasia be legal? Is there a constitutional "right to die"?; How should judges determine the meaning of vaguely worded constitutional requirements (e.g. "free exercise of religion," no "unreasonable search and seizure," no "cruel and unusual punishment," etc.)? Originalist vs. nonoriginalist approaches; The First Amendment, free speech, and freedom of religion; The death penalty and "cruel and unusual punishment"; The insanity defense in criminal law; Does the 14th Amendment's requirement of "equal protection" under the law compel states to recognize same sex marriage?; The Fourth Amendment and its prohibition of "unreasonable search and seizure."

PHIL 1155G. Philosophy of Music**3 Credits (3)**

This is an introductory course in the philosophy of music. This course will survey three questions: What is music? Why is music important? How can we distinguish good music from bad music? We will draw examples from a wide variety of musical genres, from classical music, jazz and blues to punk and rap. Students will be encouraged to apply philosophical theorizing to think about their preferred musical form.

PHIL 2110G. Introduction to Ethics**3 Credits (3)**

This course introduces students to the philosophical study of morality and will explore questions concerning our human obligations to others and related issues. Students may be asked to relate various approaches to ethics to present-day ethical debates and their own lives.

Learning Outcomes

1. Differential between various ethical theories, which may include virtue ethics, deontology, and consequentialism.
2. Critically evaluate various ethical theories and positions.

PHIL 2230G. Philosophical Thought**3 Credits (3)**

In this course, students will grapple with some of the key questions of philosophy through the study of classical and contemporary thinkers. Students will become familiar with the perennial problems in subfields of philosophy such as metaphysics, epistemology, ethics, and aesthetics. They will learn to approach these problems both critically and sympathetically.

Learning Outcomes

1. Comprehend and differentiate between various philosophical approaches to questions within fields such as metaphysics, epistemology, ethics, and aesthetics.
2. Critically evaluate various philosophical arguments and positions.
3. Identify the differences that characterize the major subfields of philosophy.

PHLS-PUBLIC HEALTH SCIENCES (PHLS)

PHLS 1110G. Personal Health & Wellness**3 Credits (3)**

A holistic and multi-disciplinary approach towards promoting positive lifestyles. Special emphasis is placed on major problems that have greatest significance to personal and community health. Topics to include nutrition, stress management, fitness, aging, sexuality, drug education, and others.

Learning Outcomes

1. Students will identify, describe and explain human health behaviors and how they are influenced by social structures, institutions, and processes within the contexts of complex and diverse communities. Students should: Develop an understanding of self and the world by examining content and processes used by social and behavioral sciences to discover, describe, explain, and predict human behaviors and social systems.
2. Students will articulate how beliefs, assumptions, and values are influenced by factors such as politics, geography, economics, culture, biology, history, and social institutions. Students should: Enhance knowledge of social and cultural institutions and the values of their society and other societies and cultures in the world.
3. Students will describe ongoing reciprocal interactions among self, society, and the environment. Students should: Understand the interdependent nature of the individual, family/social group, and society in shaping human behavior and determining quality of life.
4. Students will apply the knowledge base of the social and behavioral sciences to identify, describe, explain, and critically evaluate relevant issues, ethical dilemmas, and arguments. Students should: Articulate their role in a global context and develop an awareness and appreciation for diverse value systems in order to understand how to be good citizens who can critically examine and work toward quality of life within a framework of understanding and justice.

PHLS 2110. Foundations of Health Education**3 Credits (3)**

Role and responsibility of the health educator with emphasis on small group dynamics, oral and written communication skills, building community coalitions and introduction to grant writing. Taught with PHLS 375. Cannot receive credit for both PHLS 2110 and PHLS 375. May be repeated up to 3 credits.

Prerequisite(s): PHLS 1110G, or consent of instructor.

Learning Outcomes

1. Define health, three levels of prevention, health education and health promotion, and describe the major determinants of health.
2. Describe the 7 major areas of responsibility, major competencies and sub-competencies of a
3. professional health educator and the CHES's possible roles in various community health settings.
4. Describe and examine the historical context and development of the profession of health education.
5. Identify and critique major processes and practices of health education programming.
6. Describe the steps involved in conducting needs assessments, program and intervention planning, implementation, and program evaluation.
7. Identify, examine and describe elected health behavior change theories and models and explore possible applications in health education practice.
8. Describe and discuss the process of community mobilization and building of a community coalition.
9. Identify health issues and describe effective methods/strategies in health education advocacy.
10. Describe and discuss the future trends and issues in the professional preparation and practice of professional health educators.
11. 1Demonstrate effective and appropriate oral and written communication skills for health education professionals.

PHLS 2120. Essentials of Public Health**3 Credits (3)**

The course will focus on principles and major areas of public health, including ecological and total personal concept of health care system, epidemiological approaches to disease prevention and control. Consent of Instructor required.

Learning Outcomes

1. Understand the sources of public health data, and how to interpret that information.
2. Access existing health related data.
3. Analyze health related data.
4. Identify populations for health education programs.
5. Incorporate data analysis and principles of community organization.
6. Interpret results from evaluation and research.
7. Infer implications from findings for future health-related activities.
8. Have a basic understanding of health topics faced by various populations.

PHYS-PHYSICS (PHYS)

PHYS 1111. Introductory Computational Physics**3 Credits (2+2P)**

Introduction to computational techniques for the solution of physics-related problems.

Prerequisite(s): a C- or better in MATH 1220G or MATH 1250G or MATH 1511G.

PHYS 1112. Introductory Physics for the Health Sciences**3 Credits (3)**

Algebra-level introduction to topics required for the Health Sciences including basic mechanics (including sound, mechanical waves and fluids), heat and thermodynamics, electricity and magnetism, optics and electromagnetic waves, atomic and nuclear physics and applications to medical imaging. Restricted to Community Colleges campuses only.

Prerequisite(s): MATH 1215 or Equivalent.

Learning Outcomes

1. The objective of the course is to familiarize the student with the concepts and methods used in the underlying physics associated with various Health Science disciplines.
2. The course will demonstrate how the basic principles of mechanics, thermodynamics, electricity, magnetism, electromagnetic waves and optics can be applied to solve particular problems in Health Sciences applications. Introduces the student to selected topics in modern physics including quantum physics, atomic and nuclear physics.

PHYS 1115G. Survey of Physics with Lab**4 Credits (3+3P)**

Overview of the concepts and basic phenomena of physics. This course provides a largely descriptive and qualitative treatment with a minimum use of elementary mathematics to solve problems. No previous knowledge of physics is assumed. Includes laboratory.

Learning Outcomes

1. Apply concepts of classical mechanics (such as velocity, acceleration, force, inertia, momentum, torque, work, energy) to simple static and dynamic systems.
2. Apply concepts of thermodynamics (such as heat, temperature, internal energy, entropy) to simple processes.
3. Apply concepts of electricity and magnetism (such as fields, potential, charge conservation, static and dynamic induction) to simple circuits, motors, and other simple contrivances.
4. Apply simple geometric and wave optics in simple situations.
5. Test ideas using modern laboratory equipment.
6. Estimate experimental uncertainties.
7. Use computers to analyze and report laboratory results.
8. Draw appropriate conclusions from quantitative scientific observations.
9. Accurately and clearly communicate the results of scientific experiments.

PHYS 1125G. Physics of Music**4 Credits (3+2P)**

Introduction for non-science majors to basic concepts, laws, and skills in physics, in the context of a study of sound, acoustics, and music.

Learning Outcomes

1. Demonstrate converting units and other aspects of dimensional analysis in the working of numerical problems.
2. Apply basic classical mechanics to static and dynamic fluids, including Archimedes' principle and Bernoulli's principle.
3. Apply the general properties of waves to simple models of musical instruments.
4. Demonstrate knowledge of basic operating principles of wind, string, and percussion instruments.
5. Demonstrate knowledge of how objectively measurable properties of sound waves correspond to the perceptions of pitch, loudness, and timbre.
6. Demonstrate understanding of the description of vibrations and waves in terms of Fourier's Theorem and normal modes.
7. Demonstrate understanding of vocalization in terms of physical principles such as resonance and fluid dynamics.
8. Demonstrate understanding of how the ear works.

PHYS 1230G. Algebra-Based Physics I**3 Credits (3)**

An algebra-based treatment of Newtonian mechanics. Topics include kinematics and dynamics in one and two dimensions, conservation of energy and momentum, rotational motion, equilibrium, and fluids.

Learning Outcomes

1. Demonstrate converting units and other aspects of dimensional analysis in the working of numerical problems.
2. Apply principles of Newtonian mechanics to predict and account for simple phenomena modeled by the motion of particles in one and two dimensions.
3. Apply principles of Newtonian mechanics to predict and account for simple phenomena modeled by the motion of a rigid body in two dimensions.
4. Apply Newton's theory of gravitation to circular orbits and demonstrate understanding of how Kepler's laws of planetary motion provide the empirical foundation for Newton's theory.
5. Apply the mathematics of vectors to the principles of Newtonian mechanics.
6. Apply principles of Newtonian mechanics to the case of static and dynamic incompressible fluids, including Archimedes' and Bernoulli's principles.

PHYS 1230L. Algebra-Based Physics I Lab**1 Credit (1)**

A series of laboratory experiments associated with the material presented in PHYS 1230G.

Prerequisite(s)/Corequisite(s): PHYS 1230G.

Learning Outcomes

1. Explain the scientific method.
2. Test ideas using modern laboratory equipment.
3. Estimate experimental uncertainties using statistical methods.
4. Use computers to analyze and report laboratory results.
5. Draw appropriate conclusions from quantitative scientific observations.
6. Accurately and clearly communicate the results of scientific experiments.

PHYS 1240G. Algebra-Based Physics II**3 Credits (3)**

The second half of a two semester algebra-based introduction to Physics. This course covers electricity, magnetism and optics.

Prerequisite(s): a C- or better in PHYS 1230G or PHYS 2230G.

Learning Outcomes

1. Be able to state Coulomb's Law and Gauss's laws and apply them.
2. Apply the concepts of electric charge, electric field and electric potential to solve problems.
3. Analyze simple DC and AC circuits.
4. Apply the Lorentz force to solve problems.
5. Apply Faraday's law of induction (and Lenz's law) to solve problems.
6. Apply ray optics to practical lens systems such as microscopes and corrective lenses.
7. Apply the wave nature of light to the phenomena of reflection, refraction, and diffraction.

PHYS 1240L. Algebra-Based Physics II Lab**1 Credit (1)**

A series of laboratory experiments associated with the material presented in PHYS 1240

Prerequisite(s)/Corequisite(s): PHYS 1240G.

Learning Outcomes

1. Explain the scientific method.
2. Test ideas using modern laboratory equipment.
3. Estimate experimental uncertainties using statistical methods.
4. Use computers to analyze and report laboratory results.
5. Draw appropriate conclusions from quantitative scientific observations.
6. Accurately and clearly communicate the results of scientific experiments.

PHYS 1310G. Calculus -Based Physics I**3 Credits (3)**

A calculus level treatment of classical mechanics and waves, which is concerned with the physical motion concepts, forces, energy concepts, momentum, rotational motion, angular momentum, gravity, and static equilibrium. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in MATH 1511G or higher.

Learning Outcomes

1. Describe the relationships among position, velocity, and acceleration as functions of time.
2. Use the equations of kinematics to describe motion under constant acceleration.
3. Analyze linear motion using Newton's laws, force, and linear momentum.
4. Analyze rotational motion using torque and angular momentum.
5. Analyze motion using work and energy.

PHYS 1310L. Calculus -Based Physics I Lab**1 Credit (3P)**

A series of laboratory experiments associated with the material presented in Calculus-based Physics I. Students will apply the principles and concepts highlighting the main objectives covered in coursework for Calculus-based Physics I.

Prerequisite(s)/Corequisite(s): PHYS 1310G.

Learning Outcomes

1. Develop a reasonable hypothesis.
2. Work effectively as part of a team.
3. Take measurements and record measured quantities to the appropriate precision.
4. Estimate error sources in experimental techniques.
5. Apply appropriate methods of analysis to raw data, including using graphical and statistical methods via computer-based tools.
6. Determine whether results and conclusions are reasonable.
7. Present experimental results in written form in appropriate style and depth.
8. Experience the relationship between theory and experiment.

PHYS 1311. Problems in Calculus-Based Physics I**0.5-1 Credits (.5-1)**

This is a supplemental course for Calculus-based Physics I. May be repeated up to 1 credits.

Corequisite(s): PHYS 1310G.

PHYS 1320G. Calculus -Based Physics II**3 Credits (3)**

A calculus level treatment of classical electricity and magnetism. It is strongly recommended that this course is taken at the same time as Calculus-based Physics II laboratory. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in PHYS 2110 or PHYS 1310G and MATH 1521G or higher.

Learning Outcomes

1. Apply the concepts of electric charge, electric field and electric potential to solve problems.
2. Sketch the electric field in the vicinity of point, line, sheet, and spherical distributions of static electric charge.
3. Sketch the magnetic field in the vicinity of line, ring, sheet, and solenoid distributions of steady current.
4. Describe the relationship between electric field and electric potential.
5. Calculate the Lorentz force on a moving charge for simple geometries of the fields and use it to analyze the motion of charged particles.
6. Apply the integral forms of Maxwell's equations.
7. Calculate the energy of electromagnetic fields.
8. Analyze DC circuits.

PHYS 1320L. Calculus -Based Physics II Lab**1 Credit (3P)**

A series of Laboratory experiments associated with the material presented in Calculus-Based Physics II. Students will apply the principles and concepts highlighting the main objectives covered in coursework for Calculus-Based Physics II.

Prerequisite(s)/Corequisite(s): PHYS 1320G. Prerequisite(s): A C- or better in PHYS 2110L or PHYS 1310L.

Learning Outcomes

1. Develop a reasonable hypothesis.
2. Work effectively as part of a team.
3. Take measurements and record measured quantities to the appropriate precision.
4. Estimate error sources in experimental techniques.
5. Apply appropriate methods of analysis to raw data, including using graphical and statistical methods via computer-based tools.
6. Determine whether results and conclusions are reasonable.
7. Present experimental results in written form in appropriate style and depth.
8. Experience the relationship between theory and experiment

PHYS 1321. Problems in Calculus-Based Physics II**0.5-1 Credits (.5-1)**

This is a supplemental course for Calculus-based Physics II.

Corequisite(s): PHYS 1320G.

PHYS 2110. Mechanics**3 Credits (3)**

Newtonian mechanics.

Prerequisite(s)/Corequisite(s): MATH 1511G or higher.

PHYS 2110L. Experimental Mechanics**1 Credit (3P)**

Laboratory experiments associated with the material presented in PHYS 2110. Science majors.

Prerequisite(s)/Corequisite(s): PHYS 2110.

PHYS 2111. Supplemental Instruction to PHYS 2110**0.5-1 Credits (.5-1)**

This Optional workshop as a supplement to PHYS 2110. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 2110.

Learning Outcomes

1. analyze real world phenomena by constructing simplified idealized models and appropriate mathematical reasoning to make predictions or explain a phenomena or function.
2. use multiple representations to build, interpret and communicate the model, including visual representations such as sketches or diagrams, mathematical expressions, graphs, or text.
3. in the contexts of concepts and physical laws discussed in PHYS 2110, apply quantitative analysis to solve problems, including the use of scientific notation, unit conversion and vector algebra.
4. self-check reasonableness of assumptions and solutions, making use of limiting cases or symmetry arguments.
5. develop learning strategies and use metacognition to promote thinking in the discipline.

