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New Mexico State University
CARLSBAD
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CARLSBAD ACADEMIC CATALOG

New Mexico State University Carlsbad Catalog 2018-2019

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 2018 through spring semester 2024.

WELCOME

Welcome to the New Mexico State University at Carlsbad campus. I am 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.

Sincerely,

John Gratton

President

ADMINISTRATION

Campus President

Dr. John Gratton, President

Board of Advisors-NMSU Carlsbad

Abel Montoya (District II), President

David Shoup (District V), Vice President

Simon Rubio District I, Secretary

Andrew Harris (District IV), Board Member

Ron Singleton (District III), Board Member

Board of Regents-NMSU

Susana Martinez, Governor of New Mexico, Ex Officio Regent from Santa Fe

Debra P. Hicks, Chair

Kari Mitchell, Vice-Chair

Jerean Camúñez Hutchinson, Secretary/Treasurer

Chris Saucedo, Member

Margie Vela, Member

NMSU-Carlsbad Departments

Academics

Chief Academic Officer/Provost

(575) 234-9215

Admissions, Registration and Student Services

(575) 234-9222

Adult Education

(575) 234-9250

Barnes & Noble Bookstore

(575) 234-9240

Business Office

(575) 234-9200

Campus Health Center

(575) 234-9291

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

Office of Student Services

New Mexico State University Carlsbad

1500 University Drive

Carlsbad, New Mexico 88220

Phone: (575) 234-9200

Toll Free: 1 (888) 888-2199

Fax: (575) 885-4951

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. In 1980, the campus was relocated to a new building, which was expanded with an additional wing of classrooms in 1987 and was expanded again by the addition of a computer facility wing for occupation in 1996. The newest building, the Allied Health Center was added in 2011.

Throughout its history, the campus has been responsive to the changing academic needs of the region and the immediate Carlsbad Community. It has offered courses which apply directly to the University’s Las Cruces campus for graduation at the baccalaureate level. Some upper division and graduate courses are delivered by the University’s Las Cruces faculty on site at the Carlsbad campus.

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 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. 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-C 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/ipeds-carlsbad/>.

Gainful Employment

At a public and private not-for-profit institutions, gainful employment programs are Title IV-eligible certificate programs. Effective July 1, 2011, the U.S. Department of Education requires schools with Gainful Employment programs to disclose certain information about these programs. This information can be found at <https://carlsbad.nmsu.edu/about-nmsu-carlsbad/gainful-employment/>.

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. 55) 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. 5)

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) 234-9337.

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 lower GPAs 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

University 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 university's students.

University Financial Aid and Scholarship Services awards financial aid to students according to their individual needs. 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 University Financial Aid and Scholarship Services is regarded as confidential.

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. 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 www.fafsa.ed.gov (<https://fafsa.ed.gov>).

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

General Eligibility Requirements

To receive financial aid you must demonstrate the following:

That you are qualified to obtain 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:

- Passing 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. (You may not receive aid for correspondence or telecommunications courses unless they are a part of an associate's or bachelor's degree program.)
- Be a U.S. citizen or eligible non-citizen (state funded scholarships are available to undocumented students).
- Have a valid Social Security number. If you don't have a Social Security number, you can find out more about applying for one at www.ssa.gov (<https://www.ssa.gov>).
- Must be meeting satisfactory academic progress (SAP).
- Sign a statement on the FAFSA certifying that you will use Federal student aid only for education 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 parents, availability of funds and eligibility requirements. Any award may be revised based on changes in enrollment, cost of attendance, application of 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.

Federal Direct Subsidized Loans

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.

Federal Direct Unsubsidized Loans

Loans that are made to eligible undergraduate students that do not demonstrate financial need. Unlike other federal loans, interest accrues while the student is attending school.

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

Federal Perkins Loan

A school-based loan program for undergraduate and graduate students with exceptional financial need. Under this program the school is the lender. A Perkins Loan must be repaid according to Federal Guidelines. Repayment begins nine months after graduation or nine months after enrollment drops below 6 credits for undergraduate students.

Grants

The Federal Pell Grant is a federal grant available to undergraduate students with documented financial need. Pell Grants range from \$300 to \$5,920, though these figures are subject to change each year. If a 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 show exceptional financial need. For more information, contact University Financial Aid and Scholarship Services or visit the university's financial aid website at: <http://fa.nmsu.edu/>. Generally, grants do not have to be repaid.

Work-Study Programs

The Federal Work-Study Program provides employment opportunities for selected undergraduate students with demonstrated financial need. The New Mexico Work-Study Program also provides employment opportunities for New Mexico resident students.

For more information on the U.S. Department of Education student aid programs, go to <http://studentaid.ed.gov/> or see the NMSU Financial Aid website at <http://fa.nmsu.edu>.

New Mexico Workforce Connection

The New Mexico Workforce Connection administers the Workforce Investment Act "WIA", a federally funded program to assist students. The WIA offers three levels of services, classroom training and on the job training.

For more information, contact the

WIA office located at
323 S. Halagueno Ave.
Carlsbad, NM 88220

(575) 887-1174.

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 because of the recipient's financial need. NMSU has a variety of scholarships that are offered to incoming freshman, transfer, continuing and graduate students. State, institutional and private scholarships may also be available but amounts, deadlines and eligibility requirements vary. For more information, contact University Financial Aid and Scholarship Services or visit the university's scholarship website at <http://fa.nmsu.edu/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 <http://scholarships.nmsu.edu/>. One scholarship application serves all NMSU students regardless of campus.

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'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). Grade point values are:

Letter Grade	Grade Points per Unit of Credit
A+ / A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C/ C-	2.0
D+/ D/ D-	1.0
F	0
I, CR, RR, PR, NC, W, AU	not calculated in the GPA

- Completion Rate: Students must complete a minimum of 70 percent of all coursework (registered credit hours) attempted at NMSU. Any course with a grade of withdraw (W), incomplete (I), repeats (RR), failure (F), audit (AU), or no credit (NC) is 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 credit hours 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.
- 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 <http://fa.nmsu.edu/resources/return-of-title-iv-funds/>

Financial Aid Warning

"Warning" is a status assigned to a student who fails to make satisfactory academic progress at a school that evaluates satisfactory academic progress at the end of each payment period and/or term, and chooses to allow students who fail its progress standards to continue to receive aid. If the student has not returned to satisfactory standing after this additional 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 mitigating circumstances affecting their progress. Students who would like to appeal the suspension must submit an appeal form, available at <http://fa.nmsu.edu>, and all required documentation to University Financial Aid and Scholarship Services. A committee will review the appeal and may grant reinstatement of financial aid based on mitigating 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.

Office of Financial Aid and Scholarship Services Contact Information

For more information, contact:

Financial Aid Office, Room 111
1500 University Drive
Carlsbad, NM, 88220
Phone: (575) 234-9200
<http://fa.nmsu.edu/>.

General Education Courses

The New Mexico Common Core 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.

The New Mexico General Education Common Core includes designated general education courses guaranteed to transfer to any New Mexico public college or university. A complete list of approved courses can be found on the New Mexico Higher Education Department web site at www.hed.state.nm.us (<http://www.hed.state.nm.us>). The current approved NMSU courses are listed below under each of the five general education areas.

In accordance to state law (Chapter 21, Article 1B NMSA 1978), the New Mexico Higher Education Department has established policies to

guarantee successful transfer of completed core courses between New Mexico post-secondary public institutions.

Lower Division General Education Course Transfer Curriculum

The NMSU Prefix and Course Number will be listed first, the New Mexico Transfer Curriculum number will then be listed in parenthesis' following by the course title and credit hours.

Area I: Communications

9-10

Select one course from each sub groups:

English Composition – Level 1

ENGL 111G	Rhetoric and Composition
ENGL 111GH	Rhetoric and Composition Honors
ENGL 111 M	Rhetoric and Composition for International and Multilingual Students

English Composition – Level 2

ENGL 203G	Business and Professional Communication
ENGL 211G	Writing in the Humanities and Social Sciences
ENGL 218G	Technical and Scientific Communication
ENGL 311G	Advanced Composition
ENGL 318G	Advanced Technical and Professional Communication

Oral Communication

AXED 201G	Effective Leadership and Communication in Agricultural Organizations
COMM 253G	Public Speaking
COMM 265G	Principles of Human Communication
HON 265G	Principles of Human Communication Honors

Area II: Mathematics/Algebra

3-4

A ST/STAT 251G	Statistics for Business and the Behavioral Sciences
MATH 112G	Fundamentals of Elementary Math II
MATH 121G	College Algebra
MATH 142G	Calculus for the Biological and Management Sciences
MATH 190G	Trigonometry and Precalculus
MATH 191G	Calculus and Analytic Geometry I
MATH 192G	Calculus and Analytic Geometry II
MATH 192GH	Calculus and Analytic Geometry II Honors
MATH 210G	Mathematics Appreciation
MATH 291G	Calculus and Analytic Geometry III
STAT 271G	Statistics for Psychological Sciences

Area III: Laboratory Science

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AGRO/HORT 100G	Introductory Plant Science
ANTH 130G & 130GL	Human's Place in Nature: Introduction to Biological Anthropology and Human's Place in Nature Laboratory
ASTR 105G	The Planets
ASTR 110G	Introduction to Astronomy

BIOL 101G & 101GL	Human Biology and Human Biology Laboratory
BIOL 110G	Contemporary Problems in Biology
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory
BIOL 211G & 211GL	Cellular and Organismal Biology and Cellular and Organismal Biology Laboratory
C S 171G	Introduction to Computer Science
CHEM 110G	Principles and Applications of Chemistry
CHEM 111G	General Chemistry I
CHEM 112G	General Chemistry II
E S 110G	Introductory Environmental Science
FSTE 164G	Introduction to Food Science and Technology
FSTE 263G	Food Science I
FWCE 110G	Introduction to Natural Resources Management
GEOG 111G	Geography of the Natural Environment
GEOL 111G	Introductory Geology
GEOL 212G	The Dynamic Earth
HON 205G	Life, Energy, and Evolution
HON 219G	Earth, Time, and Life
PHYS 110G	The Great Ideas of Physics
PHYS 120G	Introduction to Acoustics
PHYS 211G & 211GL	General Physics I and General Physics I Laboratory
PHYS 212G & 212GL	General Physics II and General Physics II Laboratory
PHYS 215G & PHYS 212GL	Engineering Physics I and General Physics II Laboratory
PHYS 216G & 216GL	Engineering Physics II and Engineering Physics II Laboratory
PHYS 221G & 221GL	General Physics for Life Sciences I and Laboratory to General Physics for Life Science I
PHYS 222G & 222GL	General Physics for Life Sciences II and Laboratory to General Physics for Life Sciences II

Area IV: Social/Behavioral Sciences 15

Area IV: Social/Behavioral Sciences¹

AG E/FSTE 210G	Survey of Food and Agricultural Issues
ANTH 120G	Human Ancestors
ANTH 125G	Introduction to World Cultures
ANTH 201G	Introduction to Anthropology
ANTH 202G	World Archaeology
ANTH 203G	Introduction to Language and Cultural Anthropology
C EP 110G	Human Growth and Behavior
C J 101G	Introduction to Criminal Justice
ECON 201G	Introduction to Economics
ECON 251G	Principles of Macroeconomics
ECON 252G	Principles of Microeconomics
GEOG 112G	World Regional Geography

GEOG 120G	Culture and Environment
GOVT 100G	American National Government
GOVT 110G	Introduction to Political Science
GOVT 150G	American Political Issues
GOVT 160G	International Political Issues
HON 232G	The Human Mind
HON 235G	Window on Humanity
HON 237G	Archaeology: Search for the Past
HON 248G	The Citizen and the State: Great Political Issues
HON 249G	American Politics in a Changing World
JOUR 105G	Media and Society
LING 200G	Introduction to Language
PHLS 150G	Personal Health and Wellness
PSY 201G	Introduction to Psychology
S WK 221G	Introduction to Social Welfare
SOC 101G	Introductory Sociology
SOC 201G	Contemporary Social Problems
W S 201G	Introduction to Women s Studies
W S 202G	Representing Women Across Cultures

Area V: Humanities and Fine Arts

ART 101G	Orientation in Art
ART 110G	Visual Concepts
ART 295G	Introduction to Art History I
ART 296G	Introduction to Art History II
DANC 101G	Dance Appreciation
ENGL 115G	Perspectives on Literature
ENGL 116G	Perspectives on Film
ENGL 220G	Introduction to Creative Writing
ENGL 244G	Literature and Culture
HIST 101G	Roots of Modern Europe
HIST 102G	Modern Europe
HIST 110G	Making History
HIST 111G	Global History to 1500
HIST 112G	Global History Since 1500
HIST 201G	Introduction to Early American History
HIST 202G	Introduction to Recent American History
HIST 211G	East Asia to 1600
HIST 212G	East Asia since 1600
HIST 221G	Islamic Civilizations to 1800
HIST 222G	Islamic Civilizations since 1800
HON 208G	Music in Time and Space
HON 216G	Encounters with Art
HON 222G	Foundations of Western Culture
HON 227G	Plato and the Discovery of Philosophy
HON 229G	The New Testament as Literature
HON 230G	Bamboo and Silk: The Fabric of Chinese Literature
HON 234G	The Worlds of Arthur
HON 239G	Medieval Understandings: Literature and Culture in the Middle Ages
HON 242G	Claiming an American Past
HON 270G	Theatre: Beginnings to Broadway

MUS 101G	An Introduction to Music
MUS 201G	History of Jazz in Popular Music: A Blending of Cultures
PHIL 100G	Philosophy, Law and Ethics
PHIL 101G	The Art of Wondering
PHIL 124G	Philosophy of Music
PHIL 136G	The Quest for God
PHIL 201G	Introduction to Philosophy
PHIL 211G	Informal Logic
PHIL 223G	Ethics
THTR 101G	The World of Theatre
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Total Credits	35-37

¹ For Areas IV and V of the NM Common Core, students can take 6-9 credits of each area for a total of 15 credits.

Alternatives for Meeting General Education Requirements

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. For example, a student may complete ART 150 Drawing I, ART 155 2-D Fundamentals and ART 156 3-D Fundamentals (9 hours) and thereby satisfy one course from the Area V: Humanities and Fine Arts category, even though none of those courses carries a G suffix. Please check with the college associate dean or with college advisors.

Graduation Requirements

For the baccalaureate degree each student must complete a minimum of 120 credits including at least 48 credits numbered 300 or above. However, to satisfy the requirements of accreditation, licensure, program depth or rigor, or other needs, some majors require coursework in excess of the 120 credit hour minimum.

Each college has its own requirements for graduation listed under its curricula. However, there are certain graduation requirements common to all undergraduate colleges:

- A student must have a cumulative GPA of 2.0 in all courses taken at NMSU.
- The student will be required to show proficiency in written English in all class work at the University. Any instructor may remand a student to the English remedial laboratory for further training in written English. In each case, the student must complete the remedial laboratory work prior to submitting the application to graduate.
- Each student must complete at NMSU at least 30 of the last 36 credits necessary for the baccalaureate degree. Of these 36 credits, 21 credits must be upper division and at least 12 of these upper division credits must be in the major. Colleges or Departments may require that more than 12 of the upper division credits be from the major, and they may direct that certain of these credits be course specific.
- Curricular requirements for a specific degree may be met by completing all of the course requirements for that degree as set forth in the catalog of matriculation provided that the selected catalog is not more than six years old when the requirements for graduation are met. This rule applies only to the course requirements and number of credits as specified for the degree. In all other cases, the current

catalog is effective. The catalog is effective Summer Session I through Spring Semester.

Special provisions consistent with the NMSU Service members Opportunity College (SOC) and other agreements apply for active military and veterans- see section Military/Veterans and Family Members.

Upon completion of all requirements, multiple majors for a single degree (e.g., B.A.) will be noted on the academic record. Multiple bachelor's degrees (e.g., B.A. and B.S.) may be granted if all requirements for the degrees have been completed. Multiple degrees may be granted at one commencement if all requirements have been met. Gradation fees must be paid for each degree.

Both designated and undesignated associate degree residency requirements vary with the college awarding the degree. Requirements for the two-year associate degree and for the certificate are found in the section(s) concerning these degrees.

- Arts and Sciences, Business Administration, Education, and Health and Social Services require that at least 15 credits be completed at NMSU or one of its Community College campuses.
- College of Agricultural, Consumer and Environmental Sciences requires that the last 30 credits be completed at NMSU or one of its Community College campuses.

To Graduate with a Certificate

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

To Graduate with an Associate Degree

For each of the two-year associate degrees offered at NMSU Carlsbad, the student must complete at least 60 credits (excluding "N" suffix courses), complete ENGL 111G Rhetoric and Composition with a grade of C or better, complete a basic skills course in mathematics and reading (if needed) with a grade of C or better, and have an average of two grade points per credit in all courses taken at NMSU. In addition, the last 15 credits of the degree must be completed at an NMSU campus and all degree requirements must be met. (Service personnel enrolled under the two-year Service members Opportunity College Program may be exempt from this requirement.)

Graduate Outcomes

All students admitted to NMSU Carlsbad will be assessed for the abilities to demonstrate academic achievement and specific competencies and skills as they progress through their programs of study. Every course a student takes will provide instruction that teaches, emphasizes or reinforces one or more of the graduate outcomes.

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

1. Effective communications skills in reading, writing, listening and speaking.
2. Basic critical thinking skills.
3. The fundamental concepts of mathematics and science.
4. Appropriate technological literacy and skills for personal and professional use.
5. The fundamental concepts for analyzing significant primary texts and/or works of art, including fine arts, literature, music, theatre 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 SPCD 110 Intermediate ESL Composition and Grammar Review (a bridge course designed to ensure success in ENGL 111 M Rhetoric and Composition for International and Multilingual Students), or allowed to enroll directly into ENGL 111G Rhetoric and Composition. International students excused from SPCD 111G Advanced ESL Composition will be required to take ENGL 111G Rhetoric and Composition, 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 SPCD 110 Intermediate ESL Composition and Grammar Review is determined by CELP, and equivalencies for

ENGL 111 M Rhetoric and Composition for International and Multilingual Students and ENGL 111G Rhetoric and Composition 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/> 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 111 M Rhetoric and Composition for International and Multilingual Students. Placing out of levels by retaking the TOEFL is not allowable once conditional admission status has been granted. Visit <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 1 ¹	for fall semester
October 1 ¹	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:
4. Las Cruces campus: International Student & Scholar Services, Garcia Annex, room 246 (exchange students need to report to the Office of Study Abroad)

5. Doña Ana Community College: International Student & Scholar Services, Garcia Annex, room 246 (exchange students need to report to the Office of Study Abroad)
6. Alamogordo Community College: Office of Student Services, Student Services Building, second floor
7. Carlsbad Community College: Office of Student Services, 1500 University Drive, Room 111
8. 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 nondegree 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-C
- 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 nonveteran 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>

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 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 overpayments. 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 overpayment.

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

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, call (575) 234-9337 or visit the Counseling & Student Development Center in Room 107 of the main building.

Campus Health Center

Mission: To provide outpatient, on campus medical support for students and employees of NMSU-C.

Medical Services Provided:

- Routine care for illness (acute & urgent)
- Family Planning
- Physical and Women's Health Exams
- STD Testing
- Referral Assistance
- Health Education

- Immunizations
- Smoking Cessation, Blood Pressure and Vision Screenings
- Mental Health Consultations by Appointment

Counseling and Student Development

The Counseling and Student Development Center (CSDC) located in Room 107 coordinates services for students. See section Counseling and Student Development Center (p. 49) for details.

Distance Education

The Office of Distance Education extends New Mexico State University's reach beyond traditional programs to provide opportunities for students to meet their academic, professional and personal learning goals. Distance Education courses from NMSU are delivered using the most innovative technology and methods available, including web-based technologies, ITV (Interactive Television), faculty exchanges and off-site classes.

Distance Education (DE) programs are designed to serve students who live a significant distance away from the campus or have scheduling conflicts due to family or work obligations and often find distance education as the best solution to educational advancement. DE at NMSU is defined as the formal education process of delivering instruction so that students physically remote from the campus of program origin and/or instructor may participate. Distance education degree programs at NMSU are delivered using both a variety of formats including 100% online, or combination of ITV, online and face-to-face instruction at the Las Cruces campus or off-site locations such as NMSU community college campuses. Visit <http://distance.nmsu.edu/degrees/index.cmf> for a complete listing of programs.

Bachelor's Degree Completion Programs

All undergraduate degree programs offered through NMSU are bachelor degree completion programs. These programs require that students have all lower-division (100 and 200 level) credits completed before admittance into the program. Bachelor degree completions programs normally require two years of 300 and 400 level upper-division coursework to finish. The undergraduate degree completion programs vary in delivery format. Some are 100% online; some use web-based delivery and online; and some use online combined with face-to-face or ITV instruction at off-site locations such as NMSU community college campuses. Visit <http://distance.nmsu.edu/degrees/index.cfm> for a complete listing of programs.

Degree Audit

Students have access to Degree Audit System (STAR) available through their student online account at <http://my.nmsu.edu>. 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.

Off-site/Extension Programs

Distance education programs listed under this category are delivered primarily face-to-face at off-site/extension locations. Often, these courses will enhance instruction and learning with technology. Programs are located at NMSU two-year and Albuquerque Center campuses as well as other locations through the state. Several degree programs are available at one or more off-site/extension locations. Visit <http://distance.nmsu.edu/degrees/index.cmf> for a complete listing of programs.

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 (p. 49).

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 107 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 Test Center is located in Room 221 in the Main Building on the second floor. The Testing Services Office is located in Room 2J in the Main Building also on the second floor. The office hours are Monday, Tuesday and Thursday from 9:30 am – 6:30 pm and Wednesday and Friday from 8:00 am – 5:00 pm. Summer Session hours are Monday through Thursday 7:00 am – 6:00 pm. The office phone number is (575) 234-9322. The office provides testing for High School equivalency HISET Paper/Pencil option and the Pearson Vue GED Computer based option. The office also provides testing for the NMSU Carlsbad Pre-Nursing program HESI A2 and College Placement testing for Dual Credit students and for incoming College freshman. The office also provides WORKKEYS Certification exams for College students earning one year certificates. ETS Proficiency Profile Exit Test is also provided for College students earning two year associate's degrees. Testing for other colleges is also provided for \$30.00 an hour.

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>
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>) and pay, or make arrangements to pay, applicable tuition and fees in the Business Office.

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-C 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>, 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-C 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.

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

Each annual catalog edition is effective Summer Session I through Spring Semester and is considered active for a six 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.

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 earn a minimum grade of C- in courses required for the certificate. 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. If the certificate requires fewer than 6 credits, all credits 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. 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. **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. In addition, students must earn a C- or better in classes they take to meet the Basic Skills requirement (English 111g and one of several math course options),
3. **Residency** - 15 of the last 30 credits earned toward the degree must be completed at NMSU.
4. **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 Common Core-** 35-36 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 or above.
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 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.

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 (300-499), 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 for the field of study.

Undergraduate Minor

An undergraduate minor consist of 18 credits of course work, of which 9 credits must be upper-division (300-499). A minor encompasses courses that in a recognized field of study outside the student's major. At least 12 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.

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 (300-499), 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 and 200 level) of an undergraduate degree program to complete the remaining upper-division credits (300 and 400 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 and 200 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 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 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

During the first semester 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 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 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, a copy of the thesis must be submitted to the Graduate School for format review no later than the deadline posted to the Graduate School website. The form and style of the thesis must comply with the regulations given in the Guidelines for Preparing a Thesis or Dissertation <http://gradschool.nmsu.edu/theses-dissertations/>. These guidelines also contain detailed information on the thesis approval process and binding. The thesis is not complete until copies have been accepted for binding by the binding section staff and until the online Library binding form has been completed and received in Branson Library

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 at least 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. Any coursework more than seven years old at the time of the final examination will not be included in the program. Any exception to the time limit rule must have prior approval of the Dean of the Graduate School.

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 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 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 completed the master's degree and 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 beyond the master's degree, 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

It is recommended that during the first semester 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 beyond the master's degree, 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. Students cannot include any course work on their program of study that is more than seven years old at the time of the final oral examination.

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 level dissertation hours. However, they are expected to complete at least 12 credits at the 600 level including ECDV 694 (Internship) and ECDV 699 (Doctoral Project).