PHYS 2120. Heat, Light, and Sound**3 Credits (3)**

Calculus-level treatment of thermodynamics, geometrical and physical optics, and sound. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in PHYS 2110 or PHYS 1310G, and MATH 1511G or higher.

PHYS 2120L. Heat, Light, and Sound Laboratory**1 Credit (3P)**

Laboratory experiments associated with the material presented in PHYS 2120. Science majors.

Prerequisite(s)/Corequisite(s): PHYS 2120. Prerequisite(s): a C- or better in PHYS 2110L or PHYS 1310L.

PHYS 2121. Supplemental Instruction to PHYS 2120**0.5-1 Credits (.5-1)**

This optional workshop supplements PHYS 2120 "Heat, Light, and Sound". Students actively apply concepts and methods introduced in PHYS 2120 to problem solving and quantitative analysis. May be repeated up to 1 credits.

Corequisite(s): PHYS 2120.

Learning Outcomes

1. analyze real world phenomena by constructing simplified idealized models and appropriate mathematical reasoning to make predictions or explain a phenomena or function.
2. use multiple representations to build, interpret and communicate the model, including visual representations such as sketches or diagrams, mathematical expressions, graphs, or text.
3. in the contexts of concepts and physical laws discussed in PHYS 2121, apply quantitative analysis to solve problems involving wave propagation and interference, geometric optics, heat transfer and thermodynamics.
4. self-check reasonableness of assumptions and solutions, making use of limiting cases or symmetry arguments.
5. develop learning strategies and use metacognition to promote thinking in the discipline

PHYS 2140. Electricity and Magnetism**3 Credits (3)**

Charges and matter, the electric field, Gauss law, the electric potential, the magnetic field, Ampere's law, Faraday's law, electric circuits, alternating currents, Maxwell's equations, and electromagnetic waves. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 1521G. Prerequisite(s): a C- or better in PHYS 2110 or PHYS 1310G, and MATH 1511G or higher.

PHYS 2140L. Electricity & Magnetism Laboratory**1 Credit (3P)**

Laboratory experiments associated with the material presented in PHYS 2140.

Prerequisite(s)/Corequisite(s): PHYS 2140. Prerequisite(s): a C- or better in PHYS 2110 or PHYS 1310G.

PHYS 2141. Supplemental Instruction to PHYS 2140**0.5-1 Credits (.5-1)**

Optional workshop as a supplement to PHYS 2140. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 2140.

PHYS 2230G. General Physics for Life Science I**3 Credits (3)**

This algebra-based introduction to general physics covers mechanics, waves, sound, and heat. Special emphasis is given to applications in the life sciences. This course is recommended for students in the life sciences and those preparing for the physics part of the MCAT. May be repeated up to 3 credits.

Prerequisite(s): A C or better in MATH 1215 or higher.

Learning Outcomes

1. Modeling: analyze real-world phenomena by deciding what information is relevant and constructing simplified idealized models and appropriate mathematical reasoning to make predictions or explain phenomena or function; use multiple representations to build, interpret and communicate the model, including visual representations such as sketches or diagrams, mathematical expressions, graphs, or text; critique assumptions and determine how to test the validity of a model and use the comparison of experimental data and prediction to refine the model.
2. Conceptual understanding: describe the motion of any object in terms of displacement, velocity, and acceleration; analyze external forces acting on an object and determine if a system is in equilibrium or relate the net force to changes in motion; predict or analyze motion using conservation laws for energy and momentum; analyze forces and torques for a rigid object in static equilibrium; for a static fluid determine pressure and the buoyant force; apply idealized models of fluid flow to the circulatory system; describe the properties of pressure waves known as sound, apply the model of standing waves to musical instruments and discuss how sound is used to sense the environment; predict qualitative changes in the internal energy of a thermodynamic system when energy has been transferred due to work or heat and justify those predictions using conservation of energy (First law of thermodynamics). Identify which heat transfer processes occur in a described situation.
3. Quantitative reasoning: use a physics problem-solving strategy (Identify relevant concepts; Introduce and study simplified models; Use symmetry arguments; Establish the relation between known and unknown quantities; Calculate a quantitative result using appropriate mathematical methods; Self-check reasonableness of assumptions and solutions); use scientific notation accurately and convert units if necessary.
4. Communicating scientific information: interpret or generate graphs or other visual representations and be able to switch between various representations including text, mathematical description, or diagrams.

PHYS 2230L. Laboratory to General Physics for Life Science I**1 Credit (1)**

Laboratory experiments in topics associated with material presented in PHYS 2230G.

Prerequisite(s)/Corequisite(s): PHYS 2230G. Restricted to Las Cruces campus only.

PHYS 2231. Supplemental Instruction to General Physics for Life Sciences I**1 Credit (1)**

This optional workshop supplements Physics for Life Sciences I. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 2230G.

Learning Outcomes

1. analyze real world phenomena by constructing simplified idealized models and appropriate mathematical reasoning to make predictions or explain a phenomena or function.
2. use multiple representations to build, interpret and communicate the model, including visual representations such as sketches or diagrams, mathematical expressions, graphs, or text.
3. in the contexts of concepts and physical laws discussed in PHYS 2230, apply quantitative analysis to solve problems, including the use of scientific notation, unit conversion and vector algebra.
4. self-check reasonableness of assumptions and solutions, making use of limiting cases or symmetry arguments.
5. develop learning strategies and use metacognition to promote thinking in the discipline.

PHYS 2240G. General Physics for Life Science II**3 Credits (3)**

This algebra-based course covers electricity, magnetism, light, atomic physics, and radioactivity. Special emphasis is given to applications in the life sciences. This course is recommended for students in the life sciences and those preparing for the physics part of the MCAT. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in PHYS 1230G or PHYS 2230G, and MATH 1220G or higher.

Learning Outcomes

1. Modeling: analyze real world phenomena by constructing simplified idealized models (an abstract description) that allow making predictions or explaining a phenomena or function; use multiple representations to build and communicate the model, including sketches, mathematical expressions, diagrams or graphs; decide what information is relevant and critique assumptions and models of others; determine how to test the validity of a model and use comparison of experimental data and prediction to refine the model.
2. Conceptual understanding: electric or magnetic fields can be used to describe interactions of objects that contain charges with their surroundings; changes that occur as a result of interactions are constrained by conservation laws (such as conservation of energy, conservation of charge or conservation of nucleon number); many macroscopic properties of materials can be described using microscopic models or related to their geometry; electromagnetic radiation can be modeled as a wave or as fundamental particles (photons); the direction of propagation of a wave may change when it encounters a boundary surface between two media of different properties (reflection or refraction); the spontaneous radioactive decay of nuclei is described by probability.
3. Quantitative reasoning: apply quantitative analysis and appropriate mathematical reasoning to describe or explain phenomena; use scientific notation accurately and convert units if necessary.
4. Communicating scientific information: interpret or generate graphs or other visual representations (e.g. field lines, equipotential lines) and be able to switch between various representations including text, mathematical description, or diagrams.

PHYS 2240L. Laboratory to General Physics for Life Science II**1 Credit (1)**

Laboratory experiments in topics associated with material presented in PHYS 2240.

Prerequisite(s)/Corequisite(s): PHYS 2240G. Restricted to Las Cruces campus only.

PHYS 2241. Supplemental Instruction to General Physics for Life Sciences II**1 Credit (1)**

This optional workshop is a supplement to Physics for Life Science II. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 2240G.

Learning Outcomes

1. analyze real world phenomena by constructing simplified idealized models and appropriate mathematical reasoning to make predictions or explain a phenomena or function.
2. use multiple representations to build, interpret and communicate the model, including visual representations such as sketches or diagrams, mathematical expressions, graphs, or text.
3. in the contexts of concepts and physical laws discussed in PHYS 2240, apply quantitative analysis to solve problems, including the use of scientific notation, unit conversion and vector algebra.
4. self-check reasonableness of assumptions and solutions, making use of limiting cases or symmetry arguments.
5. develop learning strategies and use metacognition to promote thinking in the discipline.

PHYS 2996. Special Topics**1-3 Credits**

Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Learning Outcomes

1. Varies

PHYS 2997. Independent Study**1-3 Credits**

Individual analytical or laboratory studies directed by a faculty member. May be repeated for a maximum of 6 credits.

Prerequisite: consent of instructor.

Learning Outcomes

1. Varies

PL-S-PARALEGAL SERVICES (PL S)

PL S 160. Legal System for the Paralegal

3 Credits (3)

Introduction to the court system, administrative agencies, functions of law offices, and professional conduct and legal ethics. Restricted to: Community Colleges only.

Prerequisite(s): ACT standard score in English of 16 or higher or a Compass score 76 or higher; for those scoring 13-15 in English on ACT or 35-75 on Compass, successful complete of CCDE 105N or CCDE 110N; for those scoring 12 or below on the ACT standard score in English or 34 or below on the Compass, successful completion of CCDE 105N & CCDE 110N.

PL S 161. Legal Terminology

3 Credits (3)

Survey of the language of the law that will serve either as an introductory course or as a review course to prepare students for the certification test.

PL S 162. The Virtual Law Office

3 Credits (3)

The Virtual Law Office class is a 'hands-on', project oriented course designated to provide the student with the basic law office skills needed to function successfully in a law office setting. The student will gain a practical, working knowledge of the procedures necessary to work in a law office. The skills learned in the class will directly translate to real life situations. Restricted to: Community Colleges only.

Prerequisite(s): PL S 160.

PL S 180. Constitutional Law for the Paralegal

3 Credits (3)

Case standing of the law of the Constitution and Bill of Rights with regard to day-to-day applications in the law practice. Documents dealing with constitutional problems in both civil and criminal areas of law will be drafted and discussed.

Prerequisite: PL S 160.

PL S 190. Criminal Law for the Paralegal

3 Credits (3)

Introduction to federal and state criminal law; criminal proceedings, prosecution and defense, sentencing and appeal.

Prerequisite: PL S 160.

PL S 200. Legal Ethics for the Paralegal

3 Credits (3)

Introduction to ethical dilemmas faced in the workforce and the rules of ethics developed by the American Bar Association, various national paralegal organizations, and the Supreme Court of New Mexico. Restricted to: Community Colleges only.

Prerequisite(s): PL S 160.

PL S 203. Immigration Law

3 Credits (3)

Survey of the basics of immigration law including the rights and obligations of citizenship and the naturalization process.

Prerequisite: PL S 160.

PL S 221. Internship I

2-4 Credits

Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships can be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. Restricted to Community Colleges campuses only.

Prerequisite(s): PL S 274.

PL S 222. Internship II

1-3 Credits

Continuation of PL S 221. Each credit requires specified number of hours of on-the-job work experience. Restricted to Community Colleges campuses only.

Prerequisite(s): PL S 221.

PL S 231. The Law of Commerce for the Paralegal

3 Credits (3)

Law of contracts, negotiable instruments, bank transfers, secured transactions, debtor-creditor relations, agency, and business types and their formation. Students will study the relevant statutes as well as draft documents associated with these types of legal practice. Restricted to: Community Colleges only.

Prerequisite(s): PL S 160.

PL S 272. Bankruptcy Law for the Paralegal

3 Credits (3)

Individual and corporate bankruptcy; the basic principles and processes of bankruptcy law as a system of debtor relief and debt collection.

Prerequisite: PL S 160.

PL S 274. Legal Research and Writing for the Paralegal I**3 Credits (3)**

Legal memoranda, briefs, and pleadings will be prepared and written based on the student's original research. Research materials and techniques will be identified and studied; introduction of computer usage in legal research.

Prerequisite: PL S 160 and ENGL 1110G.

PL S 275. Tort and Insurance for the Paralegal**3 Credits (3)**

Primary legal principles of tort and insurance law and means of establishing insurance plans, types of torts and insurance, as well as use of specific forms and procedures relating to these areas.

Prerequisite: PL S 160.

PL S 276. Wills, Trusts, and Probate for the Paralegal**3 Credits (3)**

Cases and statutes dealing with wills, trusts, and probate. Emphasis on preparation and drafting of documents and the application of the law and documents to the client's problems.

Prerequisite: PL S 160.

PL S 277. Family Law for the Paralegal**3 Credits (3)**

Methods of conducting client interviews and drafting of pleadings and research relative to families. Laws relating to marriage, divorce, custody, support, adoption, name change, guardianship, and paternity.

Prerequisite: PL S 160.

PL S 278. Litigation for the Paralegal**3 Credits (3)**

The law of procedure and evidence will be considered through rules and cases. Case situations will be used to identify and solve problems.

Prerequisite: PL S 160.

PL S 279. Legal Research and Writing for the Paralegal II**3 Credits (3)**

Continuation of PL S 274. Advanced training in legal research problems with a focus on analysis, writing, and preparation of sophisticated legal memoranda and documents.

Prerequisite: PL S 274.

PL S 280. Interviewing and Investigation for the Paralegal**3 Credits (3)**

Techniques of legal interviewing and investigation with emphasis on development of human relations and communication skills.

Prerequisite: PL S 160.

PL S 298. Independent Study**1-3 Credits (1-3)**

Individual studies directed by consenting faculty with prior approval by department head. Restricted to Community Colleges campuses only.

Prerequisite(s): PL S 160.

POLS-POLITICAL SCIENCE

POLS 1110G. Introduction to Political Science**3 Credits (3)**

This course covers fundamental concepts in political science, such as political theories, ideologies, and government systems.

Learning Outcomes

1. Construct reasoned civic discourse to advocate a stance or examine alternate positions.
2. Identify fundamental concepts and theories in political science.
3. Analyze data and information in order to gain a deeper understanding of the material.
4. Articulate how the public influence and are influenced by politics.
5. Identify and compare government systems from democracy to authoritarian, as well as models of analysis of contemporary international relations.

POLS 1111. Introductory Government Seminar**1 Credit (1)**

Introduction to the government major. Designed to assist students in planning college experience and preparing for professional or advanced educational opportunities upon graduation. Graded: S/U. Restricted to: Main campus only.

Learning Outcomes

1. This course is designed for the "beginning" government major.
2. Its goal is to improve your educational experience at the university and within the Department of Government. In this class we hope to develop some basic skills necessary for successful completion of a degree in Government.
3. These include the skills of critical reading, critical writing, oral presentation and research methods.
4. Additionally, we will use this seminar to introduce you to Government faculty, to plan your government degree and to acquaint you with the services and opportunities the department and the university has to offer.
5. Finally, we hope to begin the discussion of where you will go next, when you complete your degree in Government.

POLS 1120G. American National Government**3 Credits (3)**

This course explains the role of American national government, its formation and principles of the Constitution; relation of state to the national government; political parties and their relationship to interest groups. This course also explains the structure of the legislative, executive, and judicial branches.

Learning Outcomes

1. Explain the historical and political foundations of the government of the United States;
2. Explain the precursors to, and the development and adoption of the United States Constitution;
3. Explain the United States federal system, the basics of federalism, and the changing relationship of state and federal power;
4. Describe the power, structure and operation of the main institutions of government, namely the legislative, executive, judicial, and the federal bureaucracy;
5. Explain the development and role of political parties and interest groups;
6. Identify the constitutional basis of civil rights and civil liberties and their changing interpretation; and
7. Describe the role of demographics, public opinion and the media in American politics.

POLS 1130G. Issues in American Politics**3 Credits (3)**

This course is designed to introduce the students to the contemporary study of American political issues. The course analysis of government policies, examining various approaches to the economy, democracy and the structure and the function of American political institutions.