A project paper must be finalized using a similar submission process as the dissertation (see the "Finalizing the Doctoral Dissertation"). On the front page, after the title of the paper, the student should indicate that it is a project paper. Students completing projects papers do not need to complete the earned doctoral survey. The paper must be submitted

to the Graduate School for format review on or before the deadline. The form and style of the paper must comply with regulations given in the "Guidelines for Preparing a Thesis or Dissertation." These guidelines also contain detailed information on the dissertation/project paper- approval process as well as information on binding. Candidates are encouraged to consult with the Graduate School on format, deadlines and procedures before final typing. The project paper is not complete until copies have been accepted for binding by the staff of Branson Library and until the microfilm agreement form has been completed and received in Branson Library.

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 level dissertation hours. However, they are expected to complete at least 12 credits at the 600 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 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-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-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 12 graduate credits 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.

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.

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, a copy of the dissertation must be submitted to the Graduate School for format review no later than the deadline posted to the Graduate School website.

The form and style of the dissertation must comply with the regulations given in the Guidelines for Preparing a Thesis or Dissertation <http://gradschool.nmsu.edu/theses-dissertations/>. These guidelines also contain detailed information on the dissertation-approval process and binding. Candidates are encouraged to consult with the Graduate School on format, deadlines and procedures before final typing.

The dissertation is not complete until copies have been accepted for binding by the binding section staff and until the UMI agreement form and the online Library binding form has been completed and received in Branson Library.

Registration at NMSU is a process that includes: (1) academic advising with a faculty or staff member, (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 is through the Aggie Welcome/Transfer Student Orientations. For currently enrolled Undergraduate students and all Graduate students registration is through 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.

Course Schedule

Each semester and summer session, the University Student Records Office provides an online course schedule 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. Freshmen have less than 29 completed credits. Sophomore rank is achieved with successful completion of 28 credits; junior rank 60 credits; senior rank 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 6 credits per session for a total of 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 the Director of the Center for Academic Advising and Student Support or the Associate Dean for Academics in the student's college. A "Change of Schedule (https://registrar.nmsu.edu/files/2018/03/Change-of-Schedule_Updated-02-02-18-1.pdf)" form is required and available from the University Student Records Office or on their 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 is 9 credits, with a maximum of 15 graded credits for a regular semester (fall or spring) and a maximum of 9 graded credits for the summer session.

Course Numbering

The course numbering system at NMSU indicates the level of the course as follows:

Undergraduate courses are assigned numbers 100-499. Courses numbered 100-299 are referred to as "lower-division courses" and are primarily for Freshman and Sophomore level students. Courses numbered 300-499 are referred to as "upper-division courses" and are primarily for Junior and Senior level students.

Graduate courses are assigned numbers 500 or greater. Courses numbered 500-599 are primarily for graduate students working on a master's degree. Courses numbered 600-700 are primarily for students working on a doctoral degree.

Some graduate programs may accept courses numbered 450-499 for graduate credit. Graduate students should confirm eligibility with their program department head.

Prerequisites and Corequisites

Some courses require advance or concurrently acquired specific knowledge and skills. Prerequisite(s) and corequisite(s) for each course 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" 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 "Change of Schedule (https://registrar.nmsu.edu/files/2018/03/Change-of-Schedule_Updated-02-02-18-1.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 records ()@nmsu.edu (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 the "Change of Schedule Form (https://registrar.nmsu.edu/files/2018/03/Change-of-Schedule_Updated-02-02-18-1.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 the last day of registration, during the semester in which the student expects to obtain the degree.

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 dis-enrolled 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 which are impairing the student's performance), or for persistent failure to complete assignments. In such cases, the Instructor may recommend administrative dis-enrollment 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 dis-enrolled from the course. A dis-enrollment has the same effect as a voluntary withdrawal (see "Registration Changes" in this catalog). 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.

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 sponsoring department will provide the instructor 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 for each semester (<http://registrar.nmsu.edu/final-examination-schedule/>). 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 if available, the NMSU Math Placement Exam score. The student's eligibility to enroll in university level English and Mathematics courses is dependent upon this evaluation. Any new student may choose to take the MPE to test towards a higher math placement than indicated by the ACT and high school graduation scores. All new engineering students must take the MPE. More information on the MPE is available from the Department of Mathematics website. <https://www.math.nmsu.edu/msc/MPE/overview.html>. 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.

• **Developmental Courses in English** - Students who score below 15 on the ACT English exam will be placed into appropriate developmental English course or course(s) (prefix CCDE) before enrolling in ENGL 111G (<http://nmsu.smartcatalogiq.com/en/2016-2017/Undergraduate-Catalog/Courses/ENGL-ENGLISH/100/ENGL-111G>). Students who score below 13 on the ACT English will require two developmental courses before enrolling in ENGL 111G (<http://nmsu.smartcatalogiq.com/en/2016-2017/Undergraduate-Catalog/Courses/ENGL-ENGLISH/100/ENGL-111G>).

• **Developmental Courses in Math** - Students who score below 23 on the ACT mathematics exam, and who did not achieve a qualifying score on the NMSU Math Placement Exam (MPE), will be placed into the appropriate development mathematics course or courses (prefix CCDM). Placement into CCDM course(s) is dependent upon the student's ACT score and high school GPA. Students are not allowed to enroll in any other math courses at NMSU until successfully completing any requisite CCDM course(s). (As an alternative to the math developmental course(s),

students may complete AS 103 with a C- or better, which does earn credit toward 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 111G**, 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 111GH** – completed with a grade of C- or higher
- ENGL 111 M - 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 111 M 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 English 111G course requirement by submitting a theme paper written under the supervision of, and demonstrating achievement of English 111G 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 111 and MATH 112G
 - Any mathematics course numbered 120 or above (prefix MATH)
 - Any one statistics course: A ST 251G, STAT 251G or STAT 271G
- 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 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 he is already registered, he 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 (<https://catalogs.nmsu.edu/nmsu/general-information/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 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 student's 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" 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, CCCL, CCDD & CCDD) 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 (scholastic 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. 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. Repeat options apply only to eligible courses that were completed prior to the time a student was awarded a degree at NMSU.

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 598, 599, 600, 699 or 700, 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.

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 withdraw 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

An administrative withdrawal is initiated for a student who is representing the university at an official out-of-town event and becomes effective when the student returns from the event or five class days after the signed drop slip gets to the dean's office.

Military Withdrawal

New Mexico State University understands that our military and Veteran 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):** VA students ordered to Active Duty must provide a copy of orders to the MVP office, in Corbett Center Student Union, Room 244. To assist in reporting accurate information to the VA Regional Office, student should also provide, in writing, last day of class attendance.
2. **NMSU Registrar:** All students presenting their orders to the University Student Records Office, (575) 646-3411, 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. (575) 646-4431.

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 Registering 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>.

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/#academicprogramsofstudyttext>) 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/essential-information-students/tuition-fees-other-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 \$25 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 regular or summer terms.

Attendance at the Commencement Ceremony

Commencement is a symbolic ceremony. 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 the students eligibility to participate in the commencement ceremony that is held at the close 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 must attend 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 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 relevant Associate Dean for Academics or Campus Academic Officer (CAO) will send the student a letter 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 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.
2. Students will 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:
3. The student may be required to take at least one repeat course to try to improve their GPA.
4. Except for the special study skills/time management course, the student's coursework may be restricted to their major.
5. The student may be required to get tutoring help.
6. The student may be required to see an academic counselor on a specified time schedule.

7. 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.

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 will 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 then petition the Provost or designee to be removed from Academic Suspension. At this time the suspension status will be evaluated for possible removal. Should the suspension be lifted, the student is placed on Academic Probation II until such time as the cumulative GPA equals or exceeds a 2.0. At the discretion of the Provost or designee, the student will enter into a contract approved by the Provost or designee and the student's Dean or CAO, setting stipulations to have the suspension removed. Failure to adhere to the contract will return the student to Academic Suspension.

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.

Rescinding Academic Suspension for Summer Attendance

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 colleges. 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. Academic Warning status is continued if the student withdraws from the university and the probation or suspension status applies to all subsequent enrollments.

A certification of eligibility to attend summer sessions at NMSU after a spring semester Academic Suspension is available to the suspended student who wishes to attend summer sessions at other institutions.

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 I 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 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://registrar.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 Registrar's 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://registrar.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://registrar.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

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Adult Education and GED Preparation

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®, (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 bjasso@nmsu.edu (); zues@nmsu.edu (); or ftgbjm@nmsu.edu ().

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.

Barnes & Noble Bookstore

The Barnes & Noble Bookstore is a full service operation intended to meet the needs of the students, faculty and staff of NMSU Carlsbad and is located on the lower level. The bookstore sells required course textbooks, both new and used. The bookstore also has school supplies and NMSU Carlsbad insignia clothing items. Students may receive a full refund if books are returned during the first week of classes with a receipt. With a proof of schedule change and a receipt, a full refund will be given during the first 30 days of classes. The textbook refund period for summer and mini-sessions is one week only from the start of classes. Additionally, the bookstore buys back books year-round. The bookstore is open during posted hours. For any additional information, please visit us at www.nmsubookstore.com (<http://www.nmsubookstore.com>).

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 take place once or more a semester and involve 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 range from retired professionals,

NMSU faculty members to business owners. Most of 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) 234-9268 or visit the Community Education Office on campus in Office 1A or 1B.

Counseling and Student Development Center

The Counseling and Student Development Center (CSDC) located in Room 107 coordinates services for students in the following areas:

Academic Advising

The Counseling and Student Development Center advisors help students interpret placement test scores, select and schedule classes, explore majors, develop a degree plan and evaluate progress towards degree completion. Students are assigned to an advisor based on the last two digits of their Aggie ID#; please contact the CSDC for more information.

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 office. Advanced notice in planning services is strongly encouraged. NMSU is committed to providing an accessible institution to all individuals. For more information, please visit the SAS office in the Counseling and Student Development Center, room 107.

Students may request services by completing these steps in order:

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 Office.
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 office 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 (575) 234-9321 in an effort to resolve problems related to the need for or provision of special 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 wish or 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 107.

The foregoing procedures are implemented to:

- Protect the substantive due process rights of students with disabilities;
- Assure that NMSU Community College at 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 Director of Counseling and Student Development, the Vice President for Student Services or NMSU's EEO/ADA and Employee Relations Director.

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.

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

COLL 155	Special Topics ²	2
UNIV 110	Personal Learning Skills I ³	1

College Level English Courses

Approved UNIV Elective		1
ENGL 111G	Rhetoric and Composition ⁴	4

Course Level Math Courses

MATH 111	Fundamentals of Elementary Mathematics I	3
MATH 112G	Fundamentals of Elementary Math II	3
MATH 120	Intermediate Algebra	3
MATH 121G	College Algebra	3
MATH 142G	Calculus for the Biological and Management Sciences	3
MATH 190G	Trigonometry and Precalculus	4
MATH 191G	Calculus and Analytic Geometry I	4
MATH 192G	Calculus and Analytic Geometry II	4
MATH 210G	Mathematics Appreciation	3
Approved MATH Elective		3
STAT 251G	Statistics for Business and the Behavioral Sciences	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 120 Intermediate Algebra and MATH 121G 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 COLL 155 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:

Coursework:

- Individualized coursework: Curriculum for specific learning needs through UNIV 110 Personal Learning Skills I, UNIV 111 and COLL 155 Special Topics.
- Tutoring for credit: Students may be eligible for math and/or English tutoring credit through CCDS, Developmental Skills courses.

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 121G 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 and ACT.

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. Students may receive credit for L.A.C. services through the following courses titles: UNIV 110 Personal Learning Skills I, UNIV 111, COLL 155 Special Topics or CCDS, Developmental Skills courses (tutorial support for math, English and/or reading). Students registering for any of these courses must follow their regular course registration process and pay for each course at the applicable college tuition rate. All registered students must meet with a tutor within the first week of classes. These classes are graded on an S/U basis.

For more information about these services or its offerings, call (575) 234-9317, visit the L.A.C. in Room 253 or 254 or visit our website at carlsbad.nmsu.edu (<http://carlsbad.nmsu.edu>). The L.A.C. is open from 8 a.m. to 6 p.m. Monday through Thursday 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 in the following topics:

- Google Docs
- Learning Management System
- Mobile learning devices basics (iPhone/iPad/Android, etc.)
- NMSU E-mail
- NMSU Skydrive

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.

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 (575) 234-9268 or visit the Community Education Office on campus in office 1A or 1B.

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

The Associated Students of NMSU Carlsbad represents the student body. The Associated Students is composed of members who are elected, at the close of each semester, to serve during the next regular academic semesters (summer sessions excluded).

Any student enrolled for a minimum of 6 semester credits, possessing a 2.0 grade point average or higher and is in good standing is eligible for election to Associated Students. Responsibility of the Associated Students include 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. Associated Students is open to all students meeting qualifications. 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.

Student Government (ASNMSU Carlsbad)

We coordinate campus activities through Associated Students of NMSU Carlsbad, the campus student government association, and host events on student development issues such as drug and alcohol abuse

prevention, suicide prevention, mental and physical wellness, leadership and cultural diversity.

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.

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.

WORKKEYS

WorkKeys® Scores for Vocational Certificates 2018-2019 Catalog

Certificate	Reading for Information Level	Locating Information Level	Applied Mathematics Level
Accounting	Dev. Ed.	Dev. Ed.	Dev. Ed.
Banking	Dev. Ed.	Dev. Ed.	Dev. Ed.
Business Office Tech – Medical Transcription option	4	4	4
Business Office Tech - Office Assistant option	4	4	4
Building Trades	4	4	4
Drafting and Graphics Technology – Architectural	4	4	3
Drafting and Graphics Technology – General Drafting	4	4	3
Electrical Trades	3	4	3
Facilities Maintenance Technology - Facilities Maintenance	4	4	3
Facilities Maintenance Technology - Industrial Maintenance	4	4	3
Fire Science	5	5	4
Heating, Air Conditioning & Refrigeration	4	5	5
Industrial Maintenance Technician – Electrical option	3	4	3
Industrial Maintenance Technician – Mechanical option	3	4	3
Security Guard Level One	3	3	3
Welding Technology	4	4	4
Auto Refinishing	4	4	4
Structural Collision Repair	4	4	4

Non Structural Collision Repair	4	4	4
Automotive Technology	4	4	4
Digital Animation	5	4	5
Digital Graphics	5	4	5
Digital Signage	5	4	5
Digital Storytelling	5	4	5
Digital Video Game Animation	5	4	5
Digital Video Media Production	5	4	5
Digital Video Applications	5	4	5
Emergency Medical Technician - Basic, Intern., Paramedic			
Health Information Technology	Dev. Ed.	Dev. Ed.	Dev. Ed.
Practical Nursing	Dev. Ed.	Dev. Ed.	Dev. Ed.
Early Childhood Administrative	4	4	4
Heritage Interpretation	Dev. Ed.	Dev. Ed.	Dev. Ed.

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.

Prerequisites to Associate Degrees

Students must demonstrate sufficient proficiency of their basic skills in math, English and reading to qualify for enrollment in

ENGL 111G	Rhetoric and Composition	4
MATH 120	Intermediate Algebra	3
COLL 108	Academic Reading and Study Skills	1-4

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:

- Students must take their last 15 semester credits through NMSU Carlsbad or any NMSU campus (cannot include CLEP, challenge exams, or transfer credits).
- Students must complete a minimum of 60 approved semester credits.
- Student must complete ENGL 111G Rhetoric and Composition with a grade a C or better.

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.

- Students must maintain a cumulative grade point average of 2.0 or higher.

ASSOCIATE DEGREE AND CERTIFICATE PROGRAMS

Associate Degree Programs

- Associate of Arts (p. 60)
- Associate of Arts in Heritage Interpretation (p. 129)
- Associate of Science (p. 150)
- Associate of Science in Engineering (p. 113)
- Business Office Technology (p. 76)
 - Accounting (p. 76)
 - Administrative Assistant (p. 76)
- Criminal Justice (p. 85)
- Education (p. 103)
- Early Childhood Education (p. 100)
- General Studies (p. 60)
- Nursing (p. 142)
- Pre-Business (p. 148)
- Social Work (p. 152)

Associate of Applied Science

- Agriculture (p. 58) (not available 2018-2019)
- Automotive Body Collision Repair (p. 61)
- Automotive Technology (p. 66)
- Building Technology (p. 70)
- Business Management (p. 73)
- Computer and Information Technology (p. 80)
 - IT Specialist (p. 80)
 - Networking (p. 80)
 - Programming (p. 80)
- Digital Media Technology (p. 87)
 - Digital Animation (p. 87)
 - Digital Graphics (p. 87)
 - Digital Signage (p. 87) (not available 2018-2019)
 - Digital Storytelling (p. 87) (not available 2018-2019)
 - Digital Video (p. 87)
 - Digital Video Game Animation (p. 87)
 - Digital Video Media Production (p. 87) (Film Industry) [not available 2018-2019]
- Drafting and Graphics Technology (p. 95)
 - Architectural Technology (p. 95)
 - General Drafting (p. 95)
- Electronics Technology (p. 105)
- Emergency Medical Technician Paramedic (p. 108)
- Facilities Maintenance Technology (p. 115) (not available 2018-2019)
- Fire Science Technology (p. 115) (not available 2018-2019)
- Hazardous Material (p. 119)
- Health Information Technology (p. 122)
- Health Physics (p. 124) (not available (2018-2019))
- Heating, AC, and Refrigeration (p. 127) (not available 2018-2019)

- Hospitality and Tourism (p. 131)
 - Lodging & Tourism (p. 131)
 - Food & Beverage (p. 131)
- Industrial Maintenance Technician (p. 133)
 - Electrical (p. 133)
 - Mechanical (p. 133)
- Manufacturing Technology (p. 138)
 - Electronic Assembly (p. 138)
 - Manufacturing Process (p. 138)
- Surgical Technology (p. 154)
- Welding Technology (p. 157)

Certificate Programs

- Accounting (p. 57)
- Automotive Body Collision Repair (p. 61)
 - Automotive Refinishing (p. 61)
 - Non-Structural Collision Repair (p. 61)
 - Structural Collision Repair (p. 61)
- Automotive Technology (p. 66)
- Banking (p. 57)
- Building Trades (p. 70)
- Business Office Technology (p. 76)
- Computer and Information Technology (p. 80)
- Microcomputer Applications (p. 80)
- Digital Media Technology (p. 87)
- Digital Animation (p. 87)
- Digital Graphics (p. 87)
- Digital Signage (p. 87) (not available 2018-2019)
- Digital Storytelling (p. 87) (not available 2018-2019)
- Digital Video (p. 87)
- Digital Video Game Animation (p. 87)
- Digital Video Media Production (p. 87) (Film Industry) [not available 2018-2019]
- Drafting and Graphics Technology (p. 95)
 - Architectural Drafting (p. 95)
 - General Drafting (p. 95)
- Early Childhood Education Provisional Administration (p. 100) (not available 2018-2019)
- Electrical Trades (p. 105)
- Emergency Medical Technician (p. 108)
 - Basic (p. 108)
 - Intermediate (p. 108)
- Facilities Maintenance Technology (p. 115) (not available 2018-2019)
- Fire Science (p. 115) (not available 2018-2019)
- New Mexico General Education (Common Core) (p. 60)
- Hazardous/Radioactive Material Technology (p. 119) (not available 2018-2019)
- Health Information Technology (p. 122)
- Heating, Air Conditioning and Refrigeration (p. 127) (not available 2018-2019)

- Heritage Interpretation (p. 129)
- Industrial Maintenance Technician (p. 133)
 - Electrical (p. 133)
 - Mechanical (p. 133)
- Microcomputer Applications (p. 80)
- Practical Nursing (p. 142)
- Security Guard Level One (p. 152) (not available 2018-2019)
- Solar-Wind Energy (p. 154) (not available 2018-2019)
- Surgical Technology (p. 154)
- Welding Technology (p. 157)

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.

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Graduation Requirements

ENGL 111G Rhetoric and Composition 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.

Accounting - Certificate (p. 57)

Banking - Certificate (p. 57)

ACCT 101. Supplemental Instruction to ACCT 221

1 Credit

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

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 221. Principles of Accounting I (Financial)

3 Credits

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.

ACCT 222. Principles of Accounting II (Managerial)

3 Credits

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 221.

Accounting - Certificate

Core Curriculum Requirements

ACCT 200	A Survey of Accounting	3
ACCT 221	Principles of Accounting I (Financial)	3
ACCT 222	Principles of Accounting II (Managerial)	3
BUSA 111	Introduction to Business	3
BLAW 230	Business Law	3
BMGT 150	Income Taxation	3
MGT 201	Introduction to 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

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		
ACCT 200	A Survey of Accounting	3
BUSA 111	Introduction to Business	3
OECS 211	Word Processing Applications	3
Credits		9
Spring		
MGT 201	Introduction to Management	3
BLAW 230	Business Law	3
OECS 215	Spreadsheet Applications	3
Credits		9
Second Year		
Fall		
ACCT 221	Principles of Accounting I (Financial)	3
OECS 220	Database Application and Design	3
Credits		6
Spring		
ACCT 222	Principles of Accounting II (Managerial)	3
OECS 200	Accounting on Microcomputers	3
BMGT 150	Income Taxation	3
Credits		9
Total Credits		33

Banking - Certificate

Core Curriculum Requirements

BCIS 110	Fundamentals of Information Literacy and Systems	3
ACCT 221	Principles of Accounting I (Financial)	3
ACCT 222	Principles of Accounting II (Managerial)	3
BLAW 230	Business Law	3
BMGT 112	Banks and Your Money	3
Approved BMGT Elective		3
BMGT 225 or BMGT 213	Introduction to Commercial Lending Consumer Lending	3
ECON 251G	Principles of Macroeconomics	3
ENGL 203G	Business and Professional Communication	3
MGT 201	Introduction to Management	3
OECS 215	Spreadsheet Applications	3
Total Credits		33

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		
ACCT 221	Principles of Accounting I (Financial)	3
BCIS 110	Fundamentals of Information Literacy and Systems	3
BMGT 112	Banks and Your Money	3
Credits		9
Spring		
ACCT 222	Principles of Accounting II (Managerial)	3
Approved BMGT Elective		3
BLAW 230	Business Law	3
Credits		9
Second Year		
Fall		
OECS 215	Spreadsheet Applications	3
BMGT 225 or BMGT 213	Introduction to Commercial Lending or Consumer Lending	3
ENGL 203G	Business and Professional Communication	3
Credits		9
Spring		
ECON 251G	Principles of Macroeconomics	3
MGT 201	Introduction to 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 111G Rhetoric and Composition 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.

Agriculture - Associate of Applied Science (p. 59)

AG E 100. Introductory to Food and Agribusiness Management **3 Credits**

Orientation to agricultural supply businesses, farm and ranch production, food markets, food processing and distribution, and food consumption. Microeconomic principles for managers. May be repeated up to 3 credits.

AG E 101. Careers in Food and Agribusiness **1 Credit**

Orientation to agribusiness management. 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. May be repeated up to 1 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Freshman status only or obtain consent of instructor.

AG E 200. 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.

AG E 210G. Survey of Food and Agricultural Issues **3 Credits**

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 210G.

AG E 236. Principles of Food and Agribusiness Management **3 Credits**

Description and application of management and financial principles, market planning, and organization theory in small business situations. May be repeated up to 3 credits.

AG E 250. Technology and Communication for Business Management **3 Credits (2+2P)**

Understanding and improving skills for data analysis, information management and communication is the focus of this course. Drawing examples from a variety of management, business, technological and research situations, students discover the versatility and variety of uses of computer applications such as spreadsheet, database, presentation and document software. Emphasizing a 'hands-on' approach students learn the foundations of these tools and their use.

AG E 260. Introduction to Food and Agribusiness Accounting **3 Credits**

Purpose and methods of keeping and analyzing farm and ranch records. Net worth and income statements, efficiency measures, analysis of the business, and tax computations. May be repeated up to 3 credits.

Agriculture - Associate of Applied Science

Agriculture - Associate not available 2018-2019.

Branch Requirement

COLL 101	College/Life Success	3
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General Education Core Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
COMM 253G or COMM 265G	Public Speaking Principles of Human Communication	3
PSY 201G or SOC 101G	Introduction to Psychology Introductory Sociology	3

Core Curriculum Requirements

AG E 100	Introductory to Food and Agribusiness Management	3
AG E 210G	Survey of Food and Agricultural Issues	3
AG E 236	Principles of Food and Agribusiness Management	3
AGRO 100G	Introductory Plant Science	4
AGRO 250	Plant Propagation	3
ANSC 100	Introductory Animal Science	3
ANSC 100 L	Introductory Animal Science Laboratory	1
ANSC 200	Introduction to Meat Animal Production	3
AXED 105	Techniques in Agricultural Mechanization	3
AXED 201G	Effective Leadership and Communication in Agricultural Organizations	3
WELD 105	Introduction to Welding	3

Related Requirements

C S 110	Computer Literacy	3
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory	4
ECON 251G or ECON 252G	Principles of Macroeconomics Principles of Microeconomics	3
MATH 120	Intermediate Algebra	3
GOVT 100G	American National Government	3

Humanities Elective

Select one from the following: 3

ART 101G	Orientation in Art	
ENGL 115G	Perspectives on Literature	
ENGL 116G	Perspectives on Film	
ENGL 220G	Introduction to Creative Writing	
ENGL 244G	Literature and Culture	
HIST 101G	Roots of Modern Europe	
HIST 102G	Modern Europe	
HIST 201G	Introduction to Early American History	
HIST 202G	Introduction to Recent American History	
MUS 101G	An Introduction to Music	
MUS 201G	History of Jazz in Popular Music: A Blending of Cultures	

THTR 101G	The World of Theatre	
Total Credits		67

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		
ANSC 100 & 100 L	Introductory Animal Science and Introductory Animal Science Laboratory	4
AGRO 100G	Introductory Plant Science	4
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
C S 110	Computer Literacy	3
	Credits	18

Spring

ANSC 200	Introduction to Meat Animal Production	3
AG E 210G	Survey of Food and Agricultural Issues	3
AXED 201G	Effective Leadership and Communication in Agricultural Organizations	3
ENGL 203G	Business and Professional Communication	3
MATH 120	Intermediate Algebra	3
WELD 105	Introduction to Welding	3
	Credits	18

Second Year

Fall

AG E 100	Introductory to Food and Agribusiness Management	3
AXED 105	Techniques in Agricultural Mechanization	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
ECON 251G or ECON 252G	Principles of Macroeconomics or Principles of Microeconomics	3
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory	4
	Credits	16

Spring

AG E 236	Principles of Food and Agribusiness Management	3
AGRO 250	Plant Propagation	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
GOVT 100G	American National Government	3
Humanities elective		3
	Credits	15
	Total Credits	67

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 111G Rhetoric and Composition 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.

New Mexico General Education Common Core Certificate (p. 61)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

General Studies - Associate Degree (p. 61)

Associate of Arts Degree (p. 60)

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 111G Rhetoric and Composition 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.

General Education Common Core

Area I: English & Communication		
ENGL 111G	Rhetoric and Composition	4
Select one from the following:		3
ENGL 203G	Business and Professional Communication	
ENGL 211G	Writing in the Humanities and Social Sciences	

ENGL 218G	Technical and Scientific Communication	
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
Area II: Mathematics		
Select 3 credits from a MATH or STAT "G" course		3
Area III: Laboratory Science		
Select 8 credits from Science "G" courses with a lab from ASTR, BIOL, CHEM, ES, GEOG (must be GEOG 111G if selected), GEOL, or PHYS		8
Area IV & V: Social/Behavioral Science & Humanities/Fine Arts		
Select 15 credits from the following:		15
Select 2-3 Social/Behavioral Science "G" courses from ANTH, CJ, CEP, ECON, GEOG (must be GEOG 112G or 120G if selected), GOVT, PHLS, LING, PSY, SOC, or SWK		
Select 2-3 Humanities/Fine Arts "G" courses from ART, ENGL, HIST, MUS, or THTR		
Branch Requirement		
COLL 101	College/Life Success	3
Electives		
Select 27 credits of electives ¹		27
Total Credits		66

¹ No more than 9 credits may be from any combination of: BOT, CMT, COLL, NURS, RDG, OE, UNIV (excluding UNIV 150 The Freshman Year Experience), or applied ART/MUS/THTR. Also, no more than 9 credits of PE may apply.

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		
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
Area III		4
Area IV/V		3
Elective		4
Credits		18
Spring		
Area II		3
Select one from the following:		3
ENGL 203G	Business and Professional Communication	
ENGL 211G	Writing in the Humanities and Social Sciences	
ENGL 218G	Technical and Scientific Communication	
Area III		4
Area IV/V		3
Elective		3
Credits		16

Second Year**Fall**

COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
Area IV/V		3
Elective		3
Elective		3
Elective		4
Credits		16

Spring

Area IV/V		3
Area IV/V		3
Elective		3
Elective		3
Elective		4
Credits		16
Total Credits		66

General Studies - Associate Degree

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 111G Rhetoric and Composition 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.

Branch and Geneneral Education Common Core Requirements

COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
Electives		
Select 59 credits of electives ¹		59
Total Credits		66

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.

New Mexico General Education Common Core Certificate

General Education Common Core*Area I: English & Communication*

ENGL 111G	Rhetoric and Composition	4
Select one from the following:		3
ENGL 203G	Business and Professional Communication	
ENGL 211G	Writing in the Humanities and Social Sciences	

ENGL 218G	Technical and Scientific Communication	
COMM 253G or COMM 265G	Public Speaking Principles of Human Communication	3
<i>Area II: Mathematics</i>		
Select 3 credits from a MATH or STAT "G" course		3
<i>Area III: Laboratory Science</i>		
Select 8 credits from Science "G" courses with a lab from ASTR, BIOL, CHEM, ES, GEOG (must be GEOG 111G if selected), GEOL, or PHYS		8
<i>Area IV & V: Social/Behavioral Science & Humanities/Fine Arts</i>		
Select 15 credits from the following:		15
Select 2-3 Social/Behavioral Science "G" courses from ANTH, CJ, CEP, ECON, GEOG (must be GEOG 112G or 120G if selected), GOVT, PHLS, LING, PSY, SOC, or SWK		
Select 2-3 Humanities/Fine Arts "G" courses from ART, ENGL, HIST, MUS, or THTR		
Total Credits		36

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
Fall		
ENGL 111G	Rhetoric and Composition	4
Area II		3
Area III		4
Area IV/V		3
Area IV/V		3
Credits		17
Spring		
Select one from the following:		3
ENGL 203G	Business and Professional Communication	
ENGL 211G	Writing in the Humanities and Social Sciences	
ENGL 218G	Technical and Scientific Communication	
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
Area III		4
Area IV/V		3
Area IV/V		3
Credits		16
Summer		
Area IV/V		3
Credits		3
Total Credits		36

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; the last 15 credits taken at NMSU.

AAS in Auto Body Collision and Repair: ENGL 111G Rhetoric and Composition 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 completed at NMSU.

Auto Body Collision Repair - Associate of Applied Science (p. 64)

Automotive Refinishing - Certificate (p. 65)

Non-Structural Collision Repair - Certificate (p. 65)

Structural Collision Repair - Certificate (p. 66)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

AUTO 102. Electrical Measuring Instruments **2 Credits (1+2P)**

Selection, operation, and care of electrical measuring instruments.

AUTO 103. Auto Mechanics Fundamentals **4 Credits (2+4P)**

Theory and operation of all areas of auto mechanics. Basic repair and maintenance operations.

AUTO 105. Welding **4 Credits (2+4P)**

Set-up and adjustment of oxyacetylene and arc welding equipment, identification of metals and rod application. Skill development in laying weld beads and different weld positions.

AUTO 111. Automotive Mechanics Basics **4 Credits**

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. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): AUTO 113. Restricted to Community Colleges campuses only.

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 118. Technical Math for Mechanics **3 Credits (2+3P)**

Mathematical applications for the automotive trade.

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**

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 161. Non-Structural Repair**4 Credits (2+4P)**

This basic auto body course is designed to develop the students understanding of general shop safety using hand tools, pneumatic tools and power tools. This course will also cover straightening fundamentals, plastic and composite repair, panel replacement, and adjustments.

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.

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**

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**

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 295. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes.

Auto Body Collision Repair - Associate of Applied Science

Branch Requirement

COLL 101	College/Life Success	3
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General Education Common Core Requirements

COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Core Curriculum Requirements

AUTO 118	Technical Math for Mechanics	3
AUTO 120	Electrical Systems	4
Approved AUTO Elective		3
AUTO 221	Cooperative Experience I	3
AUTO 161	Non-Structural Repair	4
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	3
Total Credits	76

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		
AUTO 118	Technical Math for Mechanics	3
Approved AUTO Elective		3
AUTO 172	Introduction to Automotive Refinishing	4
Approved AUTO Elective		3
	Credits	13
Spring		
AUTO 120	Electrical Systems	4
AUTO 161	Non-Structural Repair	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
COLL 101	College/Life Success	3
	Credits	11
Spring		
AUTO 163	Advanced Non-Structural Repair II	4
AUTO 178	Automotive Overall Refinishing	4
ENGL 111G	Rhetoric and Composition	4
	Credits	12
Third Year		
Fall		
AUTO 164	Automotive Industry Collision Repair I	4
AUTO 165	Automotive Industry Collision Repair II	4
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
	Credits	11
Spring		
AUTO 181	Frame and Structural Repair	4
AUTO 182	Structural Panel Replacement	4
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
	Credits	11
	Total Credits	73

Automotive Refinishing - Certificate

Core Curriculum Requirements

AUTO 118	Technical Math for Mechanics	3
Approved AUTO Elective		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
Total Credits		25

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
AUTO 118	Technical Math for Mechanics	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

Core Curriculum Requirements

AUTO 118	Technical Math for Mechanics	3
AUTO 161	Non-Structural Repair	4
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		3
Total Credits		26

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
AUTO 161	Non-Structural Repair	4
AUTO 162	Advanced Non-Structural Repair I	4
AUTO 164	Automotive Industry Collision Repair I	4
Approved AUTO Elective		3
	Credits	15
Spring		
AUTO 118	Technical Math for Mechanics	3
AUTO 163	Advanced Non-Structural Repair II	4
AUTO 165	Automotive Industry Collision Repair II	4
	Credits	11
	Total Credits	26

Structural Collision Repair - Certificate

Core Curriculum Requirements

AUTO 118	Technical Math for Mechanics	3
AUTO 161	Non-Structural Repair	4
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		3
Total Credits		26

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
AUTO 118	Technical Math for Mechanics	3
AUTO 161	Non-Structural Repair	4
AUTO 181	Frame and Structural Repair	4
Approved AUTO Elective		3
Credits		14
Spring		
AUTO 162	Advanced Non-Structural Repair I	4
AUTO 163	Advanced Non-Structural Repair II	4
AUTO 182	Structural Panel Replacement	4
Credits		12
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 (NAFEF).

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; the last 15 credits taken at NMSU.

AAS in Automotive Technology: ENGL 111G Rhetoric and Composition 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. TOTAL CREDITS REQUIRED FOR DEGREE: (63)

Automotive Technology - Certificate (p. 69)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who

attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Automotive Technology - Associate of Applied Science (p. 68)

AUTO 102. Electrical Measuring Instruments

2 Credits (1+2P)

Selection, operation, and care of electrical measuring instruments.

AUTO 103. Auto Mechanics Fundamentals

4 Credits (2+4P)

Theory and operation of all areas of auto mechanics. Basic repair and maintenance operations.

AUTO 105. Welding

4 Credits (2+4P)

Set-up and adjustment of oxyacetylene and arc welding equipment, identification of metals and rod application. Skill development in laying weld beads and different weld positions.

AUTO 111. Automotive Mechanics Basics

4 Credits

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. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): AUTO 113. Restricted to Community Colleges campuses only.

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 118. Technical Math for Mechanics

3 Credits (2+3P)

Mathematical applications for the automotive trade.

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**

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 161. Non-Structural Repair**4 Credits (2+4P)**

This basic auto body course is designed to develop the students understanding of general shop safety using hand tools, pneumatic tools and power tools. This course will also cover straightening fundamentals, plastic and composite repair, panel replacement, and adjustments.

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.

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**

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**

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 295. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes.

Automotive Technology - Associate of Applied Science

Common Core & Related Requirements

COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Core Curriculum Requirements

AUTO 112	Basic Gasoline Engines	5
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AUTO 117	Electronic Analysis and Tune-Up of Gasoline Engines	5
AUTO 118 or OETS 118	Technical Math for Mechanics 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 or AUTO 132	Basic Automatic Transmission Automotive Air-Conditioning and Heating Systems	4
AUTO 137	Fuel Systems and Emission Controls	4
Related Requirements		
Approved BMGT Elective		3
OECS 105 or OECS 227	Introduction to Information Technology Computer Applications for Technicians	3
OETS 102	Career Readiness Certification Preparation	1
Elective under General Education Course Area 4: Social/ Behavioral Sciences or Area 5: Humanities and Fine Arts.		3
Total Credits		63

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		
AUTO 112	Basic Gasoline Engines	5
AUTO 120	Electrical Systems	4
AUTO 126	Suspension, Steering, and Alignment	5
ENGL 111G	Rhetoric and Composition	4
Credits		18
Spring		
AUTO 117	Electronic Analysis and Tune-Up of Gasoline Engines	5
AUTO 125	Brakes	5
AUTO 137	Fuel Systems and Emission Controls	4
General Education Elective Area 4 or Area 5		3
Credits		17
Second Year		
Fall		
AUTO 119	Manual Transmission/Clutch	5
AUTO 118 or OETS 118	Technical Math for Mechanics or Mathematics for Technicians	3
ENGL 203G	Business and Professional Communication	3
OECS 105 or OECS 227	Introduction to Information Technology or Computer Applications for Technicians	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
Credits		17

Spring

AUTO 127 or AUTO 132	Basic Automatic Transmission or Automotive Air-Conditioning and Heating Systems	4
OETS 102	Career Readiness Certification Preparation	1
Approved BMGT Elective		3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
Credits		11
Total Credits		63

Automotive Technology - Certificate

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 or AUTO 132	Basic Automatic Transmission Automotive Air-Conditioning and Heating Systems	4
AUTO 137	Fuel Systems and Emission Controls	4

Related Program Requirements

OETS 102	Career Readiness Certification Preparation	1
AUTO 118 or OETS 118	Technical Math for Mechanics Mathematics for Technicians	3
DRFT 190	Finding and Maintaining Employment	2
Total Credits		43

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		
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

AUTO 118 or OETS 118	Technical Math for Mechanics or Mathematics for Technicians	3
Credits		8
Spring		
AUTO 127 or AUTO 132	Basic Automatic Transmission or Automotive Air-Conditioning and Heating Systems	4
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; the last 15 credits taken at NMSU.

AAS in Building Technology: ENGL 111G Rhetoric and Composition 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. TOTAL CREDITS REQUIRED FOR DEGREE: (61)

Building Trades - Certificate (p. 72)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Building Technology - Associate of Applied Science (p. 72)

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 and 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 and BCT 103.

BCT 103. Introduction to Construction Laboratory **3 Credits**

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 and 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 and 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 and BCT 116.

BCT 116. Basic Carpentry Lab**2 Credits**

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 or 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**

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 119. Plumbing 1B**3 Credits (2+2P)**

This course continues the introduction of 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.

Prerequisite(s): BCT 117.

BCT 130. Professional Development and Leadership**1 Credit**

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. S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

BCT 150. Forklift Operation**1 Credit**

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**

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 222. Alternative Building**3 Credits (2+2P)**

Exploration of different types of building techniques and materials other than the traditional wood framed structures. Materials and techniques will include adobe, straw bale, insulated concrete forms, rammed earth and structural insulated panels with an emphasis on "green building" methods. Restricted to: Community Colleges only.

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

Common Core Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
or ENGL 203G	Business and Professional Communication	
COMM 265G	Principles of Human Communication	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Prerequisite Requirements

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

Technical 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	4
BCT 290	Special Problems in Building Technology	3

Electives

Select 3 credits from General Education Area 4 or Area 5	3
Total Credits	61

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		
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
DRFT 160	Construction Take-Offs and Estimating	3
ENGL 111G	Rhetoric and Composition	4
	Credits	18

Second Year**Fall**

BCT 110	Blueprint Reading for Building Trades	4
BCT 255	Special Topics	4
BCT 118	Math for Building Trades	3
DRFT 105	Technical Drawing for Industry	3
ENGL 203G or ENGL 218G	Business and Professional Communication or Technical and Scientific Communication	3
	Credits	17

Spring

BCT 290	Special Problems in Building Technology	3
COMM 265G	Principles of Human Communication	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
Elective from General Education Area 4 or Area 5		3
Credits		12
Total Credits		61

Building Trades - Certificate

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

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		
BCT 100	Building Trades I	8
BCT 104	Woodworking Skills I	3
	Credits	11
Spring		
BCT 200	Building Trades II	8
BCT 105	Woodworking Skills II	3
	Credits	11

Second Year**Fall**

BCT 110	Blueprint Reading for Building Trades	4
BCT 255	Special Topics	1-6
	Credits	5-10

Spring

BCT 290	Special Problems in Building Technology	1-4
	Credits	1-4
	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 111G Rhetoric and Composition 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.

Business Management - Associate of Applied Science (p. 75)

BMGT 110. Introduction to Business**3 Credits**

Terminology and concepts of the business field. Role of accounting, computers, business management, finance, labor, and international business in our society. Restricted to: Community Colleges only.

BMGT 112. Banks and Your Money**3 Credits**

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**

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**

Analysis of customer behavior, persuasive communication, process of the sales interview. Restricted to: Community Colleges only.

BMGT 136. Fundamentals of Buying and Merchandising**3 Credits**

Covers operational aspects of procuring and selling merchandise for the retail store. Procedures covered are buying, receiving, pricing strategies, sales promotions and operational controls. Restricted to: Community Colleges only.

BMGT 138. Advertising**3 Credits**

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**

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**

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**

Introduction to business etiquette based on tradition, social expectations, and professional behavior standards. Restricted to: Community Colleges only.

BMGT 191. ENACTUS (Students in Free Enterprise)**1 Credit**

ENACTUS is an international organization promoting and teaching business entrepreneurship. Students learn teamwork, leadership, and networking skills by participating in regional and national business competitions and community service projects. May be repeated up to 6 credits. Restricted to: BMGT or Pre-Business majors. Restricted to Community Colleges only.

BMGT 201. Work Readiness and Preparation**3 Credits**

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**

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**

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 210. Marketing**3 Credits**

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. Crosslisted with: MKTG 203. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 212. Supervisory and Leadership Trends**3 Credits**

Current trends in marketing, merchandising, sales promotion and management; in manufacturing, merchandising and service types of businesses. Extensive use of practical student project. Restricted to Community Colleges only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 213. Consumer Lending**3 Credits**

Principles of credit evaluation, types of credit, marketing, collections, legal aspects, installment lending, leasing management, insurance, and rate structure and yields. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 112.

BMGT 215. Banks and the Money Supply**3 Credits**

Practical application of the economics of money and banking. Required of all students electing the banking option. Restricted to: Community Colleges only.

BMGT 216. Business Math**3 Credits**

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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

BMGT 225. Introduction to Commercial Lending**3 Credits**

Commercial lending overview, the lending process, portfolio management, and regulation and business development. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 112.

BMGT 231. Legal Issues in Business**3 Credits**

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. May be repeated up to 3 credits.

Restricted to Community Colleges campuses only.

BMGT 232. Personal Finance**3 Credits**

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 235. Credit Administration**3 Credits**

Covers factors influencing and determining loan policy: methods of credit investigation and analysis, credit techniques, credit problems, and types of loans. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 112.

BMGT 239. Visual Marketing Techniques**3 Credits**

Provides a basic understanding of visual marketing and merchandising techniques. The importance of effective presentation of a store and its merchandise is covered, as is line, balance and artistic display. Restricted to: Community Colleges only.

BMGT 240. Human Relations**3 Credits**

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 248. Introduction to Quality Management**3 Credits**

Introductory practices of total quality management practices aimed at all levels of an organization to continually improve performance to include competitiveness in today's business world. Restricted to: Community Colleges only.

BMGT 250. Diversity in the Workplace**3 Credits**

Concepts of culture, diversity, prejudice, and discrimination within the domestic workforce/society. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 260. Real Estate Practice**3 Credits**

This course is a requirement for licensure in real estate for the state of New Mexico. Topics covered include: real estate finance, settlement, foreclosure, federal taxation, valuation and appraisal, land descriptions and math skills. These topics are requirements of the New Mexico Real Estate Commission. Restricted to: Community Colleges only.

BMGT 264. Real Estate Law**3 Credits**

This course is a requirement for licensure in real estate for the state of New Mexico. Topics covered include: ownership of real estate, real estate brokerage relationships, contracts, environmental concerns and federal laws that affect real estate. These topics are requirements of the New Mexico Real Estate Commission. Restricted to: Community Colleges only. Crosslisted with: PL S 264

BMGT 268. Real Estate Broker's Basic Course**3 Credits**

State of New Mexico specific criteria that apply to real estate licensure: purchase agreements, listing agreements, New Mexico Rules and Regulations, and landlord tenant legislation. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 260 & BMGT 264.

BMGT 272. E-Commerce Operations**3 Credits**

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 CS 110 or BCIS 110.

BMGT 275. Entrepreneur I**3 Credits**

Introduces students to the concept of entrepreneurship and the the process of business startups. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 277. Small Business Management**3 Credits**

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): BMGT 275.

BMGT 280. Introduction to Human Resources**3 Credits**

Personnel functions encompassing job analysis, recruitment, selection, training, appraisals, discipline, and terminations. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111 or B A 104.

BMGT 282. Introduction to International Business Management**3 Credits**

Overview of the social, economic and cultural environment of international business transactions. Restricted to Community Colleges only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 285. Introduction to Manufacturing Operations**3 Credits**

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): (BMGT 110 or BUSA 111) and (BMGT 140 or MGT 201).

BMGT 286. Introduction to Logistics**3 Credits**

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**

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): BMGT 110 or BUSA 111.

BMGT 290. Applied Business Capstone**3 Credits**

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. May be repeated up to 3 credits. Restricted to: BMGT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): (BMGT 110 or BUSA 111), and (BMGT 140 or MGT 201), and (BMGT 240 or SOC 101 or PSY 201), and MKTG 203 and FIN 206.

BMGT 298. Independent Study**3 Credits**

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 of Applied Science

General Education Requirements

COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
ECON 201G	Introduction to Economics	3
or ECON 251G	Principles of Macroeconomics	
or ECON 252G	Principles of Microeconomics	
ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
or BOT 209	Business and Technical Communications	
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Related Requirements

ACCT 221	Principles of Accounting I (Financial)	3
or BOT 120	Accounting Procedures I	
BMGT 110	Introduction to Business	3
or BUSA 111	Introduction to Business	
BMGT 140	Principles of Supervision I	3
or MGT 201	Introduction to Management	
BMGT 210	Marketing	3
or MKTG 203	Introduction to Marketing	
BOT 106	Business Mathematics	3
or MATH 120	Intermediate Algebra	
FIN 206	Introduction to Finance	3
OECS 215	Spreadsheet Applications	1-3
or OECS 220	Database Application and Design	
or BOT 211	Information Processing I	
or BOT 217	Powerpoint Presentation	

Technical Requirements

BMGT 201	Work Readiness and Preparation	3
BMGT 221	Internship I	3
BMGT 231	Legal Issues in Business	3
or BLAW 316	Legal Environment of Business	

BMGT 290	Applied Business Capstone	3
General Management Courses		
Select four from the following:		12
BMGT 212	Supervisory and Leadership Trends	
BMGT 248	Introduction to Quality Management	
BMGT 250	Diversity in the Workplace	
BMGT 277	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		59-61

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		
ACCT 221 or BOT 120	Principles of Accounting I (Financial) or Accounting Procedures I	3
BMGT 110 or BUSA 111	Introduction to Business or Introduction to Business	3
BMGT 201	Work Readiness and Preparation	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
ENGL 111G	Rhetoric and Composition	4
Credits		16
Spring		
BMGT 140 or MGT 201	Principles of Supervision I or Introduction to Management	3
BOT 106 or MATH 120	Business Mathematics or Intermediate Algebra	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
ENGL 218G	Technical and Scientific Communication	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
OECS 215 or OECS 220 or BOT 211 or BOT 207	Spreadsheet Applications or Database Application and Design or Information Processing I or Machine Transcription	
Credits		15
Second Year		
Fall		
BMGT 231 or BLAW 316	Legal Issues in Business or Legal Environment of Business	3
ECON 201G or ECON 251G or ECON 252G	Introduction to Economics or Principles of Macroeconomics or Principles of Microeconomics	3

FIN 206	Introduction to Finance	3
General Management course		3
General Management course		3
Credits		15
Spring		
BMGT 221	Internship I	3
BMGT 210 or MKTG 203	Marketing or Introduction to Marketing	3
BMGT 290	Applied Business Capstone	3
General Management course		3
General Management course		3
Credits		15
Total Credits		61

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; the last 15 credits taken at NMSU.