Learning Outcomes

1. Explain the basic themes and concepts of political science and their application to contemporary issues.
2. Explain the major forces, interests, and institutions of American democratic politics.
3. Describe and define how beliefs, assumptions, and values are influenced by factors such as politics, geography, economics, culture, biology, history, and social institutions.

POLS 2120G. International Relations**3 Credits (3)**

This course covers the analysis of significant factors in world politics, including nationalism, national interest, political economy, ideology, international conflict and collaboration, balance of power, deterrence, international law, and international organization.

Learning Outcomes

1. Explain the interrelationships between countries and people in the world,
2. Demonstrate an awareness of current events in the world.
3. Describe several theories of International Relations
4. Explain and identify theories of power and decision making among states in the world.
5. Describe and evaluate issues that relate to International Politics, and how individuals are affected by them.
6. Describe the role of Intergovernmental Organizations in International Politics.
7. Identify the role war plays in International Politics.
8. Explain how economics is intertwined with International Politics.
9. Demonstrate an understanding of role of international terrorism and its impacts on global diplomacy.
10. Articulate how beliefs, assumptions, and values are influenced by factors such as politics, geography, economics, culture, history, government, and social institutions.

POLS 2996. Special Topics**3 Credits (3)**

Specific topics to be announced in Schedule of Classes. Community Colleges only. May be repeated for a maximum of 12 credits.

Learning Outcomes

1. Varies

PORT-PORTUGUESE (PORT)

PORT 1110. Portuguese I**3 Credits (3)**

Designed for students with no previous exposure to Portuguese, this course develops basic listening, speaking, reading, and writing skills. This is an introductory course aimed at teaching the student to communicate in Portuguese in everyday situations.

Learning Outcomes

1. Students can communicate and exchange information about familiar topics using phrases and simple sentences, sometimes supported by memorized language.
2. Students can handle most short social interactions in everyday situations by asking and answering simple questions.
3. Students can write short messages and notes on familiar topics related to everyday life.
4. Students can often understand words, phrases, and simple sentences related to everyday life.
5. Students can recognize pieces of information and sometimes understand the main topic of what is being said.
6. Students can understand familiar words, phrases, and sentences within short and simple texts related to everyday life.
7. Students can sometimes understand the main idea of what they have read.
8. Students can make connections between beliefs, behaviors and cultural artifacts of the Portuguese-speaking world, and make informed cross-cultural comparisons.

PORT 1120. Portuguese II**3 Credits (3)**

A continuation of Portuguese I, students will develop a broader foundation in skills gained during the first semester, including understanding, speaking, reading and writing Portuguese. Students will also gain more in- depth knowledge of Portuguese-speaking cultures.

Prerequisite: C or better in PORT 1110 or consent of instructor.

Learning Outcomes

1. Students can participate in conversations on a number of familiar topics using simple sentences.
2. Students can handle short social interactions in everyday situations by asking and answering simple questions.
3. Students can write about familiar topics and present information using a series of simple sentences.
4. Students can understand the main idea in short, simple messages and presentations on familiar topics.
5. Students can understand the main idea of simple conversations that they overhear.
6. Students can understand the main idea of short and simple texts when the topic is familiar.
7. Students can begin to narrate and describe simple events in the past.
8. Students can make broader connections between beliefs, behaviors and cultural artifacts of the Portuguese-speaking world, and make informed cross-cultural comparisons.

PSYC-PSYCHOLOGY

PSYC 1110G. Introduction to Psychology**3 Credits (3)**

This course will introduce students to the concepts, theories, significant findings, methodologies, and terminology that apply to the field of psychology.

Learning Outcomes

1. Explain how the scientific method and psychological research methodologies are used to study the mind and behavior.
2. Recall key terms, concepts, and theories in the areas of neuroscience, learning, memory, cognition, intelligence, motivation and emotion, development, personality, health, disorders and therapies, and social psychology.
3. Explain how information provided in this course can be applied to life in the real world.
4. Identify the major theoretical schools of thought that exist in psychology as they relate to the self, the culture, and the society.

PSYC 2221. Applied Psychology**3 Credits (3)**

Explanation of the psychological principles of everyday living. Emphasizes motivation, learning of intelligent behavior, and applications of psychology to social issues. Community Colleges only.

Learning Outcomes

1. The objective of this course is to orient students to the personality characteristics, interpersonal competencies, ethical decision-making skills, and other professional traits associated with pursuing a career in a helping profession.
2. Identify the requirements for becoming a helping professional, characteristics of a skilled helper, and cultural factors that impact helping professionals
3. Explain your personal strengths and weaknesses as a potential helper.
4. Demonstrate appropriate helping strategies based upon the special characteristics of clients.
5. Compare the capabilities that individual, family, group, community, and online interventions offer you as a future helper.
6. Identify the ethical and legal issues that impact helping professionals
7. Analyze the potential impact of your future ethical and professional standards as a helping professional
8. Explain how your role as a helping professional is impacted by your professional affiliation and ethical principles
9. Analyze how worsening personal problems and increasing stress can impact the kinds and quality of our responses to life and the people around us.

PSYC 2230. Psychology of Adjustment**3 Credits (3)**

This course focuses on the individual's adjustment to society, and the application of psychological principles to the understanding of adjustment.

Learning Outcomes

1. Explain the internal and external factors associated with the psychology of adjustment.
2. Evaluate contributions from psychology to adjustment concepts and processes.
3. Describe the different explanations of how individuals adjust to their environments.
4. Describe how self-identities develop and how they affect relations with others.
5. Identify resources available for assistance with adjustment-related concerns.

PSYC 2311. A Study of Substance Abuse through Learning**3 Credits (3)**

Physiological and psychological impact of drug use on human behavior. Emphasizes practical applications of intervention and prevention in the community. Community Colleges only.

Learning Outcomes

1. Through readings and discussions, students will be able to describe the role that gender, ethnicity, and age have in alcohol and drug use.
2. Through readings and discussions, students will be able to learn past and current perspectives of addiction.
3. Through readings, discussions and student presentations, students will be able to distinguish between different types of abuse-able drugs and be able to classify them.
4. Through readings, discussions, lectures and guest speaker's students will be able to describe the role of addiction and criminal behavior.
5. Through readings and discussions, students will be able to discuss the Models and Theories of Drug Dependence and Addiction.
6. Through readings, discussions and evaluation of case studies students will be able to discuss the definitions of Substance Abuse, Dependence Addiction.
7. Through readings and discussions, students will be able to acquaint themselves with the effects of Addictive Behavior on Family Systems.
8. Through readings discussions, students will be able to Discuss Disorders Co-Occurring with Substance Abuse
9. Through readings and community service learning outing, students will be able to discuss how important the concepts of Prevention, Intervention and Treatment in drug addiction.
10. 1 Through readings and community service learning outing students will be able to discuss Alcohol/Drug Recovery Treatment Relapse Prevention
11. 1 Through completion of Service Learning and field assignment students will be able to discuss the role of AA/NA in Recovery Treatment.
12. 1 Through attendance of a Drug Court Hearing students will be knowledgeable of the role of Drug Courts in prevention and treatment of drug addiction.

RADT-RADIOLOGIC TECHNOLOGY (RADT)

RADT 100. Introduction to Radiologic Technology and Patient Care**2 Credits (2)**

Overview of the profession, including ethics, terminology, and basic radiation protection. Addresses basic and specialized procedures and topics related to the care of the patient. Restricted to: Community Colleges only. Restricted to Majors.

RADT 101. Radiographic Positioning I**4 Credits (2+6P)**

Covers radiographic procedure and positioning concepts, techniques, terminology, and mechanics related to the thorax, abdomen, extremities, spine and pelvis. Includes positioning lab and clinical observation.

RADT 102. Radiographic Positioning II**4 Credits (2+6P)**

Continuation of RADT 101. Includes skull, gastrointestinal, urinary, reproductive, biliary systems, and more advanced skeletal positions. Includes positioning lab and clinical observation. Restricted to: Community Colleges only. Restricted to Majors.

Prerequisite: RADT 101.

RADT 103. Introduction to Radiographic Imaging**3 Credits (2+2P)**

Provides the student with an in-depth knowledge of radiographic exposure technique and the factors affecting radiographic image quality. Includes lab experiments. Restricted to majors.

Learning Outcomes

1. Students will demonstrate the ability to safely produce quality diagnostic radiographic images. Students will demonstrate effective communication skills. Students will analyze radiographic images for technical and positioning accuracy to make modifications as needed.

RADT 104. Special Radiologic Modalities**2 Credits (2)**

Discussion of various special procedures used in medical imaging such as, angiography, ultrasound, computerized tomography, magnetic resonance imaging, digital imaging, nuclear medicine, radiation therapy, etc. Includes guest lectures and field trips.

Prerequisite: RADT 103.

RADT 105. Radiographic Physics and Equipment**3 Credits (3)**

Fundamentals of radiographic physics and imaging theory. Includes the atom, electromagnetism, x-ray production and interactions, x-ray circuitry, digital fluoroscopic units, digital x-ray equipment and quality assurance/control; with brief overview of mammography, computed tomography (CT), and MRI imaging. Restricted to: Community Colleges only. Restricted to Majors.

Prerequisite/Corequisite: RADT 103.

Learning Outcomes

1. Students will have knowledge of and be able to operate radiographic equipment to produce quality diagnostic radiographic images. Students will demonstrate radiation safety application through ALARA Principles.

RADT 110. Radiographic Pathology**1 Credit (1)**

Overview of pathology demonstrated by radiographic procedures. Restricted to majors.

Prerequisite: RADT 154.

RADT 154. Radiographic Anatomy and Physiology**3 Credits (3)**

Basic A&P for radiographic application. Includes a systems approach to body structures and organs as they relate to anatomical projections, radiographic identification, and various imaging modalities. Restricted to: RADT majors. Restricted to: Community Colleges only.

Prerequisite(s): AHS 153 or AHS 140 or BIOL 2210 or BIOL 1130, or consent of instructor.

RADT 156. Independent Study**1-6 Credits (1-6)**

Individual studies/research on topics related to the radiological sciences. May be repeated for a maximum of 6 credits. Restricted to: Community Colleges only.

RADT 190. CT Equipment and Methodology**3 Credits (3)**

Skill development in the operation of computed tomographic equipment, focusing on routine protocols, image quality, and quality assurance and radiation protection. May be repeated up to 3 credits. Restricted to: CTOM or RADT majors. Restricted to Community Colleges campuses only.

RADT 200. Radiation Biology and Protection**2 Credits (2)**

Biological effects of ionizing radiation on cells and tissues. Includes radiation measurements, policies and protection measures for self, patients, and others. Restricted to majors. Restricted to: Community Colleges only.

Prerequisite(s): RADT 103.

RADT 201. Clinical Education I**7 Credits (32P)**

Supervised practice in a radiology department under direct supervision of a registered technician. Includes film critiques.

Prerequisite: RADT 105.

Learning Outcomes

1. Students will demonstrate the ability to safely produce diagnostic radiographic images. Students will be able to appropriately position patients, identify radiographic anatomy and pathological conditions. Students will demonstrate effective communication skills. Students will accurately document/record data in accordance with clinical site policies and procedures.
2. Students will demonstrate the ability to use independent judgement. Students will analyze radiographic images for technical and positioning accuracy to make modifications as needed. Students will conduct themselves in a professional manner to function effectively as a member of the healthcare team. Students will identify various opportunities for professional growth within medical imaging sciences.

RADT 202. Clinical Education II**11 Credits (33P)**

Continuation of RADT 201. Student will work under indirect supervision of registered personnel.

Prerequisite(s): RADT 201.

Learning Outcomes

1. Students will demonstrate the ability to safely produce diagnostic radiographic images. Students will be able to appropriately position patients, identify radiographic anatomy and pathological conditions. Students will demonstrate effective communication skills. Students will accurately document/record data in accordance with clinical site policies and procedures. Students will demonstrate the ability to use independent judgement. Students will analyze radiographic images for technical and positioning accuracy to make modifications as needed. Students will conduct themselves in a professional manner to function effectively as a member of the healthcare team. Students will identify various opportunities for professional growth within medical imaging sciences.

RADT 203. Clinical Education III**11 Credits (33P)**

Continuation of RADT 202 to include special rotations in advanced imaging modalities.

Prerequisite(s): RADT 202.

Learning Outcomes

1. Students will demonstrate the ability to safely produce diagnostic radiographic images. Students will be able to appropriately position patients, identify radiographic anatomy and pathological conditions. Students will demonstrate effective communication skills. Students will accurately document/record data in accordance with clinical site policies and procedures. Students will demonstrate the ability to use independent judgement. Students will analyze radiographic images for technical and positioning accuracy to make modifications as needed. Students will conduct themselves in a professional manner to function effectively as a member of the healthcare team. Students will identify various opportunities for professional growth within medical imaging sciences.

RADT 205. Radiographic Image Critique**1 Credit (1)**

Review of radiographs produced in clinical settings to evaluate anatomy and technical issues. Restricted to majors.

Prerequisite: RADT 201.

RADT 206. Applied Radiographic Procedures**2 Credits (1+3P)**

Advanced course which integrates the principles and techniques of radiologic technology. Restricted to majors.

Prerequisite: RADT 202.

RADT 207. Cross Sectional Anatomy for Medical Imaging**3 Credits (3)**

Anatomic relationships that are present under various sectional orientations as depicted by computed tomography or magnetic resonance imaging. May be repeated up to 3 credits. Restricted to: CTOM or RADT majors. Restricted to Community Colleges campuses only.

RADT 208. Clinical I (Computed Tomography)**3 Credits (9P)**

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinic professional. May be repeated up to 3 credits. Restricted to: RADT or CTOM majors. Restricted to Community Colleges campuses only.

RADT 209. Clinical II (Computed Tomography)**3 Credits (9P)**

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinic professional. (Capstone Course). May be repeated up to 3 credits. Restricted to: CTOM or RADT majors. Restricted to Community Colleges campuses only.

RESP - RESPIRATORY THERAPY (RESP)

RESP 110. Respiratory Therapy I

3 Credits (3)

Introduction to basic respiratory care techniques. Includes history, professional organizations, medical gas administration, oxygen therapy, cardiopulmonary AP, patient assessments, and medical terminology. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to DA-RESP-AA majors.

RESP 110 L. Respiratory Therapy I Lab

2 Credits (2)

Laboratory practice of basic respiratory care procedures. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to DA-RESP-AA majors.

RESP 115. Respiratory Therapy Pharmacology

3 Credits (3)

Concepts of physics as they apply to the physiology of the lungs. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to DA-RESP-AA majors.

RESP 120. Respiratory Therapy II

4 Credits (4)

Advanced respiratory care techniques. Emphasis on airway management, aerosol treatment, chest physiotherapy, pharmacology, posture pressure breathing, and pulmonary rehabilitation. Requires a C or better to remain in program. May be repeated up to 4 credits. Students must be admitted into program to enroll in this course. Restricted to Community Colleges campuses only.

Prerequisite(s): RESP 110.

Corequisite(s): RESP 120 L.

RESP 120 L. Respiratory Therapy II Lab

2 Credits (6P)

Continuation of lab practices and procedures learned in RESP 120, Respiratory Care II, using equipment and simulations. Requires a C or better to remain in program. Students must be admitted to the program to enroll in this course. Corequisite(s):RESP 120. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 110, RESP 110L and RESP 112.

RESP 124. Respiratory Therapy II Clinical

3 Credits (9P)

Supervised practice and application in a hospital setting. Requires a C or better to remain in program. Students must be admitted into program to enroll in this course. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 110, RESP 110L and RESP 112.

Corequisite(s): RESP 120 and RESP 120L.

RESP 155. Respiratory Therapy Special Topics

1-4 Credits

Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 10 credits. Consent of instructor required. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): Admission to program.

RESP 210. Respiratory Therapy III

2 Credits (2)

Introduction to adult, mechanical, neonatal ventilator theory and concepts of critical care medicine. Requires a C or better to remain in program. Students must be admitted into program to enroll in this course. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 115, RESP 120, RESP 120L, and RESP 124.

Corequisite(s): RESP 210L.

RESP 210 L. Respiratory Therapy III Lab

2 Credits (2)

Advanced practice procedures using mechanical ventilation devices. Requires a C or better to remain in program. Students must be admitted into program to enroll in this course. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 115, RESP 120, RESP 120 L, and RESP 124.

Corequisite(s): RESP 210.

RESP 224. Respiratory Therapy IV Clinical

3 Credits (9P)

Continuation of RESP 124. Emphasis on mechanical ventilators. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): Admission to program, and RESP 115, RESP 120, RESP 120 L, and RESP 124.

RESP 230. Respiratory Therapy V**3 Credits (3)**

Continuation of RESP 215. Emphasis on special modalities. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to DA-RESP-AA majors.

RESP 230 L. Respiratory Therapy V Lab**2 Credits (2)**

Advanced practice and procedures of respiratory care. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to DA-RESP-AA majors.

RESP 233. Respiratory Therapy Cardiopulmonary**2 Credits (2)**

Concepts of physics as they apply to the physiology of the lung. Emphasis on laws pertaining to gas flow, humidity, and the mechanics of the breathing process. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to DA-RESP-AA majors.

RESP 234. Respiratory Therapy V Clinical**3 Credits (3)**

Continuation of RESP 214. Emphasis on special modalities. Restricted to: Community Colleges only. Restricted to DA-RESP-AA majors.

RESP 240. Respiratory Therapy VI**3 Credits (3)**

Advanced theory of hemodynamics, neonate, pediatric, and new specialties that apply to respiratory care. Requires a C or better to remain in program. Students must be admitted into program to enroll in this course. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 230, RESP 230L, RESP 233 and RESP 234.

Corequisite(s): RESP 240L.

RESP 240 L. Respiratory Therapy VI Lab**2 Credits (6P)**

Advanced laboratory practice and procedures. Requires a C or better to remain in program. Students must be admitted into program to enroll in this course. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 230, RESP 230L, RESP 233 and RESP 234.

Corequisite(s): RESP 240.

RESP 242. Pediatric Advanced Life Support (PALS)**1 Credit (1)**

Etiology, diagnosis, clinical manifestations, and management of cardiopulmonary disorders related to respiratory care. Restricted to majors.

Corequisite(s): RESP 230.

RESP 243. Respiratory Therapy Neonatal Resuscitation**1 Credit (1)**

Advanced practice of the neonatal resuscitation and certification. Students must be admitted into program to enroll in this course. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 230, RESP 230L, RESP 233, and RESP 234.

Corequisite(s): RESP 240 and RESP 244.

RESP 244. Respiratory Therapy VI Clinical**3 Credits (9P)**

Clinical experience on special modalities. Requires a C or better to remain in program. Students must be admitted into program to enroll in this course. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): RESP 230, RESP 230L, RESP 233 and RESP 234.

Corequisite(s): RESP 240.

RESP 255. Respiratory Therapy Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 4 credits. Consent of instructor required. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): Admission to program.

RGSC-RANGE SCIENCE (RGSC)

RGSC 1110. The Range Science Profession

1 Credit (1)

Introduction to scientific disciplines and career opportunities in rangeland science and management.

Learning Outcomes

1. To introduce students to the Range Science program and to a variety of career opportunities in Range Science.
2. To develop an individualized course curriculum that prepares the student to achieve their career goals.
3. To examine opportunities to gain practical work experience through internships and cooperative employment.

RGSC 2110. Introduction to Rangeland Management

3 Credits (3)

This course covers the principles of managing and understanding pasture and rangelands. Plant physiology and ecology, plant communities and rangeland sustainability and how they relate to livestock production and wildlife management will be discussed. Restricted to: Main campus only.

Learning Outcomes

1. Understand rangeland management operations.
2. Identify rangeland plants.
3. Gain a perspective of watershed management.
4. Discuss the management of rangeland resources.
5. Understand the process of rangeland evaluation through a broad understanding of monitoring and production of these rangelands.
6. Gain a perspective of the correlation of rangelands and the economic principles guiding resource management.
7. Understand the process of rangeland condition.
8. Understand the concepts of stocking rates and usage of rangelands.
9. Gain a broad perspective of different classes of land ownership; Tribal, federal, private and state.
10. 1Recognize vegetative communities, ecological sites, plant physiology and application to rangeland management considerations.

RGSC 2996. Special Topics

1-4 Credits

Specific subjects and credits announced in the Schedule of Classes. Maximum of 4 credits per semester and a grand total of 9 credits.

Learning Outcomes

1. Varies

SIGN-SIGN LANGUAGE

SIGN 1110. American Sign Language I

3 Credits (3)

American Sign Language I is an introductory level language course in the language of the American Deaf Culture. Content includes ASL vocabulary and conversational skills; linguistic features of ASL; and skills in narrative/storytelling. In-class activities, comprehension and expressive examinations, narrative and storytelling assignments in addition to semester projects are venues for students to demonstrate their learning. In addition, Deaf Culture and Deaf Community issues are addressed.

Learning Outcomes

1. Engage in basic conversations using ASL, such as introducing oneself, exchanging personnel information, and talking about one's surroundings.
2. Demonstrate the use of grammatical structures, including spatial referencing, use of classifiers, role shifting, ASL syntax, and non-manual signals (NMS).
3. Demonstrate clear sign production using an understanding of sign parameters: handshapes, movement, location, palm orientation, and NMS in targeted lexicon.
4. Demonstrate the use of basic ASL vocabulary and expressions necessary for conversations about real-life situations.
5. Evaluate and provide feedback concerning peers' and one's own uses of ASL.
6. Develop culturally-appropriate behaviors and conversation strategies within a variety of contexts for interacting with people who are Deaf.
7. Demonstrate effective use of comprehension and expressive ASL skills through narrative and/or storytelling activities.
8. Describe issues of the American Deaf community and Culture.

SIGN 1120. American Sign Language II**3 Credits (3)**

American Sign Language II is a continuation course that builds on concepts and skills developed in American Sign Language I. Students gain further exposure to ASL structure and grammar, and Deaf Culture and the Deaf community. Emphasis is on increasing students' ability to comprehend other signers and express themselves with more elaboration when conversing or presenting in ASL.

Prerequisite: SIGN 1110 or consent of instructor.

Learning Outcomes

1. Further develop basic conversational skills in ASL, taking on more complicated topics.
2. Apply knowledge of ASL grammar, including classifiers, spatial referencing and agreement, role shifting, and non-manual markers.
3. Develop ASL vocabulary, fingerspelling, number, narrative and storytelling skills.
4. Evaluate and provide feedback concerning peers' and one's own uses of ASL.
5. Demonstrate effective use of comprehension and expressive ASL skills through conversation, discussion, narrative and/or storytelling activities.
6. Demonstrate knowledge and appreciation of the American Deaf community and ASL.
7. Through first-hand experience in the American Deaf community and ASL, relate and reflect on
8. perspectives of the community.

SIGN 2110. American Sign Language III**3 Credits (3)**

This is an intermediate level course in American Sign Language (ASL). Expected areas of intermediate skill and knowledge development include: language comprehension and production, conversational use, narratives, ASL language features and further knowledge of and interaction with Deaf culture and the Deaf community.

Prerequisite: SIGN 1120.

Learning Outcomes

1. Demonstrate intermediate ASL vocabulary, conversation and narrative/storytelling skills.
2. Demonstrate fundamental ASL features including visual/spatial orientation, constructed dialogue and action, spatial referencing, classifiers, non-manual behaviors and syntax/word order.
3. Demonstrate appropriate use of cultural behaviors and conversational strategies.
4. Translate written and spoken English to ASL and vice versa.
5. Self-evaluate and provide feedback to peers concerning ASL usage.
6. Examine the culture of the American Deaf community through engaging in community activities and its language.

SMET-SCIENCE/MATH/ENG/TECH (SMET)

SMET 101. Introduction to Science, Mathematics, Engineering, and Technology**1 Credit (1)**

An introductory course for science, mathematics, engineering, or technology students, emphasizing introduction to their disciplines. Development of critical thinking and academic success skills for technical disciplines, as well as degree planning for the major.

Learning Outcomes

1. Apply the scientific method of constructing and testing hypotheses. Design and conduct an experiment using Radio Jove. Apply astrobiological knowledge to solve human problems. Develop competence in appropriate scientific laboratory techniques.

SMET 102. Introduction to Engineering Design.**1 Credit (1)**

Fundamental concepts of engineering design developed through analysis of case studies and hands-on design projects.

Learning Outcomes

1. Identify assumptions within a given context and be able to predict outcomes through data analysis. Obtain, interpret and analyze numerical information through the use of appropriate tables, diagrams, and algorithms. Develop competency in conveying astrobiological knowledge through laboratory reports and/or written assignments following proper APA documentation style. Design antenna configurations to increase the frequency of the radio Jove.

SMET 201. Research for Visiting Community College Students**1 Credit (1)**

Research experience for visiting community college students. Consent of instructor required. Restricted to: Main campus only.

SOCI-SOCIOLOGY

SOCI 1110G. Introduction to Sociology

3 Credits (3)

This course will introduce students to the basic concepts and theories of sociology, as well as to the methods utilized in sociological research. The course will address how sociological concepts and theories can be utilized to analyze and interpret our social world, and how profoundly our society and the groups to which students belong influence them. Students will be given the opportunity to challenge their “takenforgranted” or “common sense” understandings about society, social institutions, and social issues. Special attention will also be paid to the intimate connections between their personal lives and the larger structural features of social life. In addition, the implications of social inequalities, such as race/ethnicity, gender, and social class will be central to the course’s examination of social life in the United States.

Learning Outcomes

1. Define sociological perspectives and the contributions that sociological knowledge can bring to the social sciences.
2. Understand the sociological imagination and explain the relationships between social structures, social forces and individuals.
3. Demonstrate the ability to apply the perspectives of symbolic interactionist theory, conflict theory, and structural-functionalist theory to qualitative and/or quantitative data.
4. Understand and explain intersectionality and the connections between race, class, gender, disability, sexual identity and other forms of structural inequality.

SOCI 2230. Sociology of Sexuality

3 Credits (3)

This course explores all aspects of human sexuality from a sociological perspective. Topics include, but are not limited to, sex work, intimate relationships, sexual response, political movements, power, and the social construction of sexuality. The course also considers how various social statuses such as ethnicity, gender, and social class intersect with sexuality.

Learning Outcomes

1. Identify the central research questions, theories, and methodologies used in the study of human sexuality.
2. Identify and describe biological, cultural, social, and psychological sexual behaviors and response across the lifespan.
3. Identify and describe trends and changes that influence sexual attitudes and values in the U.S. and globally.
4. Describe how sexuality is influenced by contextual factors, such as race/ethnicity, gender, socioeconomic status, disability, and nationality.

SOCI 2240. Sociology of Intimate Relationships and Family

3 Credits (3)

This course provides an overview of contemporary intimate relationships and families from sociological perspectives. We will examine intimate relationships and families as social constructions whose meanings have changed over time and from place to place. This course will aid students in developing a greater understanding of intimate relationships and families as institutions in contemporary U.S. society. Intersections of race, class, gender, sexual orientation, nationality, and other factors within these institutions will be addressed. Community Colleges only.

Learning Outcomes

1. Explain the sociological approaches to researchingintimate relationships and families.
2. Describe important sociological research findings concerning intimate relationships and families.
3. Explain how intimate and familial relationships are affected by multiple intersecting inequalities and ongoing events in other social institutions.

SOCI 2261. Issues in Death and Dying

3 Credits (3)

Major personal and social issues related to the process of dying in our culture. Community Colleges only.

Learning Outcomes

1. be able to understand the diversity of the death experience and the various options available in coping with death and bereavement as shown by the student’s participation in class discussions and field trips.
2. better understand death and dying as social phenomena as shown by the student’s reaction papers.
3. have taken an in-depth look at her or his own death with a researched paper. Comprehension will be shown by the student’s grade on the paper.

SOCI 2310G. Contemporary Social Problems**3 Credits (3)**

This course studies the nature, scope, and effects of social problems and their solutions. The course will concentrate on sociological perspectives, theories, and key concepts when investigating problems, such as inequality, poverty, racism, alienation, family life, sexuality, gender, urbanization, work, aging, crime, war and terrorism, environmental degradation, and mass media. This course is designed to build students' sociological understanding of how sociological approaches attempt to clarify various issues confronting contemporary life, as well as how sociologists view solutions to these problems.

Learning Outcomes

1. Identify and explain major social problems in the United States, and how social problems become constructed as problems.
2. Describe and analyze policy related solutions associated with social problems from various perspectives.
3. Critically examine social problems through the use of sociological theories, methods, and empirical techniques.
4. Identify connections, both national and global, between social problems and social inequalities (e.g., social class, race/ethnicity, and gender/sexuality).

SOIL-SOIL (SOIL)

SOIL 2110. Introduction to Soil Science**3 Credits (3)**

An overview of fundamental concepts in soil science and soils as a natural resource. Students will be introduced to the physical, chemical, and biological properties as it relates to soil management in environmental science, conservation, and agronomy. Prerequisite: (CHEM 1120G or MATH 1215 or higher) or CHEM 1215G

Learning Outcomes

1. Understand and use the technical terminology associated with the use and management of soils.
2. Understand the classification of soils and the processes leading to their formation.
3. Identify key physical, chemical, and biological properties of soils.
4. Explain the impact of land use and management decisions as it relates to soil degradation and environmental problems.

SOIL 2110L. Introduction to Soil Science Laboratory**1 Credit (1)**

Morphological, chemical, physical and biological properties of soil in the laboratory and field.

Corequisite(s): SOIL 2110.

Learning Outcomes

1. Learn techniques for sampling and characterizing soils in the region.
2. Understand how soils are formed and the processes that occur within the soil profile.
3. Gain fundamental knowledge on soil physical, chemical, and biological properties and how each can influence the overall function of a particular soil.
4. Develop critical thinking and analytical skills within laboratory and field settings.
5. Encourage collaboration, inclusiveness and critical thinking.

SOIL 2996. Special Topics**1-4 Credits**

Specific subjects and credits to be announced in the Schedule of Classes. Maximum of 4 credits per semester. No more than 9 credits toward a degree. May be repeated up to 9 credits. Consent of Instructor required.

Learning Outcomes

1. Varies

SOWK-SOCIAL WORK

SOWK 2110G. Introduction to Human Services & Social Work

3 Credits (3)

This course is for students who are interested in social welfare issues and/or are considering entering a social service profession. The course presents an overview of social problems, issues and trends, and the network of social agencies developed to address these concerns. The course examines the influence of personal and professional values and ethics on the helping relationship. The concept of social welfare will be discussed from a social work perspective (with an emphasis on social justice), and students will gain a basic understanding of social work in U.S. society, social work career opportunities, and contemporary issues facing social workers. Approaches relevant to work with individuals, families, groups and communities are presented, with special emphasis on Hispanic and Indigenous populations of New Mexico and the Southwest.