Associate in Business Office Technology: ENGL 111G Rhetoric and Composition 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.

Business Office Technology - Certificate (p. 80)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Business Office Technology - Associate Degree (p. 79)

BOT 101. Keyboarding Basics

3 Credits (2+2P)

Covers correct fingering and mastery of the keyboard to develop skillful operation. Formatting basic business letters, memos, and manuscripts.

BOT 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: BOT 101 or consent of instructor.

BOT 105. Business English I**3 Credits**

Training and application of the fundamentals of basic grammar, capitalization and sentence structure (syntax).

BOT 106. Business Mathematics**3 Credits (2+2P)**

Mathematical applications for business, including training in the touch method of the 10-key calculator.

Prerequisite: CCDM 103 N or adequate score on math placement exam.

BOT 109. Business English II**3 Credits**

Training and application of the fundamentals of punctuation, numbers, basic writing and editing skills.

Prerequisite: C or better in BOT 105.

BOT 110. Records Management**3 Credits**

Principles, methods and procedures for the selection, operation and control of manual and automated records systems.

BOT 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.

BOT 121. Accounting Procedures II**3 Credits (2+2P)**

Continuation of BOT 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): BOT 120 or ACCT 221.

BOT 135. Keyboarding Technique Review**3 Credits**

Emphasis on improving keyboarding speed and accuracy.

Prerequisite: BOT 101 or equivalent.

BOT 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 221 or BOT 120.

BOT 150. Medical Terminology**3 Credits**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as NURS 150 and OEHO 120.

BOT 169. Spanish Grammar for Business Administration**3 Credits**

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.

BOT 170. Office Communications in Spanish I**3 Credits**

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. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 169, Spanish-speaking ability, and computer keyboarding ability.

BOT 171. Office Communications in Spanish II**3 Credits**

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.

Prerequisite: BOT 101 or BOT 170.

BOT 191. Taking Minutes & Proofreading**3 Credits**

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. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 109 or consent of instructor.

BOT 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.

Prerequisites: BOT 102 and BOT 109, or consent of instructor.

BOT 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.

Prerequisites: BOT 213 or C S 110G or consent of instructor.

BOT 205. Microcomputer Accounting I**3 Credits (2+2P)**

Introduction to automated accounting systems on microcomputers.

Prerequisite: working knowledge of computers and accounting or consent of instructor.

BOT 206. Microcomputer Accounting II**3 Credits (2+2P)**

Microcomputer accounting applications, integrating spreadsheets, word processing, graphics, and database. May be repeated up to 3 credits.

Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 121 or BOT 215.

BOT 207. Machine Transcription**3 Credits (2+2P)**

Creating office documents using transcribing equipment and microcomputer software. Emphasis on proofreading, editing and grammar.

Prerequisites: minimum keyboarding of 45 wpm and C or better in BOT 105 or BOT 109 or equivalent and BOT 211 or BOT 213.

BOT 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. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 109 or ENGL 111G, HIT 150 or AHS 120, and computer keyboarding ability or consent of instructor.

BOT 209. Business and Technical Communications**3 Credits**

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 111G and computer keyboarding ability or consent of instructor.

BOT 211. Information Processing I**3 Credits (2+2P)**

Defining and applying fundamental information processing concepts and techniques using the current version of leading software. Restricted to Community Colleges only.

Prerequisite(s): BOT 101 or consent of instructor.

BOT 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: BOT 101 or keyboarding proficiency.

BOT 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: BOT 213 or consent of instructor.

BOT 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.

BOT 217. Powerpoint Presentation**3 Credits**

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: BOT 211 or ability to demonstrate keyboarding and Windows proficiency.

BOT 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: BOT 211 or consent of instructor.

BOT 220. Internship in Business Office Technology**2 Credits**

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.

BOT 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 6 credits. Consent of Instructor required. Restricted to: BOT & HIT majors. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

BOT 222. Internship II**1-3 Credits**

Continuation of BOT 221. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: BOT & HIT majors. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 221 and consent of instructor.

BOT 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 BOT 209.

BOT 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. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 150 or AHS 120 and BOT 208.

BOT 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): BOT 223 and HIT 130.

BOT 239. Personal Development**3 Credits**

Development of a marketable, employable office systems person, to include interview, voice, manners, and apparel.

BOT 240. Introduction to Individual Taxation**3 Credits**

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.

BOT 241. Auditing and Business Issues**3 Credits**

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): BOT 120 or ACCT 221.

BOT 244. Tax Preparation**3 Credits**

Introduces basic federal and state tax codes for preparing individual income tax returns. Emphasis on use of tax software.

Prerequisite: keyboarding proficiency.

BOT 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: BOT 211.

BOT 255. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes.

BOT 260. Bookkeeping Simulation Capstone**3 Credits (2+2P)**

Refines the professional and technical skills students have learned while completing the BOT-Bookkeeping Assistant Option curriculum by demonstrating how coursework ties together. Designed as a bookkeeping assistant capstone course.

Prerequisite(s): BOT 121 or ACCT 221, BOT 140, BOT 205, and BOT 244, or consent of instructor.

BOT 270. Business Office Technology Capstone**3 Credits (2+2P)**

Refines professional skills learned in the BOT program and ties all BOT coursework together. Restricted to: Community Colleges only.

Prerequisite(s): BOT 102; and BOT 120; and BOT 209 or ENGL 203G or ENGL 218G; and BOT 211 or OECS 211.

Business Office Technology - Associate Degree

Common Core Requirements

COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
ECON 201G	Introduction to Economics	3
or ECON 251G	Principles of Macroeconomics	
or ECON 252G	Principles of Microeconomics	
ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Core Curriculum Requirements

Technical Requirements		
ACCT 200	A Survey of Accounting	3
BOT 102	Keyboarding: Document Formatting	3
BOT 105	Business English I	3
BOT 106	Business Mathematics	3

BOT 110	Records Management	3
BOT 239	Personal Development	3
or BMGT 201	Work Readiness and Preparation	
BOT 270	Business Office Technology Capstone	3
OECS 211	Word Processing Applications	3
OECS 215	Spreadsheet Applications	3
Additional Business Related Courses		
BLAW 230	Business Law	3
BUSA 111	Introduction to Business	3
Program Concentrations (Select one)		12
Accounting Concentration		
Administrative Assistant Concentration		
Total Credits		61

Accounting Concentration

ACCT 221	Principles of Accounting I (Financial)	3
ACCT 222	Principles of Accounting II (Managerial)	3
BMGT 150	Income Taxation	3
OECS 200	Accounting on Microcomputers	3
Total Credits		12

Administrative Assistant Concentration

BOT 202	Keyboarding Document Production	3
BOT 191	Taking Minutes & Proofreading	3
CMT 140	Print Media I	3
OECS 220	Database Application and Design	3
Total Credits		12

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		
BOT 102	Keyboarding: Document Formatting	3
BOT 106	Business Mathematics	3
BUSA 111	Introduction to Business	3
ECON 201G	Introduction to Economics	3
or ECON 251G	or Principles of Macroeconomics	
or ECON 252G	or Principles of Microeconomics	
ENGL 111G	Rhetoric and Composition	4
Credits		16
Spring		
ACCT 200	A Survey of Accounting	3
BOT 110	Records Management	3
ENGL 203G	Business and Professional Communication	3
OECS 211	Word Processing Applications	3
OECS 215	Spreadsheet Applications	3
Credits		15

Second Year**Fall**

BMGT 240	Human Relations	3
BOT 105 or PSY 201G or SOC 101G	Business English I or Introduction to Psychology or Introductory Sociology	3
BOT 239 or BMGT 201	Personal Development or Work Readiness and Preparation	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
Concentration		3
Accounting Concentration		
ACCT 221	Principles of Accounting I (Financial)	
Administrative Assistant Concentration		
CMT 140	Print Media I	
	Credits	15

Spring

BLAW 230	Business Law	3
BOT 270	Business Office Technology Capstone	3
Concentration		9
Accounting Concentration		
BMGT 150	Income Taxation	
ACCT 222	Principles of Accounting II (Managerial)	
OECS 200	Accounting on Microcomputers	
Administrative Assistant Concentration		
BOT 202	Keyboarding Document Production	
BOT 191	Taking Minutes & Proofreading	
OECS 220	Database Application and Design	
	Credits	15
	Total Credits	61

Business Office Technology - Certificate

Core Curriculum Requirements

ACCT 200	A Survey of Accounting	3
BOT 102	Keyboarding: Document Formatting	3
BOT 106	Business Mathematics	3
BOT 110	Records Management	3
BUSA 111	Introduction to Business	3
ECON 201G	Introduction to Economics	3
or ECON 251G	Principles of Macroeconomics	
or ECON 252G	Principles of Microeconomics	
ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
OECS 211	Word Processing Applications	3
OECS 215	Spreadsheet Applications	3
Total Credits		31

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		
BOT 102	Keyboarding: Document Formatting	3
BOT 106	Business Mathematics	3
BUSA 111	Introduction to Business	3
ECON 201G	Introduction to Economics	3
or ECON 251G	or Principles of Macroeconomics	
or ECON 252G	or Principles of Microeconomics	
ENGL 111G	Rhetoric and Composition	4
	Credits	16
Spring		
ACCT 200	A Survey of Accounting	3
BOT 110	Records Management	3
ENGL 203G	Business and Professional 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; the last 15 credits taken at NMSU.

AAS in Computer and Information Technology: ENGL 111G Rhetoric and Composition 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.

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Computer and Information Technology - Associate of Applied Science (p. 83)

OECS 101. Computer Basics

1 Credit

Hands-on instruction to introduce computer use and commonly used software. Graded S/U.

OECS 105. Introduction to Information Technology

3 Credits

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

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 150. Visual Basic Programming

3-4 Credits (3-4)

Introduction to algorithmic problem-solving concepts, structured programming design-oriented application programming interface development. Solutions to problems are implemented using the Visual Basic programming language in the Windows environment, with connection to Access databases as applicable.

Prerequisite(s)/Corequisite(s): OECS 220. 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

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

Fundamental accounting principles using popular microcomputer software to include G/L, A/R, A/P, purchase order, billing, inventory, and forecasting modules.

Prerequisite: ACCT 221 or BOT 121.

OECS 203. UNIX Operating System

1-3 Credits

Introduction to the UNIX operating system using Telnet to access a remote UNIX system. Basic UNIX commands and file system concepts.

Prerequisite: C S 110, BCIS 110 or OECS 105.

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

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. Prerequisite(s): . 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, C S 110, 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: C S 110, BCIS 110 or OECS 105.

OECS 213. Image Processing**1 Credit**

Introduction to digital imaging acquisition and editing. Use of digital cameras and computer graphic software for business and personal use. Graded S/U.

Prerequisites: C S 110, BCIS 110 or OECS 105.

OECS 214. Creating a Web Page**1 Credit**

Introduction to creating Web pages for business and personal use. Graded S/U.

Prerequisites: C S 110, BCIS 110 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: C S 110, BCIS 110 or OECS 105.

OECS 216. Programming for the Web**3 Credits**

Designing web-based applications using appropriate programming language(s) such as, but not limited to HTML, PHP, MySQL, SQL, Java, Perl, C or C++. May be repeated up to 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): One semester of any programming course.

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): C S 110 OR BCIS 110 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. 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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 221 and consent of instructor.

OECS 227. Computer Applications for Technicians**3 Credits**

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 232. Implementing and Supporting Networks I**3 Credits**

Knowledge and skills relating to post-installation and day-to-day administration tasks in a single-domain or multiple-domain network.

Prerequisite: OECS 230 or OECS 261.

OECS 234. Linux Server**3 Credits**

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 6 credits.

Prerequisite(s): OECS 128, OECS 203 or OECS 204.

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 Credits**

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. Restricted to: Community Colleges only.

Prerequisite(s): OECS 207.

OECS 245. Game Programming I**3 Credits**

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**

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**

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 255. Special Topics**1-4 Credits**

Topics to be announced in the Schedule of Classes.

OECS 260. Hypertext Markup Language (HTML)**1-3 Credits**

Coverage of HTML as used for web-page development for Internet and Intranet. Text manipulation, graphics, hypertext links, lists, and tables. May be repeated for a maximum of 3 credits.

Prerequisite: C S 110, BCIS 110 or OECS 105.

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. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 261.

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. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 262.

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. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 263.

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**

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 BOT 280.

Prerequisites: either BCIS 110, C S 110, 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. DAS Occupational Education, Dental Assisting. Restricted to: Community Colleges only.

Computer and Information Technology - Associate of Applied Science

Common Core Requirements		16
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
ECON 251G	Principles of Macroeconomics	3

or ECON 252G	Principles of Microeconomics	
ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	
Related Requirements		14-15
Select one from the following:		3
BCIS 110	Fundamentals of Information Literacy and Systems	3
or C S 110	Computer Literacy	
or E T 120	Computation Software	
MATH 120	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 222	Principles of Accounting II (Managerial)	2-3
or BCIS 110	Fundamentals of Information Literacy and Systems	
or BUSA 111	Introduction to Business	
or C S 110	Computer Literacy	
or E T 120	Computation Software	
or FIN 206	Introduction to Finance	
or MGT 201	Introduction to Management	
or MKTG 203	Introduction to Marketing	
Approved programming-related course		3
Technical Requirements		15-16
OECS 128	Operating Systems Linux/Unix	3
Select 3 credits from the following:		3
OECS 185	PC Maintenance and Repair I	1-3
or OECS 227	Computer Applications for Technicians	
or E T 283	Hardware PC Maintenance	
OECS 207	Windows	3
OECS 250	Systems Analysis and Design I	3
or OECS 290	Computer Technology Capstone	
Select 3-4 credits from the following:		3-4
OECS 261	Introduction to Networks	4
or E T 153	Introduction to Computer Networks	
or E T 155	Network Operating Systems I	
Program Concentration		
Select one from the following program concentrations:		15
IT Specialist		
Networking		
Programming		
Total Credits		60-62

The program is broken down into three program concentrations. Students must take 15 credit hours in one of the following concentrations to obtain their degree in that field.

IT Specialist Concentration

Approved computer-related courses	15
Total Credits	15

Networking Concentration

Select 15 credits from the following:	15
E T 253	Networking Operating Systems II
E T 277	Computer Networking I for IET
OECS 230	Data Communications and Networks I
OECS 231	Data Communications and Networks II
OECS 232	Implementing and Supporting Networks I
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	15

Programming Concentration

Select 15 credits from the following:	15
E T 253	Networking Operating Systems II
E T 283	Hardware PC Maintenance
OECS 140	Introduction to Game Production Industry
OECS 141	Introduction to Interactive Game Programming
OECS 150	Visual Basic Programming
OECS 192	C++ Programming I
OECS 195	Java Programming I
OECS 216	Programming for the Web
OECS 235	Structured Query Language (SQL)
OECS 245	Game Programming I
Total Credits	15

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		
ENGL 111G	Rhetoric and Composition	4
MATH 120	Intermediate Algebra (or alternate)	3
Select one from the following:		2-3
BCIS 110 or C S 110 or E T 120	Fundamentals of Information Literacy and Systems or Computer Literacy or Computation Software	
Program concentration course		3
Credits		12-13

Spring

ECON 251G or ECON 252G	Principles of Macroeconomics or Principles of Microeconomics	3
ENGL 203G or ENGL 218G	Business and Professional Communication or Technical and Scientific Communication	3
OECS 128	Operating Systems Linux/Unix	3
OECS 207	Windows	3
Program concentration course		3
Programming course		3
Credits		18

Second Year**Fall**

OECS 220	Database Application and Design	3
Select one from the following:		
OECS 185 or OECS 227 or E T 283	PC Maintenance and Repair I or Computer Applications for Technicians or Hardware PC Maintenance	3
OECS 261 or E T 153 or E T 155	Introduction to Networks or Introduction to Computer Networks or Network Operating Systems I	3-4
Program concentration course		3
Business/Computer elective		3
Credits		15-16

Spring

COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
OECS 250 or OECS 290	Systems Analysis and Design I or Computer Technology Capstone	3
Program concentration course		3
Program concentration course		3
Credits		15
Total Credits		60-62

Microcomputer Applications - Certificate

Core Curriculum Requirements

C S 110	Computer Literacy	3
COMM 265G	Principles of Human 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
OECS 260	Hypertext Markup Language (HTML)	3

OECS 280	Desktop Publishing I	3
Total Credits		32

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		
C S 110	Computer Literacy	3
OECS 125	Operating Systems	3
OECS 211	Word Processing Applications	3
OECS 255	Special Topics	1
Credits		10

Spring

COMM 265G	Principles of Human Communication	3
OECS 110	Introduction to Power Point	1
OECS 209	Computer Graphic Arts	3
OECS 215	Spreadsheet Applications	3
Credits		10

Second Year**Fall**

OECS 200	Accounting on Microcomputers	3
OECS 260	Hypertext Markup Language (HTML)	3
Credits		6

Spring

OECS 220	Database Application and Design	3
OECS 280	Desktop Publishing I	3
Credits		6
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 111G Rhetoric and Composition 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.

Criminal Justice - Associate in Criminal Justice (p. 86)

C J 101G. Introduction to Criminal Justice

3 Credits

Examination of crime and justice within the broader social and cultural context of U.S. society from interdisciplinary social science perspectives. Includes critical analysis of criminal justice processes and the ethical, legal, and political factors affecting the exercise of discretion by criminal justice professionals.

C J 199. Special Topics in Criminal Justice I

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.

C J 205. Criminal Law

3 Credits

Rules, principles, and doctrines of criminal liability in the United States. The historical development, limits, and functions of the substantive criminal law. May be repeated up to 3 credits.

C J 210. The American Law Enforcement System

3 Credits

Historical and philosophical foundations of law and order. An in-depth examination of the various local, state, and federal law enforcement agencies.

C J 221. Fundamentals of Criminal Investigation

3 Credits

Investigation procedures from crime scene searches, collection of evidence, and case preparation. Community Colleges only. (Note: students completing C J 221 may not take C J 321.)

C J 230. Introduction to Corrections

3 Credits

Development of correctional philosophy, theory, and practice. Instructional and non-institutional alternatives available in the corrections process.

C J 250. Courts and the Criminal Justice System

3 Credits

Structures and functions of American courts. Roles of attorneys, judges, and other court personnel; operation of petit and grand juries, trial and appellate courts.

C J 293. Field Experience in Criminal Justice

3-6 Credits

Field experience in a public criminal justice agency or equivalent private sector organization. Supervised internship experience, conferences, and observations. Restricted to majors. Community Colleges only.

Prerequisites: C J 101G, prior arrangement and consent of instructor and a GPA of 2.0 or better in major.

Criminal Justice - Associate in Criminal Justice

Common Core Requirements

Criminal Justice Degree Requirements		
C J 101G	Introduction to Criminal Justice	3
C J 205	Criminal Law	3
C J 210	The American Law Enforcement System	3
C J 230	Introduction to Corrections	3
C J 250	Courts and the Criminal Justice System	3
PHIL 100G	Philosophy, Law and Ethics	3

or PHIL 201G	Introduction to Philosophy	
or PHIL 211G	Informal Logic	
<i>Area I: English & Communications</i>		
ENGL 111G	Rhetoric and Composition	4
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
Select one from the following:		3
ENGL 203G	Business and Professional Communication	
ENGL 211G	Writing in the Humanities and Social Sciences	
ENGL 218G	Technical and Scientific Communication	
<i>Area II: Mathematics</i>		
MATH 121G	College Algebra	3
or STAT 251G	Statistics for Business and the Behavioral Sciences	
<i>Area III: Laboratory Science</i>		8
Select 2 from the 100-200 level Lab Sciences G courses.		
<i>Area IV: Social/Behavioral Science</i>		6
Select two from the 100-200 level Social/Behavioral Sciences G courses.		
<i>Area V: Humanities/Fine Art</i>		3
Select one from the 100-200 level Humanities/Fine Arts G courses		
Second Language Requirements for Associate Degree		8
1) Completion of a second language through the 112 level or 2) Completion of a second language through the 113 or 114 level for Heritage speakers or 3) Fulfilling one of the alternatives (see an advisor for specifics)		
<i>Degree Requirement</i>		
COLL 101	College/Life Success	1
Electives to bring total to 60 credits		
<i>Recommended Electives</i>		3
C J 221	Fundamentals of Criminal Investigation	
C J 293	Field Experience in Criminal Justice	
PSY 266	Applied Psychology	
ENGL 203G	Business and Professional Communication	
or ENGL 211G	Writing in the Humanities and Social Sciences	
or ENGL 218G	Technical and Scientific Communication	
A grade of C- or better is required in all Criminal Justice courses, Second Language courses, and any courses filling the Common 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.		
Total Credits		60

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		
C J 101G	Introduction to Criminal Justice	3
COLL 101	College/Life Success	1
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
ENGL 111G	Rhetoric and Composition	4
MATH 121G or MATH 210G or STAT 251G	College Algebra or Mathematics Appreciation or Statistics for Business and the Behavioral Sciences	3
Credits		14
Spring		
Social/Behavioral Science 100-200 G course		3
ENGL 203G or ENGL 211G or ENGL 218G	Business and Professional Communication or Writing in the Humanities and Social Sciences or Technical and Scientific Communication	3
Laboratory Science 100-200 G Course		4
PHIL 101G or PHIL 201G	The Art of Wondering or Introduction to Philosophy	3
C J 210	The American Law Enforcement System	3
Credits		16
Second Year		
Fall		
Foreign Language ¹		4
C J 221 or C J 293 or PSY 266	Fundamentals of Criminal Investigation ² or Field Experience in Criminal Justice or Applied Psychology	3
C J 205	Criminal Law	3
Laboratory Science 100-200 G Course		4
Credits		14
Spring		
C J 230	Introduction to Corrections	3
Foreign Language ³		4
C J 250	Courts and the Criminal Justice System	3
Humanities and Fine Arts 100-200 G course		3
Social/Behavioral Science 100-200 G course		3
Credits		16
Total Credits		60

¹ First of two consecutive levels.

² Or any second English 200 level.

³ Second of two consecutive levels.

Digital Media Technology

The **Digital Media Technology** program offers instruction and hands-on learning 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 Signage:** the design of digital content for digital media¹
- **Digital Storytelling:** the creation, implementation and distribution of digital storytelling¹
- **Digital Video:** video production techniques for digital media
- **Digital Video Game Animation:** video game design and development for entertainment
- **Digital Video Media Production:** the design and development of projects that combine narrative and music with digital imagery and sound¹

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; the last 15 credits taken at NMSU.

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

AAS in Digital Media Technology: ENGL 111G Rhetoric and Composition 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. TOTAL CREDITS REQUIRED FOR DEGREE: 60 credit hours

¹ Certificate not offered 2018-2019.

Digital Animation - Certificate (p. 91)

Digital Graphics - Certificate (p. 92)

Digital Signage - Certificate (p. 92)

Digital Storytelling - Certificate

Digital Video - Certificate (p. 93)

Digital Video Game Animation - Certificate (p. 93)

Digital Video Media Production - Certificate (p. 94)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Digital Media Technology - Associate of Applied Science (p. 94)

CMT 100. Introduction to Visual Communications 3 Credits

Overview of the process of crafting a digital product from conception to final. Incorporates basic principles of art and design, typography, layout, color and imagery, logos and advertising basics. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

CMT 108. Introduction to Media Technologies**1-3 Credits (1-3)**

Introduction to various media technologies. May be repeated up to 12 credits. Restricted to Community Colleges campuses only.

CMT 110. Introduction to Web Design**1 Credit**

Basics of creating simple web sites for personal use.

CMT 115. Digital Photography and Imaging I**3 Credits (2+2P)**

Principles and techniques of photography using digital equipment with an emphasis on lighting, focus, and composition.

CMT 120. Introduction to Creative Media**3 Credits (2+2P)**

Exploration and discovery of the creative processes through art, music, theater, narrative, and other avenues.

CMT 126. Film Crew Training I**9 Credits**

This course was designed in collaboration with the NM IATSE Local 480 union and the NM Film Office and focuses on providing hands-on training for students wishing to work on film crews. The course will offer an overview of the primary below-the-line craft areas of film production. Restricted to: Community Colleges only.

CMT 130. Introduction to Web Design**3 Credits (2+2P)**

Introduction to web development techniques, theory, and design. Incorporates HTML and industry-standard web editing software in developing various web sites. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): ART 161 OR CMT 145.