Learning Outcomes

1. Explain the interactions of social institutions, cultural factors, dimensions of identity, and environment with the human development and behavior of individuals.
2. Demonstrate knowledge of the social work profession's focus on addressing contemporary social issues in the United States.
3. Describe the mission and services provided by social service agencies at the regional, national, and global levels.
4. Demonstrate a basic understanding of the social work profession, its history, career opportunities, and contemporary issues facing social workers in the United States today.
5. Recognize how students' knowledge, skills, and attitudes impact their competence as helping professionals.

SOWK 2111. Women's Issues in Social Work

3 Credits (3)

Examines gender-specific social problems and their identification and resolution through the use of social agencies and community resources. Community Colleges only.

Learning Outcomes

1. Understand the commonalities among all women, identifying commonalities and differences among oppressed and dominant groups, recognize multiple oppressions, and respect diversity while conducting social work practice through readings, class discussions, and/or written assignments.
2. Identify the various needs of women as individuals, family members and community members through readings, class discussions, and/or written assignments.
3. Demonstrate skills in working effectively with diverse issues involving women with an emphasis on building strengths, interdependence, self-direction, shared power, and cooperation through experiential exercises, written assignments, companion book, and instructor presentations.
4. Demonstrate skills in addressing issues that affect women such as parental issues, relationship
5. problems, physical abuse, sexual abuse, crime, substance abuse, eating disorders, housing concerns, psychological issues and physical abilities written reports.
6. Understand the importance of and demonstrating skills in caring and empathetic connection in the change process through written assignments, experiential activities in the companion book.
7. Understanding the Importance of the Professionals Self-Care through experiential activities and journaling in the companion book.

SPAN-SPANISH (SPAN)

SPAN 1110. Spanish I

4 Credits (4)

Designed for students with little exposure to Spanish, this course develops basic listening, speaking, reading, and writing skills and basic intercultural competence in interpretive, interpersonal and presentational modes of communication at the Novice Level of proficiency based on ACTFL guidelines. During this course, students perform better and stronger in the Novice Mid level while some abilities emerge in the Novice High range. This is an introductory course aimed at helping the student to communicate in Spanish in everyday familiar situations via recognition and production of practiced or memorized words, phrases, and simple sentences.

Prerequisite(s): language placement and/or assessment by departmental examination.

Learning Outcomes

1. Students can communicate on very familiar topics using a variety of words and phrases that they have practiced and memorized.
2. Students can present information about myself and some other very familiar topics using a variety of words, phrases, and memorized expressions.
3. Students can write short messages and notes on familiar topics related to everyday life.
4. Students can often understand words, phrases, and simple sentences related to everyday life.
5. Students can recognize pieces of information and some-times understand the main topic of what is being said.
6. Students can understand familiar words, phrases, and sentences within short and simple texts related to everyday life.
7. Students can sometimes understand the main idea of what they have read.

SPAN 1120. Spanish II**4 Credits (4)**

Designed for students with some degree of exposure to Spanish in high school and/or at home, this course continues to develop basic listening, speaking, reading, and writing skills and basic intercultural competence in interpretive, interpersonal and presentational modes of communication based at the Novice High Level of proficiency based on ACTFL guidelines, although a few abilities may emerge in the Intermediate Low Level. Students in this course communicate in Spanish in familiar topics using a variety of words, phrases, simple sentences and questions that have been highly practiced and memorized.

Prerequisite: language placement and/or assessment by departmental examination or a C- or better in SPAN 1110.

Learning Outcomes

1. Students can participate in conversations on a number of familiar topics using simple sentences.
2. Students can handle short social interactions in everyday situations by asking and answering simple questions.
3. Students can present basic information on familiar topics using language they have practiced using phrases and simple sentences.
4. Students can write briefly about most familiar topics and present information using a series of simple sentences.
5. Students can understand the main idea in short, simple messages and presentations on familiar topics.
6. Students can understand the main idea of simple conversations that they overhear.
7. Students can understand the main idea of short and simple texts when the topic is familiar.

SPAN 1210. Elementary Spanish for Heritage Learners I**3 Credits (3)**

This is a beginning-level Spanish course designed for students who have a cultural connection to the Spanish language. Some students have had very little exposure to the language and enter the class to develop beginning-level skills. Other students may have grown up hearing the heritage language in the community and may understand some Spanish and speak at a basic level as a result. The objective is to draw upon the connection to the heritage language as a source of motivation and engagement for our learning communities. At the same time, we build upon the language base that students may already have as a result of their heritage learner experience in order to develop new proficiencies in Spanish and reactivate the Spanish that students have learned previously. By the end of this course, students will be able to describe their home, campus surroundings and common activities including cultural traditions. At the same time, students gain cultural competency and develop a critical understanding of their linguistic and cultural background. Students who have previously earned a C or better in SPAN 1110 or SPAN 1120 may not receive credit for this course.

Learning Outcomes

1. Interpersonal Communication: Students can engage in exchanges in culturally appropriate ways using understandable pronunciation on familiar topics using contextualized words, phrases, common idiomatic expressions, and simple sentences.
2. Written expression: Students can write an essay/poem/story/creative sketch/lyric in the target language that describes a past/present/future (fictional) event to the reader.
3. Interpretive listening: Students can understand familiar questions and statements from simple sentences in conversations.
4. Interpretive reading: Students can identify the topic and some isolated facts from simple sentences in informational and fictional texts.
5. Critical cultural awareness: Students can recognize and explain some of the issues facing bilingual communities in accordance to the instructor expertise and articulation with subsequent courses.

SPAN 1220. Spanish for Heritage Learners II**3 Credits (3)**

Spanish as a Heritage Language II is a second semester class designed for students who have developed some basic Spanish proficiency from previous classes and/or from community experiences. This course provides students with the opportunity to develop their proficiency in the four language skills (speaking, listening, reading, and writing). Class activities are designed to strengthen oral communication skills (speaking and listening) through a variety of group activities. By the end of the course students will be able to understand and produce narrations of past events in oral and written Spanish. In order to foster a desire to revitalize and maintain the Spanish language in the US context we attempt to raise students' critical awareness of what it means to be part of a specific speech community.

Learning Outcomes

1. Interpersonal Communication: Students can engage in basic but authentic conversations through
2. providing and obtaining information, expressing likes and dislikes, describing their daily lives, and narrating simple events in the past.
3. Written expression: Students can write an essay/poem/story/creative sketch/lyric in the target language, and that describes a past (fictional) event to the reader.
4. Interpretive listening: can identify the main idea in short conversations.
5. Interpretive reading: Students can identify the topic and related information from simple sentences in short informational and fictional texts.
6. Critical cultural awareness: Students can recognize and explain some of the issues facing bilingual communities in accordance to the instructor expertise and articulation with previous and subsequent
7. courses.

SPAN 2110. Spanish III**3 Credits (3)**

This course is based on the integration of learning outcomes across Interpersonal, Interpretive, and Presentational Modes of Communication at the Intermediate Low Level of proficiency based on ACTFL guidelines. Students accomplish real-world communicative tasks in culturally appropriate ways as they gain familiarity with the target culture(s). This is an intermediate course aimed at helping the student to communicate in Spanish on familiar topics about self, others and everyday life at the same time that they recognize and handle short social interactions in interactions in everyday situations by asking and answering a variety of questions.

Prerequisite: language placement and assessment by departmental examination or C or better in SPAN 1120.

Learning Outcomes

1. Students can participate in conversations on familiar topics using sentences and series of sentences.
2. Students can handle short social interactions in everyday situations by asking and answering a variety of questions.
3. Students can usually say what they want to say about themselves and their everyday life.
4. Students can make presentations on a wide variety of familiar topics using connected sentences.
5. Students can write on a wide variety of familiar topics using connected sentences.
6. Students can understand the main idea in messages and presentations on a variety of topics related to everyday life and personal interests and studies.
7. Students can understand the main idea in conversations that they overhear.
8. Students can understand the main idea of texts related to everyday life and personal interests or studies.

SPAN 2120. Spanish IV**3 Credits (3)**

This course is based on the integration of learning outcomes across Interpersonal, Interpretive, and Presentational Modes of Communication at the Intermediate Low Level of proficiency based on ACTFL guidelines. Students accomplish real-world communicative tasks in culturally appropriate ways as they gain familiarity with the target culture(s). This is an intermediate course aimed at helping the student to communicate in Spanish on familiar topics about self, others and everyday life at the same time that they recognize and handle short social interactions in interactions in everyday situations by asking and answering a variety of questions.

Prerequisite: language placement and assessment by departmental examination or C or better in SPAN 2110.

Learning Outcomes

1. Students can participate with ease and confidence in conversations on familiar topics.
2. Students can usually talk about events and experiences in various time frames.
3. Students can usually describe people, places, and things.
4. Students can handle social interactions in everyday situations, sometimes even when there is an unexpected complication.
5. Students can make presentations in a generally organized way on school, work, and community topics, and on topics they have researched.
6. Students can make presentations on some events and experiences in various time frames.
7. Students can write on topics related to school, work, and community in a generally organized way.
8. Students can write some simple paragraphs about events and experiences in various time frames.
9. Students can easily understand the main idea in messages and presentations on a variety of topics related to everyday life and personal interests and studies.
10. Students can usually understand a few details of what they overhear in conversations, even when something unexpected is expressed.
11. Students can sometimes follow what they hear about events and experiences in various time frames.
12. Students can easily understand the main idea of texts related to everyday life, personal interests, and studies.
13. Students can sometimes follow stories and descriptions about events and experiences in various time frames.
14. Students can sometimes follow what they hear about events and experiences in various time frames.
15. Students can easily understand the main idea of texts related to everyday life, personal interests, and studies.
16. Students can sometimes follow stories and descriptions about events and experiences in various time frames.

SPAN 2210. Spanish for Heritage Learners III**3 Credits (3)**

Intermediate Spanish for Heritage Speakers I is a third semester course designed for students who have been raised in a Spanish-speaking environment and speak, or understand, some Spanish as a result of hearing it in the home, and in the community by family, friends, and neighbors. Students in this course will continue to develop their ability to narrate events in the past and will be able to describe hypothetical situations. Students will also develop their ability to express wishes, desires, and necessities. This course will help the student build confidence in their Spanish abilities and expand the language use in the areas of writing, reading, oral production and listening comprehension. In order to foster a desire to revitalize and maintain the Spanish language we attempt to raise students' critical awareness of wider issues facing Spanish speakers in the US context.

Learning Outcomes

1. Interpersonal Communication: Students can exchange information on a wide variety of familiar topics in which the students use appropriate vocabulary to describe their daily lives and narrate events in the past with some degree of ease and confidence.
2. Written expression: Students can write an essay/poem/story/creative sketch/lyric in the target
3. language, and that effectively conveys a series of past (fictional) events to the reader that may include recent and distant past.
4. Interpretive listening: Students can identify the main idea and key information in short straightforward conversations.
5. Interpretive reading: Students can understand the main idea and key information in short straightforward informational and fictional texts.
6. Critical cultural awareness: Students can recognize and explain some of the issues facing bilingual communities in accordance to the instructor expertise and articulation with previous and subsequent courses.

SPED-SPECIAL EDUCATION (SPED)

SPED 2130. Society**3 Credits (3)**

Development of culturally responsive learning strategies, skills and utilization of support services, to enhance academic achievement. Restricted to: Main campus only.

SPED 2996. Topics**3 Credits (3)**

Offered under various subtitles that indicate the subject matter to be covered. May be repeated 3 times for a maximum of 9 credits.

Learning Outcomes

1. Varies

SPHS-SPEECH & HEARING SCIENCE

SPHS 2110. Introduction to Communication Disorders**3 Credits (3)**

This introductory course provides an overview of common speech, language, and hearing disorders in children and adults including etiologies, characteristics, prevention, identification, assessment and intervention. The course provides an overview of the field of speech-language pathology and audiology.

Learning Outcomes

1. Describe normal human communication anatomy and processes as they relate to speech and language production.
2. Describe the nature of speech, language, and hearing disorders and differences.
3. Describe the principles of prevention, assessment and intervention of communication disorders.
4. List requirements for licensure, certification, and other relevant professional credentials.
5. Exhibit basic knowledge of contemporary professional issues in speech-language pathology.
6. List possible psychosocial implications of various communication disorders.
7. Identify cultural, educational, legal, and ethical issues related to communication disorders.
8. Describe the scope of practice of speech-language pathologists and audiologists.

SPMD-SPORTS MEDICINE

SPMD 1110. Introduction to Athletic Training

3 Credits (3)

Introduction to the principles of athletic training. May be repeated up to 3 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Learning Outcomes

1. Understand the historical development of athletic training and sports medicine.
2. Understand the knowledge and experiences needed to become a Certified Athletic Trainer.
3. Understand the specific responsibilities and duties of an athletic trainer.
4. Understand the diverse jobs settings within the profession of athletic training.
5. Understand the relationship between the athletic trainer and the sports medicine team.
6. Understand some of the general and specific injuries and medical conditions that occur in athletics; their causes, signs and symptoms, treatments, rehabilitation, and prevention.
7. Understand some of the contemporary issues and problems facing the athletic training profession.

SPMD 1120. Medical Terminology

3 Credits (3)

Study of the structure of medical language with emphasis on sports medicine-related terminology. To include analysis and interpretation of medical documentation. Restricted to: Las Cruces campus only.

Learning Outcomes

1. Master the fundamentals of word analysis, including the separation of terms into word roots or combining forms, common prefixes, and suffixes.
2. Differentiate types of medical terms and the relationships among terms.
3. Develop a proficiency in the use of physiological and anatomical terms as reflected in medical documents.
4. Master the terms, words, phrases, and symbols that describe the human body in its various states of health and disease, including essential anatomical terms.

SPMD 1190. Clinical Practicum I

2 Credits (2)

Introduction to the clinical aspects of the athletic training education program. Must maintain at least 3.0 GPA. May be repeated up to 4 credits. Consent of Instructor required. Restricted to: Athletic Training majors. Restricted to Las Cruces campus only.

Learning Outcomes

1. The Athletic Training Program application procedures.
2. The ability to perform selected taping and wrapping techniques.
3. Knowledge of HIPAA guidelines, pre-participation physical examinations, environmental illnesses, the history of Athletic Training and its governing bodies, Evidence Based Practice and its implications in the field of athletic training, evaluation procedures for the injured athlete, NMSU AT program and its affiliated clinical sites.
4. Proper documentation for the athletic training environment including SOAP notes.

SPMD 1195. Clinical Practicum II

3 Credits (3)

Athletic training related content and psycho-motor skills are introduced, enhanced, and assessed in the classroom and clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses while providing increased depth of understanding and clinical practice. Must maintain a 3.0 GPA. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: Athletic Training majors.

Learning Outcomes

1. Demonstrate knowledge and skill in emergency situation prevention, recognition, and management.
2. Demonstrate proficiency in basic skills of musculoskeletal injury recognition and management.
3. Demonstrate competency in basic pre-participation exam skills, including but not limited to taking vital signs.
4. Demonstrate competency in wound care and first aid.

SPMD 1310. Introduction to Kinesiology**3 Credits (3)**

An introduction to the field of Kinesiology which will explore areas such as exercise physiology, sport and exercise psychology, motor behavior, biomechanics, strength and conditioning, exercise prescription, as well as professional and graduate programs, and allied health and applied careers opportunities.

Learning Outcomes**SPMD 1350. Social Foundations of Physical Activity****3 Credits (3)**

Historical and cultural foundations and vocational, scientific, and educational data on careers in health education, physical education, and recreation.

Learning Outcomes

1. Improve students' knowledge of foundations of physical education. (Research) (Standard 4 j, k, l, m, o, p)
2. Improve students' abilities to analyze current physical activity issues based on historical, philosophical, sociological, and psychological perspectives. (Research) (Standard 4 l, m, e, g)
3. Improve students' knowledge of and ability to critically analyze how gender, race, social class, sexual orientation, and ability issues affect physical education and performance programs. (Research, Diversity) (Standard 4j, k, l, m, o; Standard 2 d, g, j, f, k)
4. Improve students' knowledge of forces influencing the development of physical education programs. In particular, attitudes, values, and beliefs about gender, race, social class, sexual orientation, and ability, etc. (Diversity, Practitioners, Reflection, Pedagogy) (Standard 1 a, b, h, l; Standard 4 j, k, l, m, o; Standard 2 a, d, g, j, f, k)
5. Improve students' knowledge of strategies for becoming an advocate in the school and/or community to promote a variety of physical activity opportunities. (Practitioners) (Standard 2 m, n; Standard 3 n, o, p, q, r; Standard 10 d, j, p)
6. Improve students' knowledge of current educational issues and trends. In particular, socio-cultural issues that affect educational, fitness, and sports settings. (Diversity, Research) (Standard 4 j, k, l, m, o, p Standard 9 a, c, e, f m, n)
7. Improve students' knowledge of how students' learning is influenced by individual experiences, talents, and prior learning, including language and family/community values and conditions. (Diversity, Research) (Standard 1 b, h, l; Standard 2 d, g, j, k, m, n, o; Standard 3 l)
8. Improve students' knowledge of the impact of international changes on the content of physical education, fitness, and sports programs. (Research) (Standard 4 j, k, l, m, o, p)
9. Improve students' ability to critically analyze how gender, race, sexuality and social class issues affect how we view the body, and how these views can affect students' health and participation in physical education, fitness, and sports programs. (Diversity, Reflection) (Standard 2 d, g, j, f, k, m, o)
10. 1Improve students' ability to become critically aware of how their feelings, beliefs, and values in relation to gender, race, social class, sexual orientation, and ability issues will affect their abilities to work as professionals in the fields of physical education, sport, or fitness. (Diversity, Reflection) (Standard 2d, g, j, f, k, m, o Standard 9 e, d, g, l, m)
11. 1Improve students' knowledge of and ability to critically analyze cultural stereotypes of diverse
12. populations of people. (Diversity) (Standard 2 d, g, j, f, k, m, o)
13. 1Improve students' knowledge of how cultural stereotypes influence the development of physical education, fitness and sport programs. (Research, Diversity) (Standard 2 d, g, j, f, k, m, o; Standard 4 j, k, m, o, p, q Standard 8 p)
14. 1Improve students' knowledge of how groups influence individuals, and how individuals influence groups in a democratic society. (Diversity) (Standard 2 d, g, j, f, k, m, o; Standard 4 m, p;)
15. 1Improve students' abilities to communicate in ways that demonstrate sensitivity to all learners. (Diversity, Effectiveness) (Standard 1 d, h, l; Standard 2 d, g, j, f, k, m, o)
16. 1Students will demonstrate through writing the ability to apply the issues discussed in class to their
17. specific fields in ways that benefit society. (Evaluation) (Standard 9 e, g, l, m)
18. 1Students will improve their ability to take the content from readings and present it in thought provoking ways to their classmates. (Research, Evaluation, Reflection) (Standard 9 e, g, l, m; Standard 10 a, d, h, n)
19. 1Writing proficiency is required for a passing grade in this course. (Standard 4 l)
20. 1Improve students' abilities to use computers and other technologies to communicate, network, and/or foster inquiry. (Standard 10 g)
21. 1Consult professional literature, colleagues, and other resources to develop as a professional.(Standard 10 e, f, h, l, n, r)

SPMD 2130. Emergency Response in Sports Medicine**2 Credits (2)**

Designed to provide knowledge and experience in emergency care procedures, blood borne pathogens, and first aid. Students will receive certification in CPR/AED for the Professional Rescuer and in First Aid, upon successful completion of course. May be repeated up to 4 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Consent of Instructor.

Learning Outcomes

1. Identify the individuals involved in the Emergency Response Team
2. Construct the components of an effective emergency Action Plan
3. Assess the scene and patient during an emergency situation
4. Demonstrate proper universal precautions and wound care
5. Demonstrate effective Cardiopulmonary Resuscitation, AED use
6. Demonstrate effective Rescue Breathing Airway Management techniques
7. Demonstrate effective splinting techniques
8. Demonstrate understanding of the techniques utilized in cervical stabilization
9. Identify components of acute care for general medical and orthopedic emergencies.

SPMD 2210. Anatomy and Physiology I**3 Credits (3)**

Detailed study of the structure and function of the human musculoskeletal, cardiovascular, respiratory, and peripheral nervous systems. Designed specifically for students interested in allied health professions.

Learning Outcomes

1. The student will learn and identify bones, connective tissue, joints and muscular structures of the human body. The student will study joints and associated structures of the body. The student will learn about skeletal muscle, origins, insertions, and actions. The student will learn about the fundamentals of the nervous system and associated structures. The student will learn about smooth and cardiac muscle and their association actions. The student will learn the structures associated with the cardiovascular system (heart and blood vessels). The student will learn the location of all visceral organs. Evaluation of knowledge is determined through practical identification of anatomical structures via written opened ended exams.

SPMD 2210L. Anatomy and Physiology Laboratory**1 Credit (1P)**

Students will engage in activities designed to enhance appreciation of the anatomical structures related to the content areas for SPMD 2210. Restricted to Las Cruces campus only.

Learning Outcomes

1. The student will learn and identify bones, connective tissue, joints and muscular structures of the human body.
2. The student will study joints and associated structures of the body.
3. The student will learn about skeletal muscle, origins, insertions, and actions.
4. The student will learn about the fundamentals of the nervous system and associated structures.
5. The student will learn about smooth and cardiac muscle and their association actions.
6. The student will learn the structures associated with the cardiovascular system (heart and blood vessels).
7. The student will learn the location of all visceral organs.
8. Evaluation of knowledge is determined through practical identification of anatomical structures via written opened ended exams.

SPMD 2250. Fitness for Health and Sport**3 Credits (3)**

A study of the fitness needs for health enhancement and sport participation.

Learning Outcomes

1. Recognize the importance of incorporating positive fitness/wellness habits within one's lifestyle in terms of enhancing longevity, disease prevention, and overall quality of life. Examine various physiological benefits and adaptations to such factors as muscular strength, muscular endurance, cardiovascular fitness, flexibility, and body composition when certain stimuli are applied to each. Assessment of these characteristics will be witnessed primarily in practical experiences within the course's laboratory settings. Identify current trends and/or health patterns within society in regards to scientific findings, declination in health habits, and increases in health ailments. Compare various nutritional concepts, specifically proper dietary habits and their impact on weight management aspects. Describe the role physical activity and sport specific training play on competitive athletic performance.

SPMD 2310. Career Preparation**1 Credit (1)**

From concept to implementation: Career exploration, setting up degree plans, finding graduate programs, developing professional resumes, writing letters of application, seeking letters of recommendation, and interview preparation. Graded: S/U Grading (S/U, Audit).

Learning Outcomes

1. Career opportunities within human movement and allied health fields
2. Chose both a primary and secondary career of their interest
3. Search for appropriate graduate schools to match their career choices
4. Create a plan by aligning their undergraduate curriculum with their career choices
5. Explore additional education (dual majors, minors, and certifications specific to their chosen field)
6. Study and create a professional resume
7. Create a curriculum vita as a historical reference for future job prospects
8. Write a professional letter of application for jobs and school applications
9. Learn how to seek "outstanding" letters of recommendation
10. 1Study appropriate interview protocol
11. 1Practice interviews (one on one, panel and group)

SUR-SURVEYING (SUR)

SUR 143. Civil/Survey Drafting I**3 Credits (2+2P)**

Introduction to drafting in the field of Civil Engineering. Drawings, projects, and terminologies related to topographic mapping, contour drawings, plan, and profiles as street/highway layout.

Prerequisite: DRFT 109.

Learning Outcomes

1. Students will develop a basic knowledge of AutoCad Civil 3D software as they relate to the civil drafting process. Students will become familiar with a basic understanding of computers, drafting and trigonometry is required. Use of long-term projects will be utilized to simulate real-world work environments to aid the understanding and applying vocabulary on surveying drafting plans An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology

SUR 222. Introduction to Geomatics**3 Credits (2+3P)**

Theory and practice of geomatics as applied to plane surveying in the areas of linear measurements, angle measurements, area determination, differential and trigonometric leveling, and topographic mapping. Crosslisted with: DRFT 222.

Prerequisite: MATH 1250G or MATH 1430G.

Learning Outcomes

1. Various

SUR 285. Precise Digital Mapping**3 Credits (3)**

Photogrammetric Mapping Principles, digital sensor including optical cameras, terrestrial, surveying control, IMU & GPS integration, stereo photography, analytical triangulation, orthorectification, precision and accuracy of measurement systems, sUAS (Small Unmanned Aerial Vehicles) applications to geospatial data collection and practical applications project flight/pre planning, sensor platform, FAA regulations and restrictions, introduction to laser scanning systems. Restricted to Las Cruces campus only.

SUR 292. Legal Principles and Boundary Law I**3 Credits (3)**

Fundamentals of real property law; principles of land description; survey evidence and procedure in boundary determination, order of importance of conflicting elements; and liability, ethical and professional principles in boundary surveying; contemporary issues in boundary determination.

Learning Outcomes

1. Understand how the USPLSS was developed and used Be able to locate and identify USPLSS survey monuments Be able to apply single and double proportion methods Be able to subdivide USPLSS sections Be able to read, write and interpret USPLSS legal descriptions

SURG-SURGICAL TECHNOLOGY (SURG)

SURG 120. Surgical Technology Clinical I

2-4 Credits (6P)

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. This course is designed to prepare the student to enter the surgical environment. This course provides an introduction to the operating room, observation of surgical procedures, direct participation in the preoperative (pre-op, intra-op, post-op) preparation of individual cases and professional roles and responsibilities of individual members of the surgical team. Direct supervision is provided by the clinical professional. May be repeated up to 4 credits. Students must be admitted into Surgical Technology Program to enroll in this course.

Prerequisite(s): BIOL 2310, BIOL 2210, BIOL 2225, NURS 150.

Corequisite(s): SURG 140, SURG 145.

SURG 140. Introduction to Surgical Technology

4 Credits (4)

This is an orientation to surgical technology theory, surgical pharmacology and anesthesia, technology sciences and patient care concepts and is designed to prepare the student to enter the surgical environment with entry-level knowledge necessary to understand patient responses to disease, illness, hospitalization, surgical procedures, commonly used pharmacological and anesthetic agents, and legal, moral, and ethical issues that could be encountered in the surgical environment. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission to Surgical Technology Program; BIOL 2310, BIOL 2225, & NURS 150.

SURG 145. Fundamentals of Perioperative Concepts & Techniques

4-5 Credits (3+3P)

This is an in-depth coverage of perioperative concepts such as aseptic/sterile principles and practice, infectious processes, wound healing and creation and maintenance of the sterile field. This course is designed to prepare the student to enter the surgical environment with entry-level knowledge of aseptic technique principles and practices, the creation and maintenance of the sterile field including equipment, supplies and instrumentation, and basic case preparation and procedures. An introduction to diseases and disease processes that may be displayed by the surgical patient and the patient's bodily responses to disease are also included. May be repeated up to 5 credits.

Prerequisite(s): Admission to Surgical Technology Program, BIOL 2310, BIOL 2210, BIOL 2225, & NURS 150.

SURG 150. Surgical Procedures I

4-5 Credits (3-5+3P)

This course is an introduction to surgical procedures and its related pathologies. Emphasis on surgical procedures related to general, obstetrics/gynecology, genitourinary, otorhinolaryngology and orthopedic surgical specialties incorporating instruments, equipment. It is designed to prepare the student to function actively in the surgical environment with entry-level knowledge of surgical procedures. This course expands the basic foundation principles and combines the study of common surgical procedures to include anatomy, physiology and pathophysiology. Specific patient care concepts, medications, instrumentation, equipment, supplies and complication related to selected surgical procedures will be discussed. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 140, SURG 145, and SURG 120.

SURG 155. Pharmacology for the Surgical Technology

2 Credits (2)

This is an orientation to surgical pharmacology and anesthesia and is designed to prepare the student to enter the surgical environment with knowledge necessary to categorize the classification of drugs, calculate drug dosages and identify the therapeutic use, routes of administration, indications, contraindications and adverse effects of pharmacologic agents used in the perioperative setting. This course is the foundation for the acquisition of program specific competencies as identified by the AST Core Curriculum. Restricted to Carlsbad campus only.

SURG 160. Surgical Procedures II

6 Credits (6)

This an introduction to surgical procedures and related pathologies. Emphasis on surgical procedures related to thoracic, peripheral vascular, plastic/reconstructive, ophthalmology, cardiac and neurological surgical specialties incorporating instruments. The course is designed to prepare the student to continue to function actively in the surgical environment with entry-level knowledge of more complex surgical procedures. This course expands the basic foundation principles and combines the study of complex surgical procedures to include anatomy, physiology, and pathophysiology. Specific patient care concepts, medications, instrumentation, equipment, supplies, and complications related to specific surgical procedures will be discussed. Realities of clinical practice and concepts of death and dying will also be discussed. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 150, SURG 260.

SURG 230. Professional Readiness

2 Credits (2)

This course transitions the student into professional readiness for employment, professional readiness for attaining certification and professional readiness for maintaining certification status. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 140, SURG 145, SURG 120, SURG 150, SURG 260.

Corequisite(s): SURG 160, SURG 265.

SURG 260. Surgical Technology Clinical II**4 Credits (12P)**

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. This course is designed to provide the student the opportunity to function actively in the role as a surgical technologist and health care team member in a clinical setting under the direct supervision of faculty and health care staff. Applications of basic principles and practices combined with a supervised clinical experience participating in common surgical procedures is the focus. Admission to Surgical Technology Program necessary to enroll in the course. Restricted to Community Colleges campuses only.

Prerequisite(s): SURG 120, SURG 140, & SURG 145.

SURG 265. Surgical Technology Clinical III**4 Credits (9P)**

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. This course is designed to provide the student the opportunity to function actively in the role of a surgical technologist and health care team member in a clinical setting under the direct supervision of faculty and health care staff. Refinement and application of basic principles and practices combined with entry-level employment competency expectations is the focus. Preparation for the National Certification Examination for Surgical Technologists is also included. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 260.

TCEN-ENVIRONMENTAL/ENERGY TECH (TCEN)

TCEN 101. Energy for the Next Generation**3 Credits (2+2P)**

This course will survey a broad range of sources of energy, types of energy, energy storage, and the forms of energy. Students will be exposed to theory in the classroom, laboratory exercises, and field trips to provide them with a solid foundation for all subsequent energy related environmental courses. Crosslisted with: OETS 101.

Prerequisite(s)/Corequisite(s): OETS 118 or MATH 1215. Restricted to: Community Colleges only.

TCEN 105. Building Analyst I**3 Credits (2+2P)**

This course is designed to provide the foundational knowledge and expertise necessary for the energy auditor and home performance contractor. Crosslisted with: OETS 105. Restricted to: Community Colleges only.