CMT 135. Introduction to 3D Computer Animation**3 Credits (2+4P)**

Learning to work in a 3D environment. Introduction to the basics of modeling, animation, dynamics, and rendering. Working with polygons, NURBS and subdivisions, and editing in multiple interfaces. May be repeated for a maximum of 6 credits.

CMT 140. Print Media I**3 Credits (2+2P)**

Creation and design of publications and presentation materials using page layout software. May be repeated for a maximum of 6 credits.

CMT 142. Computer Illustration**3 Credits (2+2P)**

Preparation of digital graphics with a vector or draw program for use in print, web, video, animations, and multimedia. May be repeated for a maximum of 6 credits.

CMT 145. Image Processing I**3 Credits (2+2P)**

Design and creation of digital graphics using a raster or bitmap program for use in print, multimedia, video, animation and web. May be repeated for a maximum of 6 credits.

CMT 150. 2D Animation**3 Credits (2+2P)**

Concepts and techniques in storyboarding and creating interactive 2D animations for web, multimedia and video.

Prerequisites: CMT 142.

CMT 151. 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.

CMT 155. 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. May be repeated up to 18 credits. Restricted to Community Colleges campuses only.

CMT 156. Film Crew Training II**9 Credits**

The purpose of this course is to provide applied training in a specific film production crew craft area, in which a student has decided to specialize. The various craft areas include but are not limited to, Art Dept., Grip, Electric, Sound, Production Office, Script Supervision, Props, Set Dressing, Locations, Special Effects, Hair/Makeup, Wardrobe, Production Assistant/Set Operations. Restricted to: Community Colleges only.

Prerequisite(s): CMT 126.

CMT 160. Modeling and Animation**3 Credits (2+2P)**

Building on student's knowledge of 2D animation, covers modeling, animating objects and scenes in a 3D environment using various camera and lighting effects. May be repeated for a maximum of 6 credits. Restricted to: Community Colleges only.

CMT 165. Writing and Storyboarding**3 Credits (2+2P)**

Learning good writing principles to create storyboards and scripts that communicate the overall picture of the project, timing, scene complexity, emotion, and resource requirements.

Prerequisite: CMT 135 or CMT 160.

CMT 170. History of Film: A Global Perspective**3 Credits**

Explores the history of cinema from the earliest 19th century developments to the present digital video revolution. Offers students a broader base of understanding of the tools and methodologies used in the craft.

CMT 175. 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: CMT 135 or CMT 160.

CMT 180. Design Principles**3 Credits (2+2P)**

Techniques and theories of design principles, including layout foundations, logo building, type, color, and story-boarding and their application to print, web, animation and video. Restricted to: Community Colleges only.

Prerequisite(s): CMT 142 or CMT 146.

CMT 182. Environmental Modeling, Shading and Lighting**3 Credits (2+4P)**

Modeling design techniques to create natural and architectural environments to be used for animated films and gaming. Study of various lighting techniques, shading and shadowing.

Prerequisite: CMT 135 or CMT 160.

CMT 185. 3D Shading and Lighting Techniques**3 Credits (2+4P)**

Study of various global, scene and character lighting techniques, shading and shadowing, and creating atmospheres and reflections that bring computer generated 3D scenes to life. Examines environmental and studio lighting to bring real life experience into the digital production process.

Prerequisite(s): CMT 135 or CMT 160.

CMT 190. Digital Video Production I**3 Credits (2+4P)**

A hands-on study of the tools and techniques used to produce the independent video. Through the production of various short projects, the student explores how the ideas of the writer/director are translated into a visual story. May be repeated for a maximum of 6 credits.

CMT 195. Digital Video Editing I**3 Credits (2+2P)**

A study of the basic tools and techniques of non-linear digital video editing. May be repeated for a maximum of 6 credits.

CMT 200. 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.

CMT 205. Cinematography**3 Credits (2+2P)**

Theory and techniques of visual design in cinematography and the aesthetics of lighting. May be repeated for a maximum of 6 credits. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 190.

CMT 206. Principles of Sound**3 Credits (2+2P)**

Study of soundtrack design theory, and the use of audio editing software that is compatible with media editing software to create soundtracks for different visual media. Pre/ Restricted to: Community Colleges only.

Corequisite(s): CMT 195.

CMT 210. 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: CMT 190.

CMT 215. Digital Video 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. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 195.

CMT 216. 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): CMT 115.

CMT 217. Layer Animation & 3D Applications in Photoshop**1 Credit**

This is an advanced course in Photoshop 2D techniques and motion graphic applications pertaining to the animation of Photoshop Layers juxtaposed over time and space relationships. Restricted to: CMT majors. Restricted to Community Colleges only.

Prerequisite(s): CMT 145.

CMT 218. Video for Social Interaction and Informal Commerce**3 Credits**

The use of DSLR video has opened the way for photographers to be able to add video as a component of expression. This course shows the ways that this tool can be used for on-line instructional videos, demonstrations and presentations. As more and more commercial entities become involved in YouTube and other social media, this becomes a vocationally viable form of visual communication. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: Community Colleges only.

CMT 220. 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: CMT 135 or CMT 160.

CMT 221. 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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of instructor.

CMT 222. Pre-production Management**3 Credits (2+2P)**

Pre-production planning paperwork breakdowns, budgeting, and scheduling; taking a project from start to finish from a producers standpoint.

Prerequisite: CMT 190.

CMT 223. Media Production Services**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: CMT 180 or ART 163.

CMT 224. Environmental Scene Design II**3 Credits**

Second level of 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. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 220.

CMT 225. Anatomical Character Design**3 Credits (2+4P)**

Focus on building anatomy-based 3D characters. Advanced study in NURBS, subdivisions, and polygon modeling techniques used to create fully functional and realist models. May be repeated for a maximum of 6 credits.

Prerequisite: CMT 175.

CMT 226. 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): CMT 156.

CMT 227. 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): CMT 160.

CMT 228. 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: CMT 200

CMT 229. 3D Digital Sculpting**3 Credits**

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): CMT 160.

CMT 230. Web Design II**3 Credits (2+2P)**

Creating and managing well-designed, organized web sites using HTML and web development software. May be repeated for a maximum of 6 credits. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 130.

CMT 235. Web Design for Small Businesses**3 Credits (2+2P)**

Technology and techniques for designing and building a web presence for small business. May be repeated for a maximum of 6 credits. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 130.

CMT 236. Digital Audio Fundamentals**3 Credits (2+2P)**

Advanced digital audio post production and recording techniques using current entertainment industry-standard software and hardware. Restricted to: Community Colleges only.

CMT 240. Print Media II**3 Credits (2+2P)**

Refining of technical design skills using advanced features of page layout software in preparing a variety of business-related documents. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 140.

CMT 242. 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): CMT 142.

CMT 245. Image Processing II**3 Credits (2+2P)**

Advanced techniques in editing and manipulation of raster images for digital graphics for print, multimedia and web. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 145.

CMT 247. Production Audio**3 Credits (2+2P)**

Essential tools and techniques in: field and studio recording and mixing, environmental assessment, film set protocol, various microphones, audio documentation, wildlines, ambient audio. Restricted to: Community Colleges only.

Prerequisite(s): CMT 190 and CMT 236.

CMT 248. Music Production and Mastering**3 Credits (2+2P)**

Introduction to fundamental tools and techniques in music production and mastering. Including: microphones and microphone techniques, live and studio recording, editing, mixing, and introduction to mastering digital audio. Restricted to: Community Colleges only.

Prerequisite(s): CMT 206 and CMT 236.

CMT 249. Layer Animation and 3D Applications in Photoshop**3 Credits**

This is an advanced course in Photoshop 3D techniques and motion graphic applications pertaining to the animation of Photoshop Layers juxtaposed over time and space relationships. May be repeated up to 6 credits. Restricted to Community Colleges only.

Prerequisite(s): CMT 245.

CMT 251. Gaming Platform and Standards**3 Credits (2+2P)**

Focus on the different gaming platforms and their corresponding gaming demographics and standards. May be repeated up to 6 credits. Restricted to: CMT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 200.

CMT 252. 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: CMT 200.

CMT 254. History of Media Design**3 Credits**

An introduction to the principles of design history and theory within a chronological framework of historical and emerging media.

CMT 255. Special Topics**1-4 Credits**

Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits.

CMT 256. Typography**3 Credits**

Foundation in typography with an emphasis on history of typography and the practical application and impact of font choices for print, web, animation and video. Deals with studies in font or letter construction and font choices focusing on design, application, incorporation, and visual impact. Restricted to: Community Colleges only.

Prerequisite(s): CMT 142.

CMT 258. 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: CMT 190.

CMT 260. 3D 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: CMT 160 or CMT 225.

CMT 265. Personal Character Development**3 Credits (2+4P)**

Focus on the development of personal character(s), from sketch to render. Develop complete biographies of character, then build, skin and animate with as many personal attributes as possible.

Prerequisite: CMT 225.

CMT 275. 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.

Prerequisites: CMT 145 and CMT 230.

CMT 276. Advanced Photography Workshops**1 Credit**

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): CMT 115.

CMT 285. Print Media III**3 Credits (2+2P)**

Refinement of skills needed to prepare a variety of documents for print and the service bureau. May be repeated for a maximum of 6 credits.

Prerequisite: CMT 140 or CMT 240.

CMT 290. 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.

Prerequisite: consent of instructor.

Corequisite: CMT 291.

CMT 291. 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.

Prerequisite: consent of instructor.

Corequisite: CMT 290.

CMT 292. 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.

Prerequisites: CMT 190 and CMT 195 or CMT 160.

CMT 294. Creative Media Studio II**3 Credits**

Second level of studio environment where students specialize in creating film-festival quality and portfolio ready projects under the supervision of faculty. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 292.

CMT 295. Professional Portfolio Design and 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.

Prerequisite(s): Consent of instructor.

CMT 298. 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.

Digital Animation - Certificate

Core Curriculum Requirements

CMT 142	Computer Illustration	3
CMT 145	Image Processing I	3
CMT 150	2D Animation	3
CMT 160	Modeling and Animation	3
CMT 175	3-D Character Design	3
CMT 227	Advanced Character Animation	3
CMT 290	Advanced 3d Animation Workshop A	3
CMT 291	Advanced 3d Animation Workshop B	3
Total Credits		24

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
CMT 142	Computer Illustration	3
CMT 145	Image Processing I	3
	Credits	6
Spring		
CMT 150	2D Animation	3
CMT 160	Modeling and Animation	3
	Credits	6
Second Year		
Fall		
CMT 175	3-D Character Design	3
CMT 227	Advanced Character Animation	3
	Credits	6
Spring		
CMT 290	Advanced 3d Animation Workshop A	3
CMT 291	Advanced 3d Animation Workshop B	3
	Credits	6
	Total Credits	24

Digital Graphics - Certificate

Core Curriculum Requirements

CMT 140	Print Media I	3
CMT 142	Computer Illustration	3
CMT 145	Image Processing I	3
CMT 180	Design Principles	3
CMT 230	Web Design II	3
CMT 240	Print Media II	3
	Approved CMT Electives	6
	Total Credits	24

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
CMT 140	Print Media I	3
CMT 145	Image Processing I	3
	Credits	6
Spring		
CMT 142	Computer Illustration	3
CMT 240	Print Media II	3
	Credits	6
Second Year		
Fall		
CMT 180	Design Principles	3
CMT 230	Web Design II	3
	Credits	6
Spring		
	Elective	3

Elective	3
Credits	6
Total Credits	24

Digital Signage - Certificate

Digital Signage Certificate not available 2018-2019.

Core Curriculum Requirements

CMT 140	Print Media I	3
CMT 142	Computer Illustration	3
CMT 145	Image Processing I	3
CMT 180	Design Principles	3
CMT 190	Digital Video Production I	3
CMT 195	Digital Video Editing I	3
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
OEGR 221	Cooperative Experience I	3
	Approved CMT or CS Electives	6
Total Credits		30

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
CMT 140	Print Media I	3
CMT 145	Image Processing I	3
	Credits	6
Spring		
CMT 142	Computer Illustration	3
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
Elective		3
	Credits	9
Second Year		
Fall		
CMT 180	Design Principles	3
CMT 190	Digital Video Production I	3
	Credits	6
Spring		
OEGR 221	Cooperative Experience I	3
CMT 195	Digital Video Editing I	3
Elective		3
	Credits	9
Total Credits		30

Digital Storytelling - Certificate

Digital Storytelling Certificate not available 2018-2019.

Core Curriculum Requirements

CMT 145	Image Processing I	3
CMT 190	Digital Video Production I	3
CMT 195	Digital Video Editing I	3
CMT 206	Principles of Sound	3
CMT 292	Creative Media Studio	3
CMT 295	Professional Portfolio Design and Development	3
ENGL 220G	Introduction to Creative Writing	3
Approved electives		6
Total Credits		27

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		
CMT 145	Image Processing I	3
CMT 190	Digital Video Production I	3
CMT 195	Digital Video Editing I	3
	Credits	9
Spring		
CMT 206	Principles of Sound	3
CMT 292	Creative Media Studio	3
	Credits	6
Second Year		
Fall		
ENGL 220G	Introduction to Creative Writing	3
Approved elective		3
	Credits	6
Spring		
CMT 295	Professional Portfolio Design and Development	3
Approved elective		3
	Credits	6
Total Credits		27

Digital Video - Certificate

Core Curriculum Requirements		
CMT 145	Image Processing I	3
CMT 170	History of Film: A Global Perspective	3
CMT 190	Digital Video Production I	3
CMT 195	Digital Video Editing I	3
CMT 205	Cinematography	3
CMT 210	Digital Video Production II	3
CMT 215	Digital Video Editing II	3
CMT 295	Professional Portfolio Design and Development	3
Total Credits		24

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
CMT 145	Image Processing I	3
CMT 170	History of Film: A Global Perspective	3
	Credits	6
Spring		
CMT 210	Digital Video Production II	3
CMT 215	Digital Video Editing II	3
	Credits	6
Second Year		
Fall		
CMT 190	Digital Video Production I	3
CMT 195	Digital Video Editing I	3
	Credits	6
Spring		
CMT 205	Cinematography	3
CMT 295	Professional Portfolio Design and Development	3
	Credits	6
Total Credits		24

Digital Video Game Animation - Certificate

Core Curriculum Requirements		
CMT 142	Computer Illustration	3
CMT 145	Image Processing I	3
CMT 150	2D Animation	3
CMT 160	Modeling and Animation	3
CMT 175	3-D Character Design	3
CMT 227	Advanced Character Animation	3
CMT 290	Advanced 3d Animation Workshop A	3
CMT 291	Advanced 3d Animation Workshop B	3
Approved CMT Electives		9
Total Credits		33

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
CMT 142	Computer Illustration	3
CMT 145	Image Processing I	3
	Credits	6
Spring		
CMT 150	2D Animation	3
CMT 160	Modeling and Animation	3
Approved CMT Elective		3
	Credits	9
Second Year		
Fall		
CMT 175	3-D Character Design	3

CMT 227	Advanced Character Animation	3
Approved CMT Elective		3
Credits		9

Spring

CMT 290	Advanced 3d Animation Workshop A	3
Approved CMT Elective		3
CMT 291	Advanced 3d Animation Workshop B	3
Credits		9
Total Credits		33

Digital Video Media Production - Certificate

Video Media Production Certificate not available 2018-2019.

Core Curriculum Requirements

CMT 126	Film Crew Training I	9
CMT 145	Image Processing I	3
CMT 170	History of Film: A Global Perspective	3
CMT 190	Digital Video Production I	3
CMT 195	Digital Video Editing I	3
CMT 205	Cinematography	3
CMT 210	Digital Video Production II	3
CMT 215	Digital Video Editing II	3
CMT 295	Professional Portfolio Design and Development	3
Total Credits		33

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
CMT 145	Image Processing I	3
CMT 170	History of Film: A Global Perspective	3
Credits		6
Spring		
CMT 190	Digital Video Production I	3
CMT 195	Digital Video Editing I	3
Credits		6
Second Year		
Fall		
CMT 126	Film Crew Training I	9
CMT 210	Digital Video Production II	3
CMT 215	Digital Video Editing II	3
Credits		15
Spring		
CMT 205	Cinematography	3
CMT 295	Professional Portfolio Design and Development	3
Credits		6
Total Credits		33

Digital Media Technology - Associate of Applied Science

Common Core & Related Requirements

CMT 145	Image Processing I	3
ART 101G	Orientation in Art	3
ART 150	Drawing I	3
ART 155	2-D Fundamentals	3
BUSA 111	Introduction to Business	3
COMM 265G	Principles of Human Communication	3
ENGL 111G	Rhetoric and Composition	4
ENGL 116G	Perspectives on Film	3
ENGL 235	Narrative: Principles of Story Across the Media	3
MATH 120	Intermediate Algebra	3
or MATH 210G	Mathematics Appreciation	
PSY 201G	Introduction to Psychology	3
OEGR 221	Cooperative Experience I	2
or CMT 223	Media Production Services	

Program Option 24

Select one from the following options: ¹

Digital Animation Certificate
Digital Graphics Certificate
Digital Video Certificate
Digital Video Game Animation Certificate ²

Total Credits 60

¹ For electives, select from ART, CMT, CMI, OCAN, OEGR, or OEPT.

² This program is slightly different in that BUSA 111 Introduction to Business and MATH 120 Intermediate Algebra/MATH 210G Mathematics Appreciation are not required courses for this option. All other program options in this degree plan require BUSA 111 Introduction to Business and MATH 120 Intermediate Algebra/MATH 210G Mathematics Appreciation.

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		
CMT 145	Image Processing I	3
ENGL 111G	Rhetoric and Composition	4
ART 101G	Orientation in Art	3
Program option		6
Credits		16
Spring		
ART 150	Drawing I	3
ART 155	2-D Fundamentals	3
PSY 201G	Introduction to Psychology	3
Program option		6
Credits		15

Second Year**Fall**

ENGL 116G	Perspectives on Film	3
MATH 120 or MATH 210G	Intermediate Algebra or Mathematics Appreciation	3
COMM 265G	Principles of Human Communication	3
Program option		6
	Credits	15

Spring

ENGL 235	Narrative: Principles of Story Across the Media	3
BUSA 111	Introduction to Business	3
OEGR 221 or CMT 225	Cooperative Experience I or Anatomical Character Design	3
Program option		6
	Credits	15
	Total Credits	61

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; the last 15 credits taken at NMSU.

AAS in Drafting and Graphics Technology: ENGL 111G Rhetoric and Composition 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.

Drafting and Graphics Technology: Architectural Drafting - Certificate (p. 99)

Drafting and Graphics Technology: General Drafting - Certificate (p. 99)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Drafting and Graphics Technology - Associate of Applied Science (p. 98)

DRFT 101. Introduction to Drafting and Design Technologies**1 Credit**

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**

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 120. Survey Equipment Fundamentals**2 Credits**

Introduces the application and the setup to the following surveying equipment: Automatic Level, Total station, and Global Positioning Systems. Field safety knowledge is required. Restricted to Community Colleges 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 161. Introduction to Construction Management**3 Credits**

Introduction to the construction industry and construction management; construction documents and contracts; project planning, scheduling and administration; construction site management; and the role of Building Information Modeling (BIM) in construction management. Pre/ Restricted to: Community Colleges only.

Corequisite(s): DRFT 151 or consent of instructor.

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. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 176. Solid Modeling, Rendering and Animation**3 Credits (2+2P)**

Introduction to three dimensional drafting and solid modeling, rendering and animation for architecture and engineering fields. Material application, mapping, and scene lighting will be introduced. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

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. May be repeated up to 3 credits. 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. Pre/ Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

Corequisite(s): DRFT 180.

DRFT 190. Finding and Maintaining Employment**2 Credits**

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 215. Construction Site Safety Management**3 Credits**

Construction safety, compliance, documentation, and reporting requirements for individuals with construction site safety management responsibilities. Students will have the opportunity to earn a 30-hour construction industry OSHA card. Consent of Instructor required.

Restricted to Community Colleges campuses only.

DRFT 222. Surveying Fundamentals**3 Credits (2+2P)**

Elementary surveying and civil drafting theory and techniques for non engineering majors. Includes traverse plotting, site plans, mapping, cross sections, and development of plan and profile drawings. Actual basic field measurement/surveying as well as extensive manual and CAD projects will be assigned. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 109 and MATH 190G.

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 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. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 180 or DRFT 181.

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. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 180 or DRFT 181.

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 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**

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 - Associate of Applied Science

Branch Requirement

COLL 101	College/Life Success	3
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Common Core Requirements

COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Core Curriculum Requirements

DRFT 112	Drafting Concepts/Computer Drafting Fundamentals I	4
DRFT 113	Drafting Concepts/Computer Drafting Fundamentals II	4
DRFT 130	General Building Codes	3

DRFT 143	Civil Drafting Fundamentals	3
DRFT 176	Solid Modeling, Rendering and Animation	3
DRFT 180	Residential Drafting	3
DRFT 181	Commercial Drafting	3
DRFT 288	Portfolio Development	3
Approved DRFT Elective		6
Program Options		
Architectural Technology or General Drafting		15
Total Credits		63

Architectural Technology Option

DRFT 160	Construction Take-Offs and Estimating	3
DRFT 230	Building Systems Drafting	3
DRFT 240	Structural Systems Drafting	3
Approved DRFT Electives		5
Total Credits		14

General Drafting Option

DRFT 151	Construction Principles and Print Reading	3
DRFT 276	Computer Rendering and Animation I	3
Approved DRFT Elective		8
Total Credits		14

Architectural Drafting

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		
DRFT 112	Drafting Concepts/Computer Drafting Fundamentals I	4
DRFT 130	General Building Codes	3
Approved DRFT elective		3
ENGL 111G	Rhetoric and Composition	4
COLL 101	College/Life Success	3
Credits		17
Spring		
DRFT 113	Drafting Concepts/Computer Drafting Fundamentals II	4
DRFT 160	Construction Take-Offs and Estimating	3
ENGL 218G	Technical and Scientific Communication	3
Approved drafting elective		3
PSY 201G	Introduction to Psychology	3
or SOC 101G	or Introductory Sociology	
Credits		16
Second Year		
Fall		
DRFT 143	Civil Drafting Fundamentals	3
DRFT 180	Residential Drafting	3
DRFT 230	Building Systems Drafting	3
Approved DRFT Elective		3

COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
Credits		15
Spring		
DRFT 176	Solid Modeling, Rendering and Animation	3
DRFT 240	Structural Systems Drafting	3
DRFT 288	Portfolio Development	3
DRFT 181	Commercial Drafting	3
Approve DRFT Elective		3
Credits		15
Total Credits		63

General Drafting

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		
DRFT 112	Drafting Concepts/Computer Drafting Fundamentals I	4
DRFT 130	General Building Codes	3
Approved DRFT elective		3
ENGL 111G	Rhetoric and Composition (DRFT elective)	4
COLL 101	College/Life Success (DRFT elective)	3
Credits		17
Spring		
DRFT 113	Drafting Concepts/Computer Drafting Fundamentals II	4
DRFT 276	Computer Rendering and Animation I	3
Approved DRFT elective		3
ENGL 218G	Technical and Scientific Communication	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
Credits		16
Second Year		
Fall		
Approved DRFT elective		6
DRFT 143	Civil Drafting Fundamentals	3
DRFT 180	Residential Drafting	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
Credits		15
Spring		
DRFT 151	Construction Principles and Print Reading	3
DRFT 176	Solid Modeling, Rendering and Animation	3
DRFT 181	Commercial Drafting	3
DRFT 288	Portfolio Development	3

Elective	3
Credits	15
Total Credits	63

Drafting and Graphics Technology: Architectural Drafting - Certificate

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

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		
DRFT 101	Introduction to Drafting and Design Technologies	1
DRFT 112	Drafting Concepts/Computer Drafting Fundamentals I	4
DRFT 130	General Building Codes	3
Approved DRFT Elective		2
DRFT 109	Computer Drafting Fundamentals (DRFT elective)	3
Credits		13
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		28

Drafting and Graphics Technology: General Drafting - Certificate

Technical Requirements

DRFT 101	Introduction to Drafting and Design Technologies	1
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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 130	General Building Codes	3
DRFT 151	Construction Principles and Print Reading	3
DRFT 160	Construction Take-Offs and Estimating	3
DRFT 176	Solid Modeling, Rendering and Animation	3
DRFT 180	Residential Drafting	3
Total Credits		29

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		
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 176	Solid Modeling, Rendering and Animation	3
Credits		13
Spring		
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		12
Total Credits		25

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.

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.

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.

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Associate Degree in Early Childhood Education: ENGL 111G Rhetoric and Composition 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 Administrative - Certificate (p. 101)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Early Childhood Education - Associate Degree (p. 102)

ECED 115. Child Growth, Development, and Learning 3 Credits

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.

ECED 125. Health, Safety, and Nutrition 2 Credits

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.

ECED 135. Family and Community Collaboration 3 Credits

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.

Prerequisite(s): ECED 115 and ENGL 111G.

ECED 215. Curriculum Development Through Play 3 Credits

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 and 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 diverse abilities and the development of IFSP's and IEP's is included. Consent of instructor required.

Prerequisite(s): ECED 115 and ENGL 111G.

Corequisite(s): ECED 220.

ECED 220. Early Childhood Education Practicum I**2 Credits**

The beginning practicum course will provide experiences that address curriculum content that is relevant for children birth through age four in developmentally and culturally sensitive ways. Consent of instructor required.

Prerequisite(s): ECED 115 and ENGL 111G.

Corequisite(s): ECED 215.

ECED 225. Curriculum Development and Implementation II**3 Credits**

The second 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 diverse abilities and the development of IEP's is included. Consent of instructor required.

Prerequisite(s): ECED 115, ENGL 111G.

Corequisite(s): ECED 230.

ECED 230. Early Childhood Education Practicum II**2 Credits**

The second field-based curriculum course focuses on practicing developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Consent of instructor required.

Prerequisite(s): ECED 115, ENGL 111G,.

Corequisite(s): ECED 225.

ECED 235. Introduction to Language, Literacy and Reading**3 Credits**

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.

Prerequisite(s): ECED 115 and ENGL 111G.

ECED 245. Professionalism**2 Credits**

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.

ECED 255. Assessment of Children and Evaluation of Programs**3 Credits**

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. Crosslisted with: SPED 255

Prerequisite(s): ECED 115 and ENGL 111G.

ECED 265. Guiding Young Children**3 Credits**

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.

ECED 270. Program Management**3 Credits**

Technical knowledge necessary to develop and maintain a quality early care and education program. The course will focus on sound financial management and vision, laws and legal issues that affect programs and state and national standards including accreditation requirements.

Prerequisite: consent of instructor.

ECED 275. Curriculum for Diverse Learners and Their Families**3 Credits**

Implementation of family-centered programming that includes developmentally appropriate and culturally responsive curriculum. The course will also cover the establishment and maintenance of healthy and safe learning environments. Consent of instructor required.

ECED 276. Effective Program Development for Diverse Learners and Their Families**2 Credits**

Practical experience in observing and carrying out the role of the director/administrator in the implementation of family-centered programming that includes individually appropriate and culturally responsive curriculum in a healthy and safe learning environment. Consent of instructor required.

Restricted to ECED majors.

Corequisite(s): ECED 275.

ECED 280. Professional Relationships**3 Credits**

Development of staff relationships that will foster strong professional relationships with and among families, communities and advisory boards. Issues of staff recruitment, retention, support and supervision will lay a foundation for positive personnel management. Working effectively with board, advisory groups and community members and agencies will be addressed. Consent of instructor required.

Corequisite(s): ECED 281.

ECED 281. Professional Relationships Practicum**2 Credits**

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 280.

Early Childhood Administrative - Certificate

Core Courses

ECED 115	Child Growth, Development, and Learning	3
ECED 125	Health, Safety, and Nutrition	2
ECED 135	Family and Community Collaboration	3
ECED 255	Assessment of Children and Evaluation of Programs	3

Administrative Courses

ECED 270	Program Management	3
ECED 275	Curriculum for Diverse Learners and Their Families	3
ECED 276	Effective Program Development for Diverse Learners and Their Families	2
ECED 280	Professional Relationships	3

ECED 281	Professional Relationships Practicum	2
Total Credits		24

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		
ECED 115	Child Growth, Development, and Learning	3
ECED 255	Assessment of Children and Evaluation of Programs	3
ECED 275	Curriculum for Diverse Learners and Their Families	3
Credits		9
Spring		
ECED 125	Health, Safety, and Nutrition	2
ECED 235	Introduction to Language, Literacy and Reading	3
ECED 270	Program Management	3
Credits		8
Second Year		
Fall		
ECED 276	Effective Program Development for Diverse Learners and Their Families	2
ECED 280	Professional Relationships	3
ECED 281	Professional Relationships Practicum	2
Credits		7
Total Credits		24

Early Childhood Education - Associate Degree

Branch Requirement

COLL 101	College/Life Success	3
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Common Core Requirements

Area I: English & Communications

ENGL 111G	Rhetoric and Composition	4
ENGL 211G	Writing in the Humanities and Social Sciences	3
COMM 253G or COMM 265G	Public Speaking Principles of Human Communication	3

Area II: Mathematics

MATH 111	Fundamentals of Elementary Mathematics I	3
MATH 112G	Fundamentals of Elementary Math II	3

Area III: Laboratory Science

Select two from two different areas from the following: 8

ASTR 105G or ASTR 110G	The Planets Introduction to Astronomy	
BIOL 101G	Human Biology	
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory	

BIOL 211G & 211GL	Cellular and Organismal Biology and Cellular and Organismal Biology Laboratory	
CHEM 110G or CHEM 111G or CHEM 112G	Principles and Applications of Chemistry General Chemistry I General Chemistry II	
E S 110G	Introductory Environmental Science	
GEOG 111G	Geography of the Natural Environment	
GEOL 111G or GEOL 212G	Introductory Geology The Dynamic Earth	
PHYS 110G or PHYS 211G & 211GL	The Great Ideas of Physics General Physics I and General Physics I Laboratory	
Area IV: Social/Behavioral Sciences		
Select one from the following:		3
ANTH 201G	Introduction to Anthropology	
ECON 201G or ECON 251G or ECON 252G	Introduction to Economics Principles of Macroeconomics Principles of Microeconomics	
GEOG 112G or GEOG 120G	World Regional Geography Culture and Environment	
GOVT 100G or GOVT 110G	American National Government Introduction to Political Science	
SOC 101G	Introductory Sociology	
Area V: Humanities/Fine Arts		
HIST 101G or HIST 102G	Roots of Modern Europe Modern Europe	3
HIST 201G or HIST 202G	Introduction to Early American History Introduction to Recent American History	3
Select one from the following:		3
ART 101G	Orientation in Art	
MUS 101G	An Introduction to Music	
THTR 101G	The World of Theatre	
Professional Education Courses¹		
C EP 110G	Human Growth and Behavior	3
ECED 115	Child Growth, Development, and Learning	3
ECED 125	Health, Safety, and Nutrition	2
ECED 135	Family and Community Collaboration	3
ECED 215	Curriculum Development Through Play	3
ECED 220	Early Childhood Education Practicum I	2
ECED 225	Curriculum Development and Implementation II	3
ECED 230	Early Childhood Education Practicum II	2
ECED 235	Introduction to Language, Literacy and Reading	3
ECED 245	Professionalism	2
ECED 255	Assessment of Children and Evaluation of Programs	3
ECED 265	Guiding Young Children	3
Total Credits		71

- ¹ Cumulative GPA of 2.5 and a “C” or better required in these courses. CEP and ECED courses taken more than 7 years prior to graduation must be repeated.

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		
ECED 115	Child Growth, Development, and Learning	3
ECED 255	Assessment of Children and Evaluation of Programs	3
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
	Credits	16
Spring		
ECED 125	Health, Safety, and Nutrition	2
ECED 235	Introduction to Language, Literacy and Reading	3
C EP 110G	Human Growth and Behavior	3
ENGL 211G	Writing in the Humanities and Social Sciences	3
Area IV		3
Area V		3
	Credits	17
Summer		
ECED 135	Family and Community Collaboration	3
ECED 245	Professionalism	2
ECED 265	Guiding Young Children	3
	Credits	8
Second Year		
Fall		
ECED 215	Curriculum Development Through Play	3
ECED 220	Early Childhood Education Practicum I	2
MATH 111	Fundamentals of Elementary Mathematics I	3
Area III		4
Area V		3
	Credits	15
Spring		
ECED 225	Curriculum Development and Implementation II ¹	3
ECED 230	Early Childhood Education Practicum II ¹	2
MATH 112G	Fundamentals of Elementary Math II	3
Area III		4
Area V		3
	Credits	15
	Total Credits	71

- ¹ ECED 215 and 220 must be taken before ECED 225 and 230.

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 111G Rhetoric and Composition 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.

Education - Associate Degree (p. 104)

EDUC 101. Freshman Orientation

1 Credit

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.

EDUC 102. Internship I

3 Credits

Supervised experience in elementary education settings.

EDUC 103. Introduction with Internship in 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.

EDUC 150. Math for Paraprofessionals

3 Credits

Applied math skills for paraprofessionals working with children.

Prerequisite: CCDM 103.

EDUC 151. Math for Paraprofessionals II

3 Credits

Applied math skills for paraprofessionals working under the direction of a teacher.

Prerequisite: EDUC 150.

EDUC 181. Field Experience I

1 Credit

Introduction to public school teaching, school visits, classroom observations and discussion seminar.

EDUC 195. Individual Topics in Education

1-3 Credits

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.

EDUC 202. Internship II

3 Credits

Supervised experience in junior high settings.

Prerequisite: must be a co-op student.

EDUC 204. Foundations of Bilingual/ESL Education**3 Credits**

Explore and review the historical, legal, philosophical, theoretical and pedagogical paradigms of bilingual/ESL education.

EDUC 219. Pre-Teacher Preparation**3 Credits**

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.

EDUC 250. Introduction to Education**2 Credits**

An overview of the American education system with emphasis on organization, governance, law, demographics, and professional practice. Restricted to Las Cruces campus only.

EDUC 281. Introduction to Secondary Education and Youth**3 Credits**

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.

Education - Associate Degree

Branch Requirement

COLL 101	College/Life Success	3
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Common Core & Related Requirements*Area I: English & Communication*

ENGL 111G	Rhetoric and Composition	4
ENGL 211G	Writing in the Humanities and Social Sciences	3
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	

Area II: Mathematics

Select two from the following: 6

Elementary Education majors:		
MATH 111	Fundamentals of Elementary Mathematics I ¹	
MATH 112G	Fundamentals of Elementary Math II ¹	
Secondary Education majors:		
MATH 120	Intermediate Algebra ¹	
MATH 210G	Mathematics Appreciation ¹	

Area III: Laboratory Sciences

Select three from three different areas. Must include lab: 12

ASTR 105G	The Planets	
or ASTR 110G	Introduction to Astronomy	
BIOL 101G	Human Biology	
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory	
BIOL 211G & 211GL	Cellular and Organismal Biology and Cellular and Organismal Biology Laboratory	
CHEM 110G	Principles and Applications of Chemistry	
or CHEM 111G	General Chemistry I	

E S 110G	Introductory Environmental Science	
GEOG 111G	Geography of the Natural Environment	
GEOL 111G	Introductory Geology	
or GEOL 212G	The Dynamic Earth	
PHYS 110G	The Great Ideas of Physics	
or PHYS 211G & 211GL	General Physics I and General Physics I Laboratory	

Area IV: Social & Behavioral Sciences

Select two from two different areas: 6

ANTH 201G	Introduction to Anthropology	
ECON 201G	Introduction to Economics	
or ECON 251G	Principles of Macroeconomics	
or ECON 252G	Principles of Microeconomics	
GEOG 112G	World Regional Geography	
or GEOG 120G	Culture and Environment	
GOVT 100G	American National Government	
or GOVT 110G	Introduction to Political Science	
SOC 101G	Introductory Sociology	

Area V: Humanities & Fine Arts

HIST 101G	Roots of Modern Europe	3
or HIST 102G	Modern Europe	
HIST 201G	Introduction to Early American History	3
or HIST 202G	Introduction to Recent American History	
ART 101G	Orientation in Art	3
or MUS 101G	An Introduction to Music	
or THTR 101G	The World of Theatre	
Fine Arts elective (any ART/MUS/THTR course)		3

Professional Education Courses²

C EP 110G	Human Growth and Behavior	3
C EP 210	Educational Psychology	3
EDUC 181	Field Experience I	1
EDUC 101	Freshman Orientation	1
EDUC 250	Introduction to Education	2

Electives

Select 6 elective credits. 6

Suggested Courses

HIST 261	New Mexico History	
MATH 215	Fundamentals of Elementary Mathematics III	
SPAN 111	Elementary Spanish I (recommended)	
SPAN 212	Intermediate Spanish II	

Total Credits 65

¹ Note: MATH 111 Fundamentals of Elementary Mathematics I & MATH 112G Fundamentals of Elementary Math II or MATH 120 Intermediate Algebra & MATH 210G Mathematics Appreciation must be completed together. SPAN 111 Elementary Spanish I is recommended as an elective.

² Cumulative GPA of 2.5 and a "C" or better required in these courses. CEP, EDUC & ELA courses taken more than 7 years prior to graduation must be repeated.

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		
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
C EP 110G	Human Growth and Behavior	3
EDUC 101	Freshman Orientation	1
Area IV		3
	Credits	14
Spring		
ENGL 211G	Writing in the Humanities and Social Sciences	3
Area V		3
C EP 210	Educational Psychology	3
Area III		4
Area IV		3
	Credits	16
Second Year		
Fall		
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
Area V		3
Area II		3
Area III		4
Area V		3
Elective		3
	Credits	19
Spring		
EDUC 250	Introduction to Education	2
EDUC 181	Field Experience I	1
Area V		3
Area II		3
Area III		4
Elective		3
	Credits	16
	Total Credits	65

Electrical Trades and Electronics Technology

The **Electrical Trades** and **Electronic Technology** programs prepare students for entry-level employment as electronic technicians or electrical tradesmen in a wide range of industries, including consumer electronics, industrial controls, avionics, manufacturing, construction, and computers.

The Electrical Trades certificate is designed for students who intend to enter the industrial workforce as maintenance persons, linemen, or building construction workers. Students will learn electricity theory, AC/DC circuits, maintenance and safety operation of industrial equipment,

the use and care of common measuring instrumentation, and National Electric Code branch circuits.

The AAS in Electronics Technology curriculum emphasizes how to fabricate, operate, test, troubleshoot and maintain existing electronic equipment and systems. Graduates will be prepared to work with hardware and gain basic knowledge of software.

Graduation Requirements

Certificate in Electrical Trades: 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; the last 15 credits taken at NMSU.

AAS in Electronics Technology: ENGL 111G Rhetoric and Composition 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.

Electrical Trades - Certificate (p. 106)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Electronics Technology - Associate of Applied Science (p. 107)

ELT 103. Math Study Skills for Electronics

1 Credit

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: AERT 123. Restricted to: Community Colleges only.

ELT 120. Mathematics for Electronics

4 Credits

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 120 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 120).

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 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.

ELT 295. Professional Development/Leadership**1 Credit**

As members and/or officers of student professional organizations, electronics technology students gain experience in leadership, team building, and community services. May be repeated for a maximum of 6 credit. Restricted to ELT and ET E majors.

Electrical Trades - Certificate

Core Curriculum Requirements

HVAC 102	Fundamentals of Electricity	4
HVAC 103	Electrical and Mechanical Controls I	4
MAT 110	Machine Operation and Safety	3
MAT 102	Print Reading for Industry	3
MAT 130	Applied Industrial Electricity I	4

OEET 115	Wiring Methods and Materials	5
OEET 205	National Electric Code	3
Approved OEMN or OEET Elective		4
Total Credits		30

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
HVAC 102	Fundamentals of Electricity	4
OEET 115	Wiring Methods and Materials	5
MAT 110	Machine Operation and Safety	3
MAT 130	Applied Industrial Electricity I	4
	Credits	16
Spring		
HVAC 103	Electrical and Mechanical Controls I	4
OEET 205	National Electric Code	3
Approved OEMN or OEET Elective		4
MAT 102	Print Reading for Industry	3
	Credits	14
	Total Credits	30

Electronics Technology - Associate of Applied Science

A grade of "C" or better is required in all English, ET, math and science courses. Students who place out of MATH 120 Intermediate Algebra must complete three credits of electives.

Branch Requirement

COLL 101	College/Life Success	3
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Common Core Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
COMM 265G or COMM 253G	Principles of Human Communication Public Speaking	3
MATH 120	Intermediate Algebra	3
MATH 121G	College Algebra	3
PHYS 211G & 211GL	General Physics I and General Physics I Laboratory	4
PHYS 212G & 212GL	General Physics II and General Physics II Laboratory	4

Core Curriculum Requirements

E T 104	Soldering Techniques	1
E T 120	Computation Software	2
E T 153	Introduction to Computer Networks	3
E T 182	Digital Logic	3
E T 183 & 183 L	Applied DC Circuits and Applied DC Circuits Lab	4
E T 184 & 184 L	Applied AC Circuits and Applied AC Circuits Lab	4
E T 246	Electronic Devices I	4
E T 262	Software Technology I	3

E T 272	Electronic Devices II	4
E T 273	Fundamentals of Networking Communications I	4
E T 276	Electronic Communications	3
E T 282	Digital Electronics	4
E T 283	Hardware PC Maintenance	3
E T 284	Software PC Maintenance	3
Total Credits		72

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		
E T 120	Computation Software	2
E T 183 & 183 L	Applied DC Circuits and Applied DC Circuits Lab	4
MATH 120	Intermediate Algebra	3
ENGL 111G	Rhetoric and Composition	4
COLL 101	College/Life Success	3
	Credits	16

Spring

E T 104	Soldering Techniques	1
E T 184 & 184 L	Applied AC Circuits and Applied AC Circuits Lab	4
E T 282	Digital Electronics	4
E T 283	Hardware PC Maintenance	3
E T 182	Digital Logic	3
MATH 121G	College Algebra	3
	Credits	18

Summer

COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
ENGL 218G	Technical and Scientific Communication	3
	Credits	6

Second Year

Fall

E T 153	Introduction to Computer Networks	3
E T 246	Electronic Devices I	4
E T 262	Software Technology I	3
E T 273	Fundamentals of Networking Communications I	4
PHYS 211G	General Physics I	3
	Credits	17

Spring

E T 272	Electronic Devices II	4
E T 276	Electronic Communications	3
E T 284	Software PC Maintenance	3

PHYS 212G & 212GL	General Physics II and General Physics II Laboratory	4
	Credits	14
	Total Credits	71

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; the last 15 credits taken at NMSU.

AAS in Emergency Medical Services: ENGL 111G Rhetoric and Composition 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.

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 Basic - Certificate (p. 110)

Emergency Medical Technician Intermediate - Certificate (p. 111)

Emergency Medical Technician Paramedic - Certificate (p. 113)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Emergency Medical Technician Paramedic - Associate of Applied Science (p. 111)

OEEM 101. CPR for the Health Care Professional

1 Credit

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

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 106. Advanced First Aid

2 Credits

Theory and advanced first aid skills taught emphasizing recognition and providing care for injury or sudden illness until professional medical help arrives. Course meets and/or exceeds the Red Cross or National Safety Council standards.

Corequisite: OEEM 101 or consent of instructor.

OEEM 115. First Responder Prehospital Professional

3 Credits (2+3P)

Provides training in prehospital medical and traumatic emergencies. Requires a C or better to pass. Restricted to majors.

Prerequisite: consent of instructor.

Corequisite: OEEM 101.

OEEM 116. Emergency Medical Technician Bridge

5 Credits (3+6P)

Enhanced skill instruction and didactic integration designed to meet the requirements for an EMT-Basic certificate. Requires a "C" or better to pass. May be repeated up to 5 credits. Consent of Instructor required.

Corequisite(s): OEEM 121.

Prerequisite(s)/Corequisite(s): OEEM 153. Prerequisite(s): OEEM 101, OEEM 115. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

OEEM 120. Emergency Medical Technician Basic

6 Credits

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

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**

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**

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**

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**

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**

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**

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 158. Emergency Medical Technician-Combination Refresher
2 Credits**

A comprehensive review of prehospital medicine for the prehospital care provider from the first responder level through the EMT Intermediate. New material relevant to recertification of the New Mexico First Responder, EMT Basic and EMT Intermediate licensure included. Graded S/U.

**OEEM 177. Emergency Medical Services Instructor
4 Credits**

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: 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: 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, OEEM 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**

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**

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**

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**

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**

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**

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. Pre/ Requires a C- or better to pass.

Corequisites: OEEM 240 Restricted to majors.

**OEEM 242. EMT-Paramedic Field Internship
3 Credits**

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**

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 247. Emergency Medical Technician - Paramedic Refresher
2 Credits (1+3P)**

A comprehensive review of prehospital emergency medicine for the EMT Paramedic. New material relevant to recertification of the New Mexico and Nationally Registered Paramedic licensure. Graded S/U.

**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

General Education and Common Core Requirements

ENGL 111G	Rhetoric and Composition	4
BOT/NURS 150	Medical Terminology	3
COMM 253G or COMM 265G	Public Speaking Principles of Human Communication	3

Program Requirements¹

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.

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		
ENGL 111G	Rhetoric and Composition	4
BOT 150 or NURS 150	Medical Terminology or Medical Terminology	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human 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

OEEM 151	Emergency Medical Technician Intermediate Field/Clinical	2
Total Credits		30

³ Students must enroll in these courses concurrently and score at least 80% on all departmental exams.

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		
ENGL 111G	Rhetoric and Composition	4
BOT 150 or NURS 150	Medical Terminology or Medical Terminology	3
BIOL 225	Human Anatomy and Physiology I	4
Credits		11
Spring		
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
MATH 120	Intermediate Algebra	3
BIOL 226	Human Anatomy and Physiology II	4
Credits		10
Second Year		
Fall		
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		9
Total Credits		30

Emergency Medical Technician Intermediate - Certificate

All courses must be completed with a C or higher.

General Education and Common Core Requirements

ENGL 111G	Rhetoric and Composition	4
BOT/NURS 150	Medical Terminology	3
COMM 253G or COMM 265G	Public Speaking Principles of Human Communication	3
MATH 120	Intermediate Algebra	3
BIOL 225	Human Anatomy and Physiology I	4
BIOL 226	Human Anatomy and Physiology II	4

Program Requirements³

OEEM 150	Emergency Medical Technician Intermediate	5
OEEM 150 L	Emergency Medical Technician Intermediate Lab	2

Emergency Medical Technician Paramedic - Associate of Applied Science

All courses must be completed with a C or higher.

Branch Requirement

COLL 101	College/Life Success	3
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General Education and Common Core Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
BOT/NURS 150	Medical Terminology	3
COMM 253G or COMM 265G	Public Speaking Principles of Human Communication	3
PSY 201G or SOC 101G	Introduction to Psychology Introductory Sociology	3

BIOL 225	Human Anatomy and Physiology I	4
BIOL 226	Human Anatomy and Physiology II	4
MATH 120	Intermediate Algebra	3
Supplemental Requirements ¹		
Select 9-15 credits from the following:		9-15
OEEM 150	Emergency Medical Technician Intermediate	
OEEM 150 L	Emergency Medical Technician Intermediate Lab	
OEEM 151	Emergency Medical Technician Intermediate Field/Clinical	
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
Approved OEEM Elective		3
OEEM 242	EMT-Paramedic Field Internship	3
OEEM 243	EMT-Paramedic Preparation for Practice	2
Total Credits		88-98

¹ Complete as needed according to program director.

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		
ENGL 111G	Rhetoric and Composition	4
BOT 150 or NURS 150	Medical Terminology or Medical Terminology	3
BIOL 225	Human Anatomy and Physiology I	4
COLL 101	College/Life Success	3
	Credits	14
Spring		
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3

MATH 120	Intermediate Algebra	3
BIOL 226	Human Anatomy and Physiology II	4
ENGL 203G or ENGL 218G	Business and Professional Communication or Technical and Scientific Communication	3
	Credits	13

Second Year

Fall

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
OEEM 206	Introduction to Advanced Prehospital Care	3
	Credits	12

Spring

OEEM 201	Human Pathophysiology	3
OEEM 202	EMT-Paramedic Respiratory Emergencies	3
OEEM 207	Introduction to Pharmacology	3
	Credits	9

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
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
	Credits	9

Fifth Year

Fall

OEEM 214	EMT-Paramedic: Medical Environmental Emergencies II	3
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OEEM 243	EMT-Paramedic Preparation for Practice	2
	Credits	5
Total Credits		88-92

Emergency Medical Technician Paramedic - Certificate

All courses must be completed with a C or higher.