TCEN 106. Building Analyst II**3 Credits (2+2P)**

Designed to prepare the student for the BPI Building Analyst Certification. This course will walk the student through the hands-on process of conducting visual building inspections, diagnostic testing, identifying improvement opportunities, documenting a home's performance and preparing a scope of work. Crosslisted with: OETS106.

Prerequisite(s)/Corequisite(s): TCEN 105 or OETS 105. Restricted to: Community Colleges only.

TCEN 110. Photovoltaic Application**4 Credits (3+2P)**

This course will provide an introduction to Photovoltaic (PV) installation. The course will provide instruction on site selection, prep, installation, and maintenance for photovoltaic applications. Students that complete the course and have the opportunity to take the entry level exam with the North American Board of Certified Energy Practitioners (NABCEP) en route to becoming Certified Installers. Crosslisted with: OETS110.

Prerequisite(s)/Corequisite(s): TCEN 101 or OETS 101. Restricted to: Community Colleges only.

TCEN 111. Basic Electrical Principles I, DC Circuits**4 Credits (3+2P)**

Course begins with the basics of electricity and DC circuits. Includes categorization of material properties within conductors, semiconductors, and insulators. Gradual progression tackles more complex topics like DC circuit analysis of series and parallel circuits, including Kirchhoff's laws, Thevenin's & Norton's theorems, and superposition. Finally DC combination circuits, magnetism and electromagnetism, generators and motors are covered. Emphasis on safety throughout. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OETS 104 or MATH 1215. Restricted to Community Colleges campuses only.

TCEN 112. PV Power Generation Design Fundamentals**3 Credits (2+2P)**

A study of photo voltaic design basics, photo voltaic (PV) Cells, modules, and system components; electrical circuits; grid-tied/grid-interactive PV system design and sizing for use on homes; solar electric products and applications; and understanding energy conversion from sunlight to electricity, and working with solar conversion equipment. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): TCEN 111 and (OETS 104 or MATH 1215). Restricted to Community Colleges campuses only.

TCEN 113. OSHA 10 Hour Construction Hazard Identifications**1 Credit**

Intended for entry-level participants to provide instruction on a variety of construction safety and health standards. Topics include Introduction to OSHA, Electrical, Ladder, Excavation, Scaffold, and Forklift Hazards, Fall Protection, Materials Handling, Personnel Protective Equipment and Confined Space Entry Hazards. Meets OSHA 10-Hour Requirements.

TCEN 115. Wind Power Generation Design Fundamentals**3 Credits (2+2P)**

Course covers wind turbine module descriptions and functions and wind system installation, operation, and troubleshooting. Additional topics include wind energy harvesting and the conversion process from the generator system to electricity. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): TCEN 111 and (OETS 104 or MATH 1215). Restricted to Community Colleges campuses only.

TCEN 121. Basic Electrical Principles II, AC Circuits**4 Credits (3+2P)**

Course begins with an overview of the primary components of AC circuits, such as resistors, inductors, rectifiers, transformers and capacitors, and then gradually introduces new, more complicated topics like applying AC principles in power generation and generators, motors, parallel and combination circuits, troubleshooting and evaluation of circuit conditions. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): TCEN 111 and (OETS 104 or MATH 1215). Restricted to Community Colleges campuses only.

TCEN 156. Building Envelope**3 Credits (2+2P)**

Designed to prepare the student for the BPI Building Envelope Certification. This course will provide the principles behind building performance testing and the purpose of completing a comprehensive energy audit. Through lecture and subsequent field training, the student will learn how to use building diagnostics to develop a prescriptive plan for enhancing comfort, health & safety, building durability, and energy savings. The student will learn how to outline the follow-up process required after completion of the retrofit. Crosslisted with: OETS156. Restricted to: Community Colleges only.

Prerequisite(s): TCEN 106 or OETS 106.

TCEN 205. NEC for Alternative Energy**4 Credits (2+4P)**

This hands-on course will cover the National Electrical Code specifics concerning photovoltaic installation. Also code compliant wiring of basic electrical systems will be covered. Existing installations will be visited and studied. Restricted to: Community Colleges only.

Prerequisite(s): TCEN 101 and ELT 105.

TCEN 220. Cooperative Experience**1-3 Credits (1-3)**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. May be repeated up to 6 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): MAT 235. Prerequisite(s): TCEN 180. Restricted to: TCEN majors. Graded: S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

TCEN 221. Roofing Materials and Methods**3 Credits (2+2P)**

Covers application techniques and estimation of asphalt and wood roofing products and accessories including gutters and flashing. Presents roof penetration, roof loading issues, and energy system installation requirements for mounting photo voltaic or solar thermal systems.

Prerequisite(s): TCEN 112.

TCEN 222. Photo Voltaic Grid Tie Installation**4 Credits (3+2P)**

This is a more advanced course culminating in a PV system-to-grid connection. This course includes gathering site specific data, design, wire type and sizing specific to project, installation of all solar modules and balance of system (BOS) components, and grounding and bonding of system components, all in accordance with the latest NEC. Upon project design approval a system will be commissioned for the grid. Decommissioning will commence after measurements and troubleshooting as directed by the instructor. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): TCEN 121 and TCEN 223. Prerequisite(s): TCEN 111 and TCEN 112. Restricted to Community Colleges campuses only.

TCEN 223. National Electric Code Principles in Relation to Photo Voltaic**2 Credits (2+1P)**

Focuses on all sections of the National Electrical Code and local code requirements applicable to photo voltaic electrical installation. A partial list of areas covered is chapters one through four and section 690, "Solar Photovoltaic Systems" of the National Electrical Code.

Prerequisite: TCEN 112.

Prerequisite/Corequisite: TCEN 222.

Learning Outcomes

1. Identify the requirements for safe and practical solar PV installations. Accurately reference, read, and interpret NEC code as it relates to PV installations (Code 690). Present a compelling case of when the PV electricity market will reach "grid-parity."

TCEN 224. Field Experience**1-3 Credits (1-3)**

Student will collaborate with instructor in proposing, defining, implementing, and analyzing outcomes of a project in the Environmental and Energy fields of study. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: TCEN majors. Restricted to: Community Colleges only.

TCEN 241. Solar Thermal SHW Principles/Installation and Maintenance**3 Credits (2+2P)**

Course presents the theory, installation, operation, and maintenance of solar hot water (SHW) systems. Topics include the types of systems to choose, the costs associated with SHW installation and operation, system sizing requirements, batteries and battery chemistry. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): OETS 104 or MATH 1215.

TCEN 246. Building Weatherization & Auditor Fundamentals**3 Credits (3)**

Course provides information on how to locate air leaks and identify heat losses or gains through specific testing. Students will learn how to inspect and evaluate building envelopes, mechanical systems, and ventilation systems to determine the safety and energy consumption for each system. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): TCEN 113 and OETS 104.

Corequisite(s): TCEN 221.

TCEN 251. Advanced Photo Voltaic On/Off Grid Installation**3 Credits (2+2P)**

Photo Voltaic advanced topics to include panel racking and installation, battery storage, charge controllers, mechanical integration of arrays on buildings, and key elements involved in choosing a mounting system. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): TCEN 222. Restricted to Community Colleges campuses only.

TCEN 252. NABCEP Entry-Level Exam Review**2 Credits (2)**

Course presents knowledge, key terms, and concepts of photovoltaic systems and solar hot water systems as related to the NABCEP Entry-level exam. This exam is for those wanting to enter the workforce in either solar thermal or solar PV. Scheduling and taking the exam is the responsibility of the student. Consent of Instructor required. Restricted to Community Colleges campuses

Prerequisite(s): TCEN 222.

Learning Outcomes

1. Analyze photovoltaic markets and application trends
2. Complete practice questions for the NABCEP PV Associate Exam
3. Develop a practice of safe work environment as it relates to the installation and maintenance of photovoltaic systems according to OSHA standards
4. Apply electrical concepts to the operation and maintenance of photovoltaic systems and related equipment
5. Apply solar energy fundamentals, i.e. photovoltaic module essentials, system components, system sizing principles, system electrical design, system mechanical design, performance analysis, maintenance, and troubleshooting
6. Pass the NABCEP PV Associate exam with at least 70 percentile.

TCEN 253. Renewable Energy System Troubleshooting and Maintenance**3 Credits (2+2P)**

Covers wind, solar and solar thermal system troubleshooting and maintenance topics to include equipment, electrical, and installation problem areas. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): TCEN 251. Prerequisite(s): TCEN 222. Restricted to Community Colleges campuses only.

TCEN 254. Renewable Energy Internship**2 Credits (2)**

Student will receive industry-related renewable energy experiences at an approved industry location. Typical areas of hands-on practices will be installing solar PV, solar hot-water systems, or wind energy systems. May be repeated up to 6 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): TCEN 112 and 113 and 222.

THEA-THEATER

THEA 1110G. Introduction to Theatre**3 Credits (3)**

This course provides an introduction to the study of theatre. Students will examine various components that comprise theatre, such as acting, directing, playwriting, dramaturgy, scenic and costume design, stagecraft, spectatorship, history, theory, and criticism.

Learning Outcomes

1. Define and discuss basic theater terms and concepts.
2. Discuss the fundamental elements of theatre, and the ways in which theatre differs from other art forms.
3. Analyze and critique the elements of a live theatrical production.
4. Identify and describe the roles of various theatre artists including actors, directors, playwrights, dramaturges, and designers.

THEA 1210G. Acting for Non-Majors**3 Credits (3)**

This class gives non-majors experience in the depth and craft of the actor's art. Students will learn various terms, techniques, and practices of acting and will demonstrate their understanding in class. Through exercises and improvisations, partnered scenes, and group work, students will be better able to appreciate the work of others as they learn techniques of performing. May be repeated up to 3 credits.

Learning Outcomes

1. Develop fundamental physical, vocal, analytical, and imaginative skills for acting for the stage.
2. Apply fundamental techniques of voice and movement for the stage.
3. Apply principles of play text analysis to understand story, character, and meaning.
4. Gain a better understanding of an actor's approach to goals, tactics, and obstacles.
5. Engage in character creation and development while preparing and performing monologues and scenes.
6. Learn a common vocabulary to help discuss the process of acting.
7. Employ collaborative methods of work with a partner and in groups.
8. Observe and evaluate acting skills of other actors.
9. Increase verbal and physical communication skills which are applicable in any field.
10. 1Develop personal and social responsibility via group work, research and self-reflection.
11. 1Increase confidence and self-esteem via continuous presentations with supportive feedback.

THEA 1221. Beginning Acting**3 Credits (3)**

Basic understanding of self-expression through a variety of physical exercises, improvisation, and character study, culminating in scene or monologue work. Restricted to: THTR majors.

Learning Outcomes

1. Apply a common vocabulary that serves as a foundation in acting for the theatre major and minor
2. Communicate effectively in front of an audience, applying learned concepts while exercising freedom and control of voice, body, and imagination
3. Analyze the written character and live performance
4. Provide objective feedback to your classmate's work as well as your own, that supports a greater understanding of our craft while building trust within the collaborative ensemble

THEA 1222. Stage Movement**3 Credits (3)**

Physical techniques for the actor to develop kinesthetic awareness and skills in characterization, archetypes, and stage combat. Restricted to: THTR majors.

Learning Outcomes

1. To provide fundamental training in a variety of movement techniques which can be applied to both theatrical performance and physical communication in everyday life.
2. Observation and critical skills will be advanced through class participation and outside assignments
3. Class exercises are aimed at guiding participants to uncover their own creative expression, while working with efficient, healthy body alignment

THEA 1223. The Art of Theatre**3 Credits (3)**

This course introduces the variety and scope of theatre professions, the value and goals of the theatre major and an analysis of the art form from script to stage. Restricted to: Required for THTR majors majors.

Learning Outcomes

1. An overview of the history of theatre in the Western world
2. A general understanding of the artistic roles and functions within the theatre industry (including within NMSU Theatre as a model)
3. A strong preparation for independent in-depth script analysis and theatre critique

THEA 1310. Introduction to Costuming**3 Credits (3)**

This course introduces students to basic skills generally used in creating costumes for theatre. During the semester students will be introduced to the costume shop, equipment, supplies, and processes. They will learn the process of sewing a garment and running a stage production.

Prerequisite(s)/Corequisite(s): THEA 1310L. Restricted to: THTR majors.

Learning Outcomes

1. Demonstrate basic hand and machine sewing skills.
2. Use basic costume craft tools and techniques.
3. Analyze fabric selection for the stage.
4. Draft and use patterns.
5. Take body measurements for patterning and construct a costume from those measurements.
6. Combine interpersonal communication skills with costume construction skills.
7. Analyze a script for costume design purposes.
8. Build a garment.

THEA 1310L. Costume Craft Lab**1 Credit (1)**

Class members will assist in construction for productions in a studio environment.

Prerequisite(s)/Corequisite(s): THEA 1310.

Learning Outcomes

1. This laboratory class compliments THEA 1310: Costume Crafts.
2. It gives the student an opportunity to put into practice the skills learned in THEA 1310 as well as be introduced to and participate in the day-to-day operations of the Costume Shop.

THEA 1415. Running Crew I**2 Credits (1+2P)**

Students learn about backstage and front of house production positions and work on a technical aspect of a product in a rehearsal and performance environment.

Learning Outcomes

1. Students will learn one, or more, of the basic technical elements of theatrical crew work.

THEA 2221. Intermediate Acting: Scene Study and Monologues**3 Credits (3)**

Monologues and scene work, using character and script analysis. Prerequisite(s):

Prerequisite(s): THEA 1221 or THEA 1210 with C- or above.

Learning Outcomes

1. Students will gain further insight into the craft of acting and the techniques and skills required to present a successful stage performance.
2. Via the presentation of varied scenes and monologues, students will be exposed to a variety of theatrical literature.
3. Via research, students will gain knowledge of successful actors, acting techniques, and career advice.

THEA 2222. Intermediate Acting for Non-Majors**3 Credits (3)**

A continuation of THEA 1210 with an emphasis on monologues, scenes and characterization. Prerequisite(s): THEA 1210

Learning Outcomes

1. Apply fundamental techniques of voice and movement for the stage.
2. Analyze a dramatic text and interpret a character and develop the skills necessary to score a script for character development.
3. Perform specific choices to create and perform goal-driven characters.
4. Demonstrate various physical and mental relaxation techniques.
5. Identify internal and external techniques to increase actor's emotional range.
6. Demonstrate sensory exercises and apply this technique to scene work.
7. Articulate and implement key terminology of modern acting techniques.
8. Develop and articulate a basic personal artistic process.
9. Demonstrate the ability to work cooperatively on a creative/interpretative project.
10. 1 Begin to develop professionalism and development of a critical eye through practice giving and receiving peer feedback, adherence to deadlines, memorization, flexibility and coachability.

THEA 2310. Stagecraft**3 Credits (3)**

Student will explore basic skills for scenic designers and techniques of set construction for the stage, including building scenery, rigging, painting and properties.

Prerequisite(s)/Corequisite(s): THEA 2310L.

Learning Outcomes

1. Demonstrate a range of technical skills, which will qualify them to assist in the basic technical
2. production of a play.
3. Demonstrate and apply how to safely and competently use hand tools, power tools, electrical, and electronic stage equipment.
4. Analyze the technical aspects of a play in performance.
5. Read and construct scenery from ground plans, elevations, and drawings.
6. Analyze a script from the perspective of a designer, artistic, and/ or technical director.