Supplemental Requirements

Select 9-15 credits from the following: ⁴ 9-15

OEEM 150	Emergency Medical Technician Intermediate	
OEEM 150 L	Emergency Medical Technician Intermediate Lab	
OEEM 151	Emergency Medical Technician Intermediate Field/Clinical	

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
Approved OEEM Elective		3
OEEM 242	EMT-Paramedic Field Internship	3
OEEM 243	EMT-Paramedic Preparation for Practice	2
Total Credits		58-68

⁴ Complete as needed according to program director.

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		
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	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 242	EMT-Paramedic Field Internship	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

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 111G Rhetoric and Composition 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. TOTAL CREDITS REQUIRED FOR DEGREE: (60)

Engineering - Associate of Science (p. 114)

ENGR 100. 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.

Prerequisite(s)/Corequisite(s): MATH 121G.

ENGR 100H. 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. Pre/

Corequisite(s): MATH 190G.

ENGR 111. Mathematics for Engineering Applications 3 Credits

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 190G. Prerequisite(s): MATH 121G.

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.

Engineering - Associate of Science

All courses must be completed with a C or higher.

General Education/NM Common Core

Area I: English & Communication (10 credits)		
ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
or ENGL 211G	Writing in the Humanities and Social Sciences	
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
Area II: Mathematics (8 credits)		
MATH 191G	Calculus and Analytic Geometry I	4
MATH 192G	Calculus and Analytic Geometry II	4
Area III: Laboratory Sciences (8 credits)		
CHEM 111G	General Chemistry I	4
PHYS 215G & 215GL	Engineering Physics I and Engineering Physics I Laboratory	4
Area IV: Social/Behavioral Science (9 credits)		
ECON 251G	Principles of Macroeconomics	3
Social/Behavioral Science electives (6 credits)		6
Any two Social/Behavioral Sciences 100-200 G courses listed in the NM Common Core list.		

Area V: Humanities/Fine Arts (6 credits)		6
Any two Humanities/Fine Arts 100-200 G courses listed in the NM Common Core list.		
Related Requirements (13 credits)		13
ENGR 100	Introduction to Engineering	
C E 151	Introduction to Civil Engineering	
ENGR 111	Mathematics for Engineering Applications	
CHEM 112G or GEOL 111G	General Chemistry II or Introductory Geology	
Engineering Degree Electives (6-8 credits)		6
Select any two from the following:		
MATH 291G	Calculus and Analytic Geometry III	
PHYS 216G & 216GL	Engineering Physics II and Engineering Physics II Laboratory	
C E 233	Mechanics-Statics	
C E 256 & 256 L	Environmental Engineering and Science and Environmental Science Laboratory	
I E 152	Introduction to Industrial Engineering	
M E 240	Thermodynamics	
Approved E E courses		
Total Credits		60

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		
CHEM 111G	General Chemistry I	4
ENGL 111G	Rhetoric and Composition	4
ENGR 100	Introduction to Engineering	3
MATH 191G	Calculus and Analytic Geometry I	4
Credits		15
Spring		
COMM 265G or COMM 253G	Principles of Human Communication or Public Speaking	3
MATH 192G	Calculus and Analytic Geometry II	4
ENGR 111	Mathematics for Engineering Applications	3
C E 151	Introduction to Civil Engineering	3
CHEM 112G or GEOL 111G	General Chemistry II or Introductory Geology	4
Credits		17

Second Year		
Fall		
ENGR Elective		3-4
PHYS 215G & 215GL	Engineering Physics I and Engineering Physics I Laboratory	4
Social/Behavioral Science G course		3
ENGL 218G or ENGL 211G	Technical and Scientific Communication or Writing in the Humanities and Social Sciences	3

ECON 251G	Principles of Macroeconomics	3
	Credits	16-17
Spring		
Humanities/Fine Arts G course		3
ENGR Elective		3-4
Social/Behavioral Science G course		3
Humanities/Fine Arts G course		3
	Credits	12-13
	Total Credits	60-62

Facilities Maintenance Technology

The **Facilities Maintenance Technology** program equips students with the technical and management skills necessary to maintain, repair, troubleshoot, and manage modern maintenance programs in industrial plants, warehouses, hospitals, schools, and government buildings. Two options are available: Facilities Maintenance and Industrial maintenance.

Graduation Requirements

Certificate in Facilities Maintenance Technology: WorkKeys® scores of level 4 in Reading for Information, level 4 in Locating Information, and level 3 in Applied Mathematics; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU.

AAS in Facilities and Maintenance Technology: ENGL 111G Rhetoric and Composition 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.

Facilities Maintenance Technology - Certificate (p. 115)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Facilities Maintenance Technology - Associate of Applied Science (p. 115)

Facilities Maintenance Technology - Associate of Applied Science

Facilities Maintenance Technology - Associate not available 2018-2019.

Branch Requirement

COLL 101	College/Life Success	3
Common Core & Related Requirements		
ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
BCIS 110	Fundamentals of Information Literacy and Systems	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	
Technical Requirements		
HVAC 101	Fundamentals of Refrigeration	4

OETS 118	Mathematics for Technicians	3
Approved Elective		4
BCT 111	Small Equipment Maintenance and Repair	4
OEET 110	Basic Electricity and Electronics	4
Approved OEET Elective		4
Approved Elective		4
WELD 101	Fundamentals of Welding	3
Program Options		
Facilities Maintenance or Industrial Maintenance Option		22
Total Credits		71

Facilities Maintenance Option

Approved Program Electives	22
Total Credits	22

Industrial Maintenance Option

Approved Program Electives	22
Total Credits	22

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.

Facilities Maintenance Technology - Certificate

Facilities Maintenance Technology Certificate not available 2018-2019.

Certificate not offered 2018-2019

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.

Fire Science

The **Associate of Applied Science (AAS) degree in Fire Science** curriculum equips students with the knowledge base necessary for entry-level firefighters and includes a course equivalent to the Academy's "Firefighter I." Courses completed through the Certificate in Fire Science apply to the associate degree.

Graduation Requirements

Certificate in Fire Science: 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; the last 15 credits taken at NMSU.

AAS in Fire Science: ENGL 111G Rhetoric and Composition 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.

Fire Science - Certificate (p. 118)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who

attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Fire Science - Associate of Applied Science (p. 117)

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

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

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

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

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

This course will train students on 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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): FIRE 128. Restricted to Community Colleges campuses only.

FIRE 126. Fire Prevention

3 Credits

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

This course is a pre/co-requisite to FIRE 120. 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

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**

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**

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**

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**

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**

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**

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 226. Fire Investigations II**3 Credits**

This course is intended to provide the student with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and court-room testimony. Restricted to: Community colleges only.

FIRE 230. Fire Service Instructor**3 Credits**

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**

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**

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.

Fire Science - Associate of Applied Science

Fire Science - Associate not available 2018-2019.

Branch Requirement

COLL 101	College/Life Success	3
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General Course Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
CHEM 110G or CHEM 111G	Principles and Applications of Chemistry General Chemistry I	4
MATH 120	Intermediate Algebra	3
MGT 201	Introduction to Management	3
SOC 101G	Introductory Sociology	3

or SOC 201G	Contemporary Social Problems	
Core Curriculum Requirements		
FIRE 114	Fire Behavior and Combustion	3
FIRE 126	Fire Prevention	3
FIRE 128	Apparatus and Equipment	2
FIRE 200	Special Topics	2
FIRE 203	Fire and Emergency Services Administration	3
FIRE 210	Building Construction for Fire Protection	3
FIRE 223	Fire Investigations I	3
FIRE 224	Strategy and Tactics	3
Fire Science Electives		
Select three from the following:		9
FIRE 112	Principles of Emergency Services	
FIRE 202	Wildland Fire Control	
FIRE 225	Fire Protection Systems	
FIRE 230	Fire Service Instructor	
E T 312	Emergency Response to Hazardous Material Incidents	
Electives		
Select 9 credits from the following:		9
BCIS 110	Fundamentals of Information Literacy and Systems	
C S 110	Computer Literacy	
BLAW 230	Business Law	
C EP 110G	Human Growth and Behavior	
Any C J course		
COMM 265G	Principles of Human Communication	
GOVT 100G	American National Government	
GOVT 150G	American Political Issues	
HIST 202G	Introduction to Recent American History	
HIST 261	New Mexico History	
BOT/NURS 150	Medical Terminology	
PSY 201G	Introduction to Psychology	
Total Credits		63

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		
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
FIRE 114	Fire Behavior and Combustion	3
FIRE 126	Fire Prevention	3
FIRE 128	Apparatus and Equipment	2
Credits		15
Spring		
MATH 120	Intermediate Algebra	3
ENGL 218G	Technical and Scientific Communication	3
FIRE 200	Special Topics	2

FIRE 203	Fire and Emergency Services Administration	3
Fire Science Elective		6
Credits		17
Second Year		
Fall		
CHEM 110G or CHEM 111G	Principles and Applications of Chemistry or General Chemistry I	4
FIRE 210	Building Construction for Fire Protection	3
FIRE 223	Fire Investigations I	3
FIRE 224	Strategy and Tactics	3
Elective		3
Credits		16
Spring		
MGT 201	Introduction to Management	3
SOC 101G or SOC 201G	Introductory Sociology or Contemporary Social Problems	3
Fire Science Elective		3
Fire Science Elective		3
Elective		3
Elective		3
Credits		18
Total Credits		66

Fire Science - Certificate

Fire Science - Certificate not available 2018-2019.

Core Curriculum Requirements		
FIRE 114	Fire Behavior and Combustion	3
FIRE 126	Fire Prevention	3
FIRE 128	Apparatus and Equipment	2
FIRE 200	Special Topics	2
FIRE 203	Fire and Emergency Services Administration	3
FIRE 210	Building Construction for Fire Protection	3
FIRE 223	Fire Investigations I	3
FIRE 224	Strategy and Tactics	3
Electives		
Select two from the following:		6
FIRE 112	Principles of Emergency Services	
FIRE 202	Wildland Fire Control	
FIRE 225	Fire Protection Systems	
FIRE 230	Fire Service Instructor	
E T 312	Emergency Response to Hazardous Material Incidents	
Approved FIRE course		3
Total Credits		31

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
FIRE 114	Fire Behavior and Combustion	3

FIRE 126	Fire Prevention	3
FIRE 128	Apparatus and Equipment	2
	Credits	8
Spring		
	Approved FIRE course	3
FIRE 200	Special Topics	2
FIRE 203	Fire and Emergency Services Administration	3
	Credits	8
Second Year		
Fall		
FIRE 210	Building Construction for Fire Protection	3
FIRE 223	Fire Investigations I	3
Elective		3
	Credits	9
Spring		
FIRE 224	Strategy and Tactics	3
Elective		3
	Credits	6
	Total Credits	31

Hazardous Material Technology

The **Hazardous Materials** program is designed to prepare students for entry-level employment as technicians in hazardous materials emergency response, waste management, environmental protection, water and waste water treatment, and state and federal regulatory agencies.

Graduation Requirements

Certificate in Hazardous Materials: 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.

AAS in Hazardous Materials Technology: ENGL 111G Rhetoric and Composition 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.

Hazardous Material Technology - Certificate (p. 122)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Hazardous Material Technology - Associate of Applied Science (p. 121)

E T 101. Introduction to Engineering Technology 1 Credit

The development of engineering technology, with an introduction to engineering technology, education, and practice. Graded S/U.

E T 104. Soldering Techniques 1 Credit

Fundamentals of soldering, desoldering, and quality inspection of printed circuit boards.

E T 106. 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. Community Colleges only. Same as DRFT 112.

Prerequisite: OECS 125, OECS 207, or consent of instructor.

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

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 153. Introduction to Computer Networks 3 Credits

Introduction to basic computer network fundamentals including International Open Systems Interconnect (OSI), the seven-layer model, and various networking hardware devices. Community Colleges only.

E T 154. Construction Methods and Communications 3 Credits

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

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. Introduction to Information Engineering Technology 3 Credits

An information engineering technology approach to the basics of computer systems and data, computer architecture, hardware and software operation, networks, and data communications. May be repeated up to 3 credits.

E T 182. Digital Logic 3 Credits

The use of truth tables, Boolean equations, and diagrams to define, simplify, and implement logic-valued functions.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 121G.

E T 183 L. Applied DC Circuits Lab**1 Credit**

DC applied circuits lab. May be repeated up to 1 credits.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 190G. **Prerequisite(s):** E T 183.

E T 184 L. Applied AC Circuits Lab**1 Credit**

AC applied circuits lab May be repeated up to 1 credits.

Corequisite(s): E T 184.

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(s)/Corequisite(s): MATH 190G.

E T 191. Applied Circuits Laboratory**1 Credit**

Applied Circuits Lab May be repeated up to 1 credits.

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**

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. May be repeated up to 3 credits.

Prerequisite(s): MATH 190G and E T 262.

E T 210. Intermediate 3-D Modeling (Solid Works)**3 Credits (2+2P)**

Intermediate 3-D modeling. Applied modeling of techniques to prepare for SolidWorks certification (CSWA). May be repeated up to 3 credits.

Prerequisite(s): E T 110.

E T 217. Manufacturing Processes**3 Credits**

Introduction to manufacturing and processing, including: casting, forming, and machining. Emphasis on creating products with the appropriate techniques. May be repeated up to 3 credits. Crosslisted with: I E 217.

Prerequisite(s)/Corequisite(s): E T 217L. **Prerequisite(s):** E T 110 and MATH 121G.

E T 217 L. Manufacturing Processes Lab**1 Credit**

Hands-on laboratory in machine shop to apply topics from E T 217, including: casting, forming, and machining. May be repeated up to 1 credits.

Prerequisite(s)/Corequisite(s): E T 217.

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**

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**

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH191G.

Prerequisite(s): PHYS 211G or PHYS 215G.

E T 241. Applied Dynamics**3 Credits**

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. May be repeated up to 3 credits.

Prerequisite(s): E T 240, (MATH 235 or MATH 191G).

E T 245. Computer Hardware Fundamentals**3 Credits (2+2P)**

Computer hardware fundamentals including architecture, interfacing, peripherals, troubleshooting, system upgrades, and maintenance. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

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. May be repeated up to 4 credits.

Prerequisite(s): E T 190 or E T 184.

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(s): E T 155.

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**

Introduction to Linux system administration.

Prerequisite(s)/Corequisite(s): E T 160.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 182 or MATH 190G.

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. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH 191G.

Prerequisite(s): E T 246.

E T 273. Fundamentals of Networking Communications I**4 Credits (2+4P)**

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. Community Colleges only. May be repeated up to 4 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 153.

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 to WAN, protocols, switches, bridges, routers, NT server, TCP/IP networks, network diagnostics, voice over IP, wireless networks, and the OSI layers from physical to transport. May be repeated up to 3 credits.

Prerequisite(s): E T 182.

E T 280. Introduction to Multimedia**3 Credits**

Introduction to video, audio and other digital presentation methods.

Prerequisite(s): E T 255.

E T 282. Digital Electronics**4 Credits (3+3P)**

Applications of digital integrated circuits, multiplexers, counters, arithmetic circuits, and microprocessors. May be repeated up to 4 credits.

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**

Examines the field of information security within a real-world context of issues faced by today's IT professionals. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 283. **Prerequisite(s):** E T 156.

E T 286. Information Security Certification Preparation**4 Credits (3+1P)**

An overview of general security concepts for information technology systems.

Prerequisite(s): E T 285.

E T 287. PC Disaster and Data Recovery**3 Credits**

This course provides an overview of the various causes of personal computer data failure and methods to mitigate the loss of your personal computer data. The focus is on restoring your personal computer to full PC functionality and recovering lost and damaged files after one of these unforeseen problems. In addition, the course provides a means to lessen the impact of these inevitable events with the preparation of a disaster recovery plan.

Prerequisite(s): E T 120 or E T 122.

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**

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.

Hazardous Material Technology - Associate of Applied Science

Hazardous Material Technology - Associate not available 2018-2019.

Branch Course Requirement

COLL 101	College/Life Success	3
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Common Core & Related Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
COMM 265G	Principles of Human Communication	3
C S 110	Computer Literacy	3
MATH 120	Intermediate Algebra	3
PSY 201G	Introduction to Psychology	3

or SOC 101G Introductory Sociology

Core Course Requirements

Select one from the following:	4
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory
BIOL 221 & 221 L	Introductory Microbiology and Introductory Microbiology Laboratory
PHYS 211G & 211GL	General Physics I and General Physics I Laboratory
PHYS 212G & 212GL	General Physics II and General Physics II Laboratory
CHEM 111G	General Chemistry I
CHEM 112G	General Chemistry II
CHEM 211	Organic Chemistry
Approved E T Electives	26
E T 200	Special Topics
E T 312	Emergency Response to Hazardous Material Incidents
MATH 121G	College Algebra
or STAT 251G	Statistics for Business and the Behavioral Sciences
Total Credits	70

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

Hazardous Material Technology - Certificate

Hazardous Material Technology - Certificate not available 2018-2019.

Core Curriculum Requirements

CHEM 111G	General Chemistry I	4
Approved E T Electives		28
Total Credits		32

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

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 111G Rhetoric and Composition 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.

Health Information Technology - Certificate (p. 124)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Health Information Technology - Associate of Applied Science (p. 123)

HIT 110. Electronic Health Records**3 Credits**

Current electronic health record principles, methods and procedures, and computerized medical record concepts and software applications will be introduced. Restricted to: Community Colleges only.

Prerequisite(s): C S 110 or OECS 105.

HIT 120. Health Information Introduction to Pharmacology**3 Credits**

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.

HIT 130. Health Information Technology Anatomy & Physiology**3 Credits**

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**

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**

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. Restricted to: Community Colleges only.

HIT 158. Advanced Medical Terminology**3 Credits**

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**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 6 credits. Consent of Instructor required. Restricted to: HIT & BOT majors. S/U Grading (S/U, Audit). Restricted to Dona Ana campus only.

HIT 228. Medical Insurance Billing**3 Credits**

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**

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**

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**

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

All courses must be completed with a C or higher.

Common Core & Related Requirements

13

ENGL 111G	Rhetoric and Composition
ENGL 203G	Business and Professional Communication
COMM 265G	Principles of Human Communication
MATH 120	Intermediate Algebra

Related Requirements 15

C S 110	Computer Literacy
HIT/NURS 150	Introduction to Medical Terminology
HIT 158	Advanced Medical Terminology
MGT 201	Introduction to Management
STAT 251G	Statistics for Business and the Behavioral Sciences

Technical Requirements 34

AHS 140	Essentials of Anatomy and Physiology
AHS 202	Legal and Ethical Issues in Health Care
BOT 208/208	Medical Office Procedures
BOT/HIT 228	Medical Insurance Billing
HIT 120	Health Information Introduction to Pharmacology
HIT 140	Health Information Introduction to Pathophysiology
HIT 221	Internship I
HIT 240	Health Information Quality Management
HIT 248	Medical Coding I
HIT 258	Medical Coding II
HIT 268	Health Information Systems

Total Credits 62

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		
ENGL 111G	Rhetoric and Composition	4
HIT 150 or NURS 150 or BOT 150	Introduction to Medical Terminology or Medical Terminology or Medical Terminology	3
BOT 208	Medical Office Procedures	3
AHS 140	Essentials of Anatomy and Physiology	4
Credits		14
Spring		
MGT 201	Introduction to Management	3
HIT 158	Advanced Medical Terminology	3
AHS 202	Legal and Ethical Issues in Health Care	3
C S 110	Computer Literacy	3
HIT 228	Medical Insurance Billing	3
Credits		15
Summer		
STAT 251G	Statistics for Business and the Behavioral Sciences	3
Credits		3
Second Year		
Fall		
HIT 140	Health Information Introduction to Pathophysiology	3
HIT 248	Medical Coding I	3
HIT 268	Health Information Systems	3

HIT 120	Health Information Introduction to Pharmacology	3
ENGL 203G	Business and Professional Communication	3
Credits		15

Spring

HIT 240	Health Information Quality Management	3
HIT 258	Medical Coding II	3
MATH 120	Intermediate Algebra	3
COMM 265G	Principles of Human Communication	3
HIT 221	Internship I	3
Credits		15
Total Credits		62

Health Information Technology - Certificate

All courses must be completed with a C or higher.

Core Curriculum Requirements		10
ENGL 111G	Rhetoric and Composition	
COMM 265G	Principles of Human Communication	
MATH 120	Intermediate Algebra	
Related Requirements		9
C S 110	Computer Literacy	
HIT/NURS 150	Introduction to Medical Terminology	
HIT 158	Advanced Medical Terminology	
Program Requirements		13
AHS 140	Essentials of Anatomy and Physiology	
AHS 202	Legal and Ethical Issues in Health Care	
BOT 208	Medical Office Procedures	
BOT/HIT 228	Medical Insurance Billing	
Total Credits		32

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		
ENGL 111G	Rhetoric and Composition	4
HIT 150 or NURS 150	Introduction to Medical Terminology or Medical Terminology	3
BOT 208	Medical Office Procedures	3
AHS 140	Essentials of Anatomy and Physiology	4
COMM 265G	Principles of Human Communication	3
Credits		17
Spring		
AHS 202	Legal and Ethical Issues in Health Care	3
HIT 158	Advanced Medical Terminology	3
C S 110	Computer Literacy	3
HIT 228	Medical Insurance Billing	3

MATH 120	Intermediate Algebra	3
Credits		15
Total Credits		32

Health Physics

The **Health Physics** program is designed to prepare students for entry-level employment as technicians in hazardous materials emergency response, waste management, environmental protection, water and waste water treatment, and state and federal regulatory agencies.

Graduation Requirements

AAS in Health Physics: ENGL 111G Rhetoric and Composition 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.

Health Physics - Associate of Applied Science (p. 127)

E T 101. Introduction to Engineering Technology

1 Credit

The development of engineering technology, with an introduction to engineering technology, education, and practice. Graded S/U.

E T 104. Soldering Techniques

1 Credit

Fundamentals of soldering, desoldering, and quality inspection of printed circuit boards.

E T 106. 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. Community Colleges only. Same as DRFT 112.

Prerequisite: OECS 125, OECS 207, or consent of instructor.

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

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 153. Introduction to Computer Networks

3 Credits

Introduction to basic computer network fundamentals including International Open Systems Interconnect (OSI), the seven-layer model, and various networking hardware devices. Community Colleges only.

E T 154. Construction Methods and Communications**3 Credits**

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**

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. Introduction to Information Engineering Technology**3 Credits**

An information engineering technology approach to the basics of computer systems and data, computer architecture, hardware and software operation, networks, and data communications. May be repeated up to 3 credits.

E T 182. Digital Logic**3 Credits**

The use of truth tables, Boolean equations, and diagrams to define, simplify, and implement logic-valued functions.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 121G.

E T 183 L. Applied DC Circuits Lab**1 Credit**

DC applied circuits lab. May be repeated up to 1 credits.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 190G. Prerequisite(s): E T 183.

E T 184 L. Applied AC Circuits Lab**1 Credit**

AC applied circuits lab May be repeated up to 1 credits.

Corequisite(s): E T 184.

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(s)/Corequisite(s): MATH 190G.

E T 191. Applied Circuits Laboratory**1 Credit**

Applied Circuits Lab May be repeated up to 1 credits.

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**

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. May be repeated up to 3 credits.

Prerequisite(s): MATH 190G and E T 262.

E T 210. Intermediate 3-D Modeling (Solid Works)**3 Credits (2+2P)**

Intermediate 3-D modeling. Applied modeling of techniques to prepare for SolidWorks certification (CSWA). May be repeated up to 3 credits.

Prerequisite(s): E T 110.

E T 217. Manufacturing Processes**3 Credits**

Introduction to manufacturing and processing, including: casting, forming, and machining. Emphasis on creating products with the appropriate techniques. May be repeated up to 3 credits. Crosslisted with: I E 217.

Prerequisite(s)/Corequisite(s): E T 217L. Prerequisite(s): E T 110 and MATH 121G.

E T 217 L. Manufacturing Processes Lab**1 Credit**

Hands-on laboratory in machine shop to apply topics from E T 217, including: casting, forming, and machining. May be repeated up to 1 credits.

Prerequisite(s)/Corequisite(s): E T 217.

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**

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**

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH191G.

Prerequisite(s): PHYS 211G or PHYS 215G.

E T 241. Applied Dynamics**3 Credits**

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. May be repeated up to 3 credits.

Prerequisite(s): E T 240, (MATH 235 or MATH 191G).