THEA 2310L. Stagecraft Laboratory**1 Credit (1)**

Class members will assist with construction for productions in a studio environment.

Prerequisite(s)/Corequisite(s): THEA 2310.

Learning Outcomes

1. History of scenic design and the development of present day stage design.
2. How to create and interpret basic scenic ground plans, elevations, and detail drawings.
3. To construct basic scenic structures to include flats and platforms.
4. Various techniques of scenic painting and decorating.
5. The installations of theatre lighting instruments and sound equipment.

THEA 2340. Introduction to Design**3 Credits (3)**

Introduction into our visual world via the language of designers, focusing on collaboration, creative thinking and presentation skills. The varied design professions in theatre and the performing arts will be explored. Restricted to: Required of all THTR Majors.

Learning Outcomes

1. Apply design vocabulary and descriptions when speaking about design.
2. Identify design tools and make choices about where to use them.
3. Apply the foundation information in understanding how design tools work.
4. Apply correct terminology in assessing design and script analysis.
5. Read and understand some of the design documents commonly used in the industry.

THEA 2415. Running Crew II**1 Credit (1)**

Students learn about backstage and front of house production positions and work on a technical aspect of a product in a rehearsal and performance environment.

Learning Outcomes

1. To provide students with "hands on" experience participating in being a member of a running crew on a theatrical production.
2. Students will learn one, or more, of the basic technical elements of theatrical crew work.

THEA 2421. Vocal Production for the Actor**3 Credits (3)**

Exploration and development of the actor's vocal instrument, including relaxation, projection, diction and articulation. May be repeated up to 3 credits. Restricted to: THTR majors.

THEA 2993. Theatre Workshop I**0.5 Credits (.5)**

Required for all freshman and sophomore theatre majors, this course coordinates all processes within Theatre Arts, providing a forum for discussion and feedback. May be repeated up to 4 credits. Restricted to Las Cruces campus only.

Learning Outcomes

1. This lab course is designed to create community via group meetings with your peers while providing a platform for our guest artists to present information regarding our profession.
2. As time allows, group discussions and sharing will further the sense of community and collaboration with your peers.
3. This forum also provides an opportunity to discuss and provide feedback for each production in the ASTC season.

THEA 2996. Theatre Topics**1-3 Credits (1-3)**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 9 credits.

Learning Outcomes

1. Varies

WATR-WATER UTILITIES (WATR)

WATR 120. Introduction to Water Systems**3 Credits (3)**

Introduction to and theory of groundwater sources, production, treatment, and distribution.

WATR 130. Wastewater Collection and Basic Treatment Systems**3 Credits (3)**

Introduction to wastewater characteristics, collection, and basic treatment operations.

WATR 140. Applied Water and Wastewater Math I**3 Credits (3)**

Introduction to basic water and wastewater mathematics, flows through distribution networks and collection systems, and fundamentals of flow measurement.

Prerequisite: CCDM 114 N or equivalent.

WATR 160. Systems Maintenance**4 Credits (2+4P)**

Basic tools, equipment, maintenance schedules, chlorinator trouble-shooting, and chlorine safety. Hands-on training with valves, pumps, meters and chlorination equipment.

WATR 175. Programmable Logic Controllers**2 Credits (2)**

This course will introduce students to electrical safety, theory, and the function, operations, programming and troubleshooting of the PLC controlling common electrical components utilized in control circuits associated with the water and wastewater industry. Restricted to: Community Colleges only.

WATR 180. Water Chemistry**3 Credits (3)**

Basic chemistry with applications to water and wastewater analysis.

Prerequisite: CCDM 114 N or consent of instructor.

WATR 182. Water Chemistry Analysis**1 Credit (3P)**

Beginning water and wastewater laboratory analysis including gravimetric, volumetric, and quality control techniques.

Prerequisite: CCDM 114 N or equivalent or consent of instructor.

WATR 190. Water and Wastewater Microbiology**3 Credits (3)**

Overview of microorganisms associated with water and wastewater. Growth and reproduction, energy production, and methods of counting.

Prerequisite: WATR 130, WATR 180, or consent of instructor.

WATR 192. Water and Wastewater Microbiological Analysis**1 Credit (3P)**

Introduction to water and wastewater treatment operational tests such as BODs, solids testing, activated sludge control tests, use of microscope, and bacteriological techniques.

Prerequisites: WATR 130 and WATR 182, or consent of instructor.

WATR 200. Internship**3-5 Credits**

On-the-job training/work experience with municipalities or industries, working in water or wastewater treatment plants, high purity water plants, industrial waste plants, distribution systems, or wastewater collection systems. May be repeated up to 5 credits. Consent of Instructor required. Restricted to: Water Technology majors. Graded: S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

WATR 220. Water Treatment Systems**3 Credits (3)**

Theory of water systems operation including surface water treatment, fluoridation, sodium zeolite softening, corrosion control, iron removal, various filtration methods, and overview of SDWA.

Prerequisites: WATR 180 and WATR 182 or consent of instructor.

WATR 222. Water Systems Operation**1 Credit (3P)**

Operations of various water treatment systems including surface water treatment, sodium zeolite softeners, and various filtration methods.

Prerequisite: WATR 220 or consent of instructor.

WATR 230. Advanced Wastewater Treatment**4 Credits (4)**

Calculations and operations involved in wastewater and water reclamation plants.

Prerequisites: WATR 140, WATR 190, and WATR 192, or consent of instructor.

WATR 232. Wastewater Systems Operations**1 Credit (3P)**

Operation of pretreatment, primary, and biological treatment units.

Prerequisite: WATR 230 or consent of instructor.

WATR 240. Advanced Water and Wastewater Math II**3 Credits (2+2P)**

Advanced water and wastewater mathematics. Flow measurement. Systems head and pump curves.

Prerequisites: WATR 140.

WATR 250. Municipal Systems Management**4 Credits (4)**

Management of water utility systems including laws, finance, records, and safety.

Prerequisites: WATR 120, WATR 130.

WATR 270. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

WATR 275. Certification Review**3 Credits (3)**

Review of water and wastewater plant operations and laws in preparation for state certification exams. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): WATR 120, WATR 130, WATR 140, WATR 160.

WATR 285. High Purity Water Treatment Systems**3 Credits (3)**

Principles of high purity water production including microfiltration, ultra-filtration, reverse osmosis, and deionization.

Prerequisite: WATR 220.

WATR 287. Advanced Water Chemistry Analysis**3 Credits (6P)**

Sampling techniques, analysis, and evaluation of potable water contaminants using gravimetric, volumetric, spectrophotometric, and other instrumentation methods. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): WATR 285. Restricted to Community Colleges campuses only.

WATR 290. Advanced Wastewater Microbiology and Chemistry**3 Credits (3)**

Covers NPDES permits and DMR calculations and reporting; 503 sludge regs, including pathogen and vector attraction reduction and pollutants; wetlands, composting, and wastewater treatment ponds microbiology; activated sludge bulking and foaming microbiology and treatment; and use of selector to remove nutrients and prevent the growth of filamentous bacteria.

Prerequisite: WATR 190, WATR 192.

WATR 292. Advanced Wastewater Analysis**3 Credits (6P)**

Covers sampling techniques, analysis, and evaluation of wastewater contaminants using gravimetric, volumetric, spectrophotometric, and other instrumentation methods.

Prerequisite: WATR 190 and WATR 192.

WELD-WELDING TECHNOLOGY (WELD)

WELD 100. Structural Welding I**6 Credits (3+6P)**

Development of basic skills in SMAW, OFC, and OFW in accordance with the AWS entry-level welder program.

WELD 102. Welding Fundamentals**3 Credits (2+2P)**

Survey of welding and cutting processes for nonmajors. Classroom instruction and laboratory work with OFC/OFW, SMAW, GMAW, FCAW, and plasma arc cutting.

WELD 105. Introduction to Welding**3 Credits (3)**

Welding practices, procedures, and terminology. Welding safety, equipment types, electrode types in usage, joint design and testing procedures.

WELD 110. Blueprint Reading (Welding)**3 Credits (3)**

Interpretation of prints related to welding. Emphasis on AWS standard symbols for welding, brazing, and nondestructive examination.

WELD 115. Structural Welding II**6 Credits (3+6P)**

Continuation of WELD 100. Emphasis on AWS entry and advanced level welder skills with SMAW, including all-position welding with mild and stainless steel electrodes. Plasma arc and air-carbon arc cutting, metallurgy, heat treatment, and weld defects.

Prerequisite: WELD 100.

WELD 120. Basic Metallurgy**3 Credits (3)**

Properties of ferrous and nonferrous materials. Service conditions and heat treatment of metals related to welding trade.

Prerequisites: WELD 100 or consent of instructor.

WELD 125. Introduction to Pipe Welding**3 Credits (2+2P)**

Pipe fit-up and welding techniques for pipe fitting and pipe weld joint using SMAW, GMAW, GTAW, and FCAW, 2G welding of pipe. Restricted to: Community Colleges only.

Prerequisite(s): WELD 100, WELD 130, and WELD 140, or consent of instructor.

WELD 126. Industrial Pipe Welding**3 Credits (3)**

Enhancement of WELD 125. Development of more advanced pipe welding skills.

Prerequisite(s): WELD 110, WELD 130 and WELD 140.

Corequisite(s): WELD 125.

WELD 130. Introduction to GMAW MIG)**3 Credits (2+2P)**

Development of basic skills with gas metal arc welding (MIG) in accordance with AWS entry-level welder objectives. Wire electrodes, shielding/purge gases, and modes of metal transfer.

WELD 140. Introduction to GTAW TIG)**3 Credits (2+2P)**

Development for basic skills with gas tungsten arc welding (TIG) in accordance with AWS entry/advanced welder objectives. Welding mild steel, tungsten electrode preparation, filler wire selection, and equipment set-up.

WELD 150. Pipe Welding II**3 Credits (2+2P)**

Continuation of WELD 125; with fillet and groove welded joints in a horizontal fixed and 45-degree fixed positions (5-F, 5-G, 6-F, 6-G).

Prerequisite: WELD 125.

WELD 151. Industrial Pipe Welding II**3 Credits (3)**

Enhancement of WELD 150. Development of more advanced pipe welding skills. Emphasis on industry driven test.

Prerequisite(s): WELD 125 and WELD 126.

Corequisite(s): WELD 150.

WELD 160. Introduction to SAW and FCAW**3 Credits (2+2P)**

Submerged arc and flux-cored arc welding. Demonstrations and practice with machine travel submerged arc welding (SAW), flux-cored arc welding (FCAW-G, FCAW-S) on mild steel plate and pipe. Restricted to: Community Colleges only.

WELD 170. Welded Fabrication**3 Credits (1+4P)**

Development of fabrication skills including basic layout, measuring, and utilization of various welding processes including out-of-position welding. Use of common shop tools.

Prerequisites: WELD 100, WELD 110, WELD 130, and OETS 104 or OETS 118.

WELD 180. GTAW II**3 Credits (2+2P)**

Continuation of WELD 140. Development of more advanced GTAW skills. Emphasis on pipe welding with mild steel, stainless steel, and aluminum.

Prerequisite: WELD 140 or consent of instructor.

WELD 190. Welded Art**3 Credits (1+4P)**

Students explore the possibilities of welded art in the form of sculpture, jewelry, furniture and as a framework to support other art media. Offered as an elective for students who wish to create art using welding. May be repeated up to 12 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): WELD 102.

WELD 211. Welder Qualification**6 Credits (3+6P)**

Laboratory and classroom instruction on AWS and ASME Welder Performance Qualification Tests. All position plate and pipe techniques and tests for SMAW, GMAW, GTAW, FCAW, and SAW. Nondestructive and destructive examination methods. Basics of welding codes. Restricted to majors.

Prerequisites: OETS 104 or OETS 118; and WELD 100, WELD 110, WELD 120, WELD 130, WELD 140, WELD 160 and WELD 180 or consent of instructor.

WELD 221. Cooperative Experience I**1-6 Credits**

Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U. Restricted to majors.

Prerequisites: WELD 100 or WELD 101 and consent of instructor.

WELD 255. Special Problems in Welding Technology**1-6 Credits**

Individual studies in areas of welding technology. May be repeated for a maximum of 12 credits.

Prerequisite: consent of instructor.

WELD 295. Special Topics**1-4 Credits**

Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

Personnel

Campus Executive Administrators

Garcia, Juanita, VP for Student Services, M.Ed., Eastern New Mexico University

Harris, Dr. Monty, Interim VPAA, D.C. Sherman College of Chiropractic

Nwanne, Dr. Andrew, VPAA & Associate Campus Director; Ph.D., University of North Texas

Volpi, Dr. Karla, VP for Business and Finance, Ph.D., Grand Canyon University

Professional Staff

- Bedingfield, Della, Director of the Small Business Development Center, B.S., Kaplan University
- Borkorm, Bright – Director of Institutional Analysis, Ed.D, Benedictine University
- Campos, Diana – CC Director, Financial Aid; M.A., New Mexico State University
- Davis, Valerie – Component Program Manager, M.B.A., New Mexico State University
- Dodson, Teri – Program Manager Sr., Grant Services; M.S.N., New Mexico State University
- Dunaway, Melissa – Director of the Learning Assistant Center, M.S., Jacksonville State University
- Espinoza, Roxy - Student Program Coordinator Sr., Grant Services
- Eubank, Corey – Manager, Systems Administration, M.B.A., New Mexico State University
- Hardin, Dianne – Professor/Director of Nursing; M.S.N., University of New Mexico
- Johnson, Kelly, Manager Facilities Services, B.S., New Mexico State University
- Jones, Haley – Student Accessibility Services Coordinator, MS, Kansas State University
- Klaus, Sky – Director of Marketing & Publications, B.F.A., Western New Mexico University
- Liu, Andre - STEM – Data Management Specialist, M.P.A., San Diego State University
- McCormack, Misty - CC Manager, Adult Education, M.A., New Mexico State University
- McNair, Mike - CC Director, Community Education, M.A., Southwest Oklahoma State University
- Morales, Ron Humberto – Title V Adelante Program Manager, M.B.A., New Mexico State University

- Moreno, Luz – Multi- Media Specialist, Learning Technology Center, M.A., New Mexico State University
- Silva, Rebecca – Business Manager, Business Office; M.B.A., New Mexico State University
- Theragood, Merdia – Administrative Assistant, Sr., Campus Academic/Provost Office, B.I.S, New Mexico State University
- Thompson, Karla – CC Director, M.S., University of the Southwest

Full Time Faculty

- Abdaljalil, Talal – Assistant Professor, Industrial Maintenance; M.S., New Mexico State University
- Addington, April – Instructor of Mathematics, M.S., University of Southern Indiana
- Al-Nouman, Jamil – Professor, Engineering; Ph.D., New Mexico State University
- Aryal, Pradip – Professor, Mathematics; Ph.D., New Mexico State University
- Biebel, Patricia – Professor, English; M.F.A., University of Oregon
- Buckholz, Mark – Emeritus Professor, English/Communication Arts; Ed.D., New Mexico State University, MFA, Yale University
- Chappa, Eduardo – Professor, Mathematics & Developmental Mathematics, Ph.D., University of Washington
- Childs, Ashley – College Instructor, Nursing, B.S., Nursing, New Mexico Highlands University
- Conard, Scott – Associate Professor of Digital Media; M.F.A., University of Cincinnati
- Davis, Lacy Jo – Assistant Professor, English; M.A., Angelo State University
- Girmus, Ronald – Professor, Biology; Ph.D., University of Arizona
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