E T 245. Computer Hardware Fundamentals**3 Credits (2+2P)**

Computer hardware fundamentals including architecture, interfacing, peripherals, troubleshooting, system upgrades, and maintenance. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

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. May be repeated up to 4 credits.

Prerequisite(s): E T 190 or E T 184.

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(s): E T 155.

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**

Introduction to Linux system administration.

Prerequisite(s)/Corequisite(s): E T 160.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 182 or MATH 190G.

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. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH 191G.

Prerequisite(s): E T 246.

E T 273. Fundamentals of Networking Communications I**4 Credits (2+4P)**

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. Community Colleges only. May be repeated up to 4 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 153.

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 to WAN, protocols, switches, bridges, routers, NT server, TCP/IP networks, network diagnostics, voice over IP, wireless networks, and the OSI layers from physical to transport. May be repeated up to 3 credits.

Prerequisite(s): E T 182.

E T 280. Introduction to Multimedia**3 Credits**

Introduction to video, audio and other digital presentation methods.

Prerequisite(s): E T 255.

E T 282. Digital Electronics**4 Credits (3+3P)**

Applications of digital integrated circuits, multiplexers, counters, arithmetic circuits, and microprocessors. May be repeated up to 4 credits.

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**

Examines the field of information security within a real-world context of issues faced by today's IT professionals. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 283. **Prerequisite(s):** E T 156.

E T 286. Information Security Certification Preparation**4 Credits (3+1P)**

An overview of general security concepts for information technology systems.

Prerequisite(s): E T 285.

E T 287. PC Disaster and Data Recovery**3 Credits**

This course provides an overview of the various causes of personal computer data failure and methods to mitigate the loss of your personal computer data. The focus is on restoring your personal computer to full PC functionality and recovering lost and damaged files after one of these unforeseen problems. In addition, the course provides a means to lessen the impact of these inevitable events with the preparation of a disaster recovery plan.

Prerequisite(s): E T 120 or E T 122.

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**

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.

Health Physics - Associate of Applied Science

Health Physics - Associate not available 2018-2019.

Branch Course Requirement

COLL 101	College/Life Success	3
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Common Core & Related Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
C S 110	Computer Literacy	3
MATH 120	Intermediate Algebra	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Core Course Requirements

Select one from the following:		4
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory	
BIOL 221 & 221 L	Introductory Microbiology and Introductory Microbiology Laboratory	
PHYS 211G & 211GL	General Physics I and General Physics I Laboratory	
PHYS 212G & 212GL	General Physics II and General Physics II Laboratory	
CHEM 111G	General Chemistry I	4

CHEM 112G	General Chemistry II	4
CHEM 211	Organic Chemistry	4
E T 220	Internship	1
MATH 121G	College Algebra	3
or STAT 251G	Statistics for Business and the Behavioral Sciences	
Approved E T Electives		35
Total Credits		77

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

Heating, Air Conditioning, and Refrigeration

The **Heating, Air Conditioning, and Refrigeration (HACR)** program prepares students for entry-level positions in the HACR industry. Every new home, hospital, institutional building, shopping mall, and office complex requires trained and certified technicians to install and maintain HACR systems. New Mexico's climate creates an additional demand for technicians skilled in both heating and cooling technology. Among the program offerings is an EPA certification short course needed by all persons who work with refrigerants.

Graduation Requirements

Certificate in Heating, Air Conditioning, and Refrigeration: WorkKeys® scores of level 4 in Reading for Information, level 5 in Locating Information, and level 5 in Applied Mathematics; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU.

AAS in Heating, Air Conditioning, and Refrigeration: ENGL 111G Rhetoric and Composition 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.

Heating, Air Conditioning, and Refrigeration - Certificate (p. 129)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Heating, Air Conditioning, and Refrigeration - Associate of Applied Science (p. 128)

HVAC 100. EPA Clean Air Act: Section 608**1 Credit**

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**

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. S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

HVAC 113. Job Shadowing**1 Credit**

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**

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.

Heating, Air Conditioning, and Refrigeration - Associate of Applied Science

Heating, Air Conditioning, and Refrigeration - Associate not available 2018-2019.

Branch Course Requirement

COLL 101	College/Life Success	3
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Common Core & Related Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
BCIS 110	Fundamentals of Information Literacy and Systems	3
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Technical Requirements

BCT 104	Woodworking Skills I	3
HVAC 101	Fundamentals of Refrigeration	4
HVAC 102	Fundamentals of Electricity	4
HVAC 103	Electrical and Mechanical Controls I	4
HVAC 205	Commercial Refrigeration Systems	4
HVAC 207	Residential Air Conditioning Systems	4
HVAC 209	Residential Heating Systems	4
HVAC 210	Commercial Air Conditioning and Heating Systems	4

Approved Electives

Approved HVAC Electives	11
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Select 8 credits in consultation with an advisor ¹	8
Total Credits	69

¹ HVAC 220 Introduction to Sheet Metal Fabrication is recommended as one of the two courses.

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		
HVAC 101	Fundamentals of Refrigeration	4
HVAC 102	Fundamentals of Electricity	4
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
	Credits	15
Spring		
HVAC 103	Electrical and Mechanical Controls I	4
Approved HVAC Elective		4
BCT 104	Woodworking Skills I	3
ENGL 218G	Technical and Scientific Communication	3
Elective		4
	Credits	18
Second Year		
Fall		
Approved HVAC Elective		3
HVAC 205	Commercial Refrigeration Systems	4
HVAC 210	Commercial Air Conditioning and Heating Systems	4
Approved elective		4
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
	Credits	21
Spring		
HVAC 207	Residential Air Conditioning Systems	4
HVAC 209	Residential Heating Systems	4
Approved HVAC Elective		4
BCIS 110	Fundamentals of Information Literacy and Systems	3
	Credits	15
	Total Credits	69

Heating, Air Conditioning, and Refrigeration - Certificate

Heating, Air Conditioning, and Refrigeration - Certificate not available 2018-2019.

Core Curriculum Requirements

HVAC 101	Fundamentals of Refrigeration	4
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HVAC 102	Fundamentals of Electricity	4
HVAC 103	Electrical and Mechanical Controls I	4
Approved HVAC Elective		4
HVAC 207	Residential Air Conditioning Systems	4
HVAC 209	Residential Heating Systems	4
BCT 104	Woodworking Skills I	3
Total Credits		27

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		
HVAC 101	Fundamentals of Refrigeration	4
HVAC 102	Fundamentals of Electricity	4
	Credits	8
Spring		
HVAC 103	Electrical and Mechanical Controls I	4
Approved HVAC Elective		4
	Credits	8
Second Year		
Fall		
HVAC 207	Residential Air Conditioning Systems	4
HVAC 209	Residential Heating Systems	4
	Credits	8
Spring		
BCT 104	Woodworking Skills I	3
	Credits	3
	Total Credits	27

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 111G Rhetoric and Composition 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. **TOTAL CREDITS REQUIRED FOR DEGREE: (60)**

Heritage Interpretation - Certificate (p. 130)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Heritage Interpretation - Associate of Arts (p. 130)

Heritage Interpretation - Associate of Arts

General Education Requirements

Area I: English and Communication

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 211G	Writing in the Humanities and Social Sciences	
or ENGL 218G	Technical and Scientific Communication	
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	

Area II: Mathematics

Select one MATH or STAT "G" course	3
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Area III: Laboratory Science

Select two Science with a lab "G" courses from ASTR, BIOL, CHEM, ES, GEOG (must be GEOG 111G or 120G if selected), GEOL, or PHYS	8
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Area IV & V: Social/Behavioral Science & Humanities/Fine Arts 15

Select 2-3 Social/Behavioral Science "G" courses from ANTH, CJ, CEP, ECON, GEOG (must be GEOG 112G or GEOG 120G if selected), GOVT, PHLS, LING, PSY, SOC, or SWK

Select 2-3 Humanities/Fine Arts "G" courses from ART, ENGL, HIST, MUS, or THTR

Department of History Requirements

ANTH 118	Introduction to Historic Preservation	3
ANTH 201G	Introduction to Anthropology	3
HIST 101G	Roots of Modern Europe	3
HIST 102G	Modern Europe	3
HIST 201G	Introduction to Early American History	3
HIST 202G	Introduction to Recent American History	3
HIST 261	New Mexico History	3
HIST 269	Special Topics ¹	3
Total Credits		60

¹ May be repeated for up to 12 hours.

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 101G	Roots of Modern Europe	3
ANTH 201G	Introduction to Anthropology	3
ENGL 111G	Rhetoric and Composition	4
GEOG 111G or GEOG 120G	Geography of the Natural Environment or Culture and Environment	3
	Credits	13
Spring		
HIST 201G	Introduction to Early American History	3
ANTH 118	Introduction to Historic Preservation	3

ENGL 203G or ENGL 211G or ENGL 218G	Business and Professional Communication or Writing in the Humanities and Social Sciences or Technical and Scientific Communication	3
MATH 112G or MATH 120	Fundamentals of Elementary Math II or Intermediate Algebra	3
GOVT 100G	American National Government	3
	Credits	15

Summer

HIST 269	Special Topics	3
	Credits	3

Second Year

Fall

HIST 102G	Modern Europe	3
HIST 261	New Mexico History	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
E S 110G	Introductory Environmental Science	4
P E 270	Special Topics	1
	Credits	14

Spring

HIST 202G	Introduction to Recent American History	3
LING 200G	Introduction to Language	3
SOC 101G or SOC 201G or SOC 262	Introductory Sociology or Contemporary Social Problems or Issues in Death and Dying	3
PSY 201G or PSY 266	Introduction to Psychology or Applied Psychology	3
	Credits	12

Summer

HIST 269	Special Topics ¹	3
	Credits	3
	Total Credits	60

¹ May be repeated for up to 12 hours.

Heritage Interpretation - Certificate

Core Curriculum Requirements

Area I: English and Communication

ENGL 111G	Rhetoric and Composition	4
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	

Area II: Mathematics

Select one MATH or STAT "G" course	3
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Area III: Laboratory Science

Select one Science "G" course with a lab from ASTR, BIOL, CHEM, ES, GEOG (must be GEOG 111G if selected), GEOL, or PHYS	4
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Department of History Requirements

ANTH 118	Introduction to Historic Preservation	3
ANTH 201G	Introduction to Anthropology	3

HIST 101G or HIST 102G	Roots of Modern Europe Modern Europe	3
HIST 201G or HIST 202G	Introduction to Early American History Introduction to Recent American History	3
HIST 261	New Mexico History	3
Electives		
Select 4 credits from ANTH, GOVT, HIST, MATH or SPAN		4
Total Credits		33

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		
ANTH 201G	Introduction to Anthropology	3
ENGL 111G	Rhetoric and Composition	4
HIST 101G or HIST 102G	Roots of Modern Europe or Modern Europe	3
HIST 261	New Mexico History	3
Elective		4
Credits		17
Spring		
ANTH 118	Introduction to Historic Preservation	3
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
HIST 201G or HIST 202G	Introduction to Early American History or Introduction to Recent American History	3
Area II		3
Area III		4
Credits		16
Total Credits		33

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 111G Rhetoric and Composition 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.

Hospitality and Tourism - Associate of Applied Science (p. 132)

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

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

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

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

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

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

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

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

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

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 252.

HOST 210. Catering and Banquet Operations**3 Credits**

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**

Technical purchasing concepts, product selection, and specifications. Safety and sanitation as they relate to food service establishments. Prepares student for work with HACCP programs. Restricted to Community Colleges campuses only.

HOST 216. Event, Conference and Convention Operations**3 Credits**

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**

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 220. Experiential Travel**1-3 Credits (1-3)**

Course provides an opportunity for students to plan, prepare for and experience travel to destinations they might not otherwise have visited. Students experience local culture and peoples. May be repeated up to 9 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HOST 201 or consent of instructor.

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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

HOST 222. Cooperative Experience II**3 Credits**

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 223. Travel Agency Principles**3 Credits**

Travel agents are called upon to exhibit broad knowledge about many different tourism products. This course prepares students to undertake the challenging job of an agent in a travel agency. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

HOST 224. Travel Agency Booking & Operations**3 Credits**

Course trains students to use the common electronic booking software that is found in travel agencies. Familiarization with operational procedures of travel agencies. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HOST 223.

HOST 230. Wedding Events Management**3 Credits**

This course will address various issues that could potentially arise in the preparation and management of a wedding or related event. All aspects of planning and attention to details that will ensure that students are prepared to provide services as a professional wedding planner. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

HOST 239. Introduction to Hotel Management**3 Credits**

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**

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 - Associate of Applied Science

Branch Course Requirement

COLL 101	College/Life Success	3
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General Education Common Core Requirements

COMM 265G	Principles of Human Communication	3
ECON 251G	Principles of Macroeconomics	3
or ECON 252G	Principles of Microeconomics	
ENGL 111G	Rhetoric and Composition	4
MATH 120	Intermediate Algebra	3
or BOT 106	Business Mathematics	
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Related Requirements

BOT 120	Accounting Procedures I	3
Select one from the following:		3
BOT 209	Business and Technical Communications	
ENGL 203G	Business and Professional Communication	
ENGL 218G	Technical and Scientific Communication	
BMGT 201	Work Readiness and Preparation	3

BMGT 231	Legal Issues in Business	3
OECS 105	Introduction to Information Technology	3
or C S 110	Computer Literacy	
OECS 215	Spreadsheet Applications	3
Technical Requirements		
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		
Select 15 credits from one or both tracks:		15
Lodging & Tourism		
Food & Beverage		
Total Credits		73

Lodging & Tourism Track

HOST 202	Front Office Operations	3
HOST 204	Promotion of Hospitality Services	3
HOST 205	Housekeeping, Maintenance, and Security	3
HOST 206	Travel and Tourism Operations	3
HOST 216	Event, Conference and Convention Operations	3
HOST 220	Experiential Travel	3
HOST 223	Travel Agency Principles	3
HOST 224	Travel Agency Booking & Operations	3
HOST 230	Wedding Events Management	3
Total Credits		27

Food & Beverage Track

CHEF 211	Food Production Management I	3
CHEF 212	Food Production Management II	3
CHEF 213	Bakery Management I	3
CHEF 214	Bakery Management II	3
HOST 210	Catering and Banquet Operations	3
Approved CHEF Elective		3
Total Credits		18

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	Introduction to Information Technology	3
or C S 110	or Computer Literacy	
COLL 101	College/Life Success	3

ENGL 111G	Rhetoric and Composition	4
Elective		3
Credits		16
Spring		
HOST 203	Hospitality Operations Cost Control	3
OECS 215	Spreadsheet Applications	3
BOT 106	Business Mathematics	3
or MATH 120	or Intermediate Algebra	
Select one from the following:		3
BOT 209	Business and Technical Communications	
ENGL 203G	Business and Professional Communication	
ENGL 218G	Technical and Scientific Communication	
BMGT 231	Legal Issues in Business	3
Elective		3
Credits		18
Summer		
COMM 265G	Principles of Human Communication	3
ECON 251G	Principles of Macroeconomics	3
or ECON 252G	or Principles of Microeconomics	
Credits		6

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
BOT 120	Accounting Procedures I	3
Elective		3
Credits		15

Spring

HOST 209	Managerial Accounting for Hospitality	3
HOST 221	Internship I	3
BMGT 201	Work Readiness and Preparation	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	or Introductory Sociology	
Elective		3
Elective		3
Credits		18
Total Credits		73

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.

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 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; the last 15 credits taken at NMSU.

AAS in Industrial Maintenance Technician: ENGL 111G Rhetoric and Composition 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. TOTAL CREDITS REQUIRED FOR ELECTRICAL DEGREE: (67)
TOTAL CREDITS REQUIRED FOR MECHANICAL DEGREE: (64)

Industrial Maintenance Technician - Certificate (p. 135)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Industrial Maintenance Technician, Electrical - Associate of Applied Science (p. 136)

Industrial Maintenance Technician, Mechanical - Associate of Applied Science (p. 137)

INMT 133. Process Technology and Systems

4 Credits

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

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

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

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): Computer Literacy (CS 110).

INMT 223. Electrical Repairs

4 Credits

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

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 236. Lubrication Process

3 Credits

This course teaches the technical skills needed to operate, install, tune, maintain and troubleshoot automatic lubrication systems. Lubrication concepts, setup and tuning, pneumatic pumps, series-progressive valve systems and microprocessor based lubrication controllers will be covered. The course covers the principles of and importance of lubrication, oils and grease types and applications, lube management (storage, handling, and purity), and PDM and PM. Restricted to Carlsbad campus only.

INMT 237. Hydraulics I

2 Credits

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**

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**

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 demensioning and tolerancing will taught. Restricted to Carlsbad campus only.

INMT 263. Mechanical Drives II**4 Credits**

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**

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**

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**

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 Technician - Certificate

Core Curriculum Requirements

INMT 133	Process Technology and Systems	4
INMT 134	Maintenance Principles	4
INMT 165	Equipment Processes	4
MAT 110	Machine Operation and Safety	3
MAT 145	Electromechanical Systems for Non-Majors	4
OETS 100	Industrial/Construction Safety	2
OETS 118	Mathematics for Technicians	3

Program Option

Electrical or Mechanical Option	30-32
Total Credits	54-56

Electrical Option

INMT 223	Electrical Repairs	4
INMT 205	Programmable Logic Controllers and Applications	4
MAT 130	Applied Industrial Electricity I	4
MAT 135	Applied Industrial Electricity II	4
MAT 234	Industrial Electricity Maintenance	3
OEET 110	Basic Electricity and Electronics	4
OEET 120	Basic Motor Controls	5
OEET 205	National Electric Code	3
OEET 295	Special Topics	1
Total Credits		32

Mechanical Option

INMT 235	Mechanical Drives I	4
INMT 236	Lubrication Process	3
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		30

Electrical Option

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		
INMT 133	Process Technology and Systems	4
OETS 100	Industrial/Construction Safety	2
OETS 118	Mathematics for Technicians	3
MAT 110	Machine Operation and Safety	3
	Credits	12
Spring		
INMT 134	Maintenance Principles	4
INMT 165	Equipment Processes	4
MAT 145	Electromechanical Systems for Non-Majors	4
	Credits	12
Second Year		
Fall		
INMT 223	Electrical Repairs	4
MAT 130	Applied Industrial Electricity I	4
MAT 234	Industrial Electricity Maintenance	3
OEET 110	Basic Electricity and Electronics	4
	Credits	15
Spring		
INMT 205	Programmable Logic Controllers and Applications	4
MAT 135	Applied Industrial Electricity II	4
OEET 120	Basic Motor Controls	5
OEET 205	National Electric Code	3
OEET 295	Special Topics	1
	Credits	17
	Total Credits	56

Mechanical Option

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		
INMT 133	Process Technology and Systems	4
OETS 100	Industrial/Construction Safety	2
OETS 118	Mathematics for Technicians	3
MAT 110	Machine Operation and Safety	3
	Credits	12
Spring		
INMT 134	Maintenance Principles	4
INMT 165	Equipment Processes	4

MAT 145	Electromechanical Systems for Non-Majors	4
	Credits	12
Second Year		
Fall		
INMT 235	Mechanical Drives I	4
INMT 236	Lubrication Process	3
INMT 237	Hydraulics I	2
INMT 261	Pump Operations I	4
INMT 262	Piping Systems	2
	Credits	15
Spring		
	Approved INMT Elective	4
	Approved INMT Elective	2
INMT 235	Mechanical Drives I	4
INMT 237	Hydraulics I	2
MAT 265	Special Topics	2
WELD 105	Introduction to Welding	3
	Credits	17
	Total Credits	56

Industrial Maintenance Technician, Electrical - Associate of Applied Science

Common Core & Related Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Prerequisite and Core Curriculum Requirements

INMT 133	Process Technology and Systems	4
OETS 100	Industrial/Construction Safety	2
OETS 118	Mathematics for Technicians	3
MAT 145	Electromechanical Systems for Non-Majors	4
INMT 134	Maintenance Principles	4
INMT 165	Equipment Processes	4
OEET 110	Basic Electricity and Electronics	4
MAT 130	Applied Industrial Electricity I	4
MAT 234	Industrial Electricity Maintenance	3
INMT 223	Electrical Repairs	4
MAT 135	Applied Industrial Electricity II	4
OEET 120	Basic Motor Controls	5
OEET 205	National Electric Code	3
INMT 205	Programmable Logic Controllers and Applications	4
OEET 295	Special Topics	1

Elective from General Education Area 4 or 5	3
Total Credits	69

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		
INMT 133	Process Technology and Systems	4
OETS 100	Industrial/Construction Safety	2
OETS 118	Mathematics for Technicians	3
ENGL 111G	Rhetoric and Composition	4
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
	Credits	16
Spring		
MAT 145	Electromechanical Systems for Non-Majors	4
INMT 134	Maintenance Principles	4
INMT 165	Equipment Processes	4
ENGL 218G	Technical and Scientific Communication	3
General Education Elective Area 4 or Area 5		3
	Credits	18
Second Year		
Fall		
OEET 110	Basic Electricity and Electronics	4
MAT 130	Applied Industrial Electricity I	4
MAT 234	Industrial Electricity Maintenance	3
INMT 223	Electrical Repairs	4
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
	Credits	18
Spring		
MAT 135	Applied Industrial Electricity II	4
OEET 120	Basic Motor Controls	5
OEET 205	National Electric Code	3
INMT 205	Programmable Logic Controllers and Applications	4
OEET 295	Special Topics	1
	Credits	17
	Total Credits	69

Industrial Maintenance Technician, Mechanical - Associate of Applied Science

Prerequisite Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
COMM 253G	Public Speaking	3

or COMM 265G	Principles of Human Communication	
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	
Common Core & Related Requirements		
INMT 133	Process Technology and Systems	4
INMT 134	Maintenance Principles	4
INMT 165	Equipment Processes	4
MAT 145	Electromechanical Systems for Non-Majors	4
OETS 100	Industrial/Construction Safety	2
OETS 118	Mathematics for Technicians	3
MAT 265	Special Topics	2
Technical Requirements		
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
WELD 105	Introduction to Welding	3
General Education Elective Area 4 or Area 5		3
Total Credits		64

Course	Title	Credits
First Year		
Fall		
INMT 133	Process Technology and Systems	4
OETS 100	Industrial/Construction Safety	2
OETS 118	Mathematics for Technicians	3
ENGL 111G	Rhetoric and Composition	4
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
	Credits	16
Spring		
MAT 145	Electromechanical Systems for Non-Majors	4
INMT 134	Maintenance Principles	4
INMT 165	Equipment Processes	4
ENGL 218G	Technical and Scientific Communication	3
	Credits	15
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
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
General Education Elective Area 4 or Area 5		3
	Credits	18

Spring

INMT 263	Mechanical Drives II	4
WELD 105	Introduction to Welding	3
INMT 265	Hydraulics II	2
INMT 267	Pump Operations II	2
INMT 264	Rigging	2
MAT 265	Special Topics	2
Credits		15
Total Credits		64

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 111G Rhetoric and Composition 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.

Manufacturing Technology - Associate of Applied Science (p. 140)

E T 101. Introduction to Engineering Technology

1 Credit

The development of engineering technology, with an introduction to engineering technology, education, and practice. Graded S/U.

E T 104. Soldering Techniques

1 Credit

Fundamentals of soldering, desoldering, and quality inspection of printed circuit boards.

E T 106. 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. Community Colleges only. Same as DRFT 112.

Prerequisite: OECS 125, OECS 207, or consent of instructor.

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

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 153. Introduction to Computer Networks

3 Credits

Introduction to basic computer network fundamentals including International Open Systems Interconnect (OSI), the seven-layer model, and various networking hardware devices. Community Colleges only.

E T 154. Construction Methods and Communications

3 Credits

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

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. Introduction to Information Engineering Technology

3 Credits

An information engineering technology approach to the basics of computer systems and data, computer architecture, hardware and software operation, networks, and data communications. May be repeated up to 3 credits.

E T 182. Digital Logic

3 Credits

The use of truth tables, Boolean equations, and diagrams to define, simplify, and implement logic-valued functions.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 121G.

E T 183 L. Applied DC Circuits Lab

1 Credit

DC applied circuits lab. May be repeated up to 1 credits.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 190G. Prerequisite(s): E T 183.

E T 184 L. Applied AC Circuits Lab**1 Credit**

AC applied circuits lab May be repeated up to 1 credits.

Corequisite(s): E T 184.

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(s)/Corequisite(s): MATH 190G.

E T 191. Applied Circuits Laboratory**1 Credit**

Applied Circuits Lab May be repeated up to 1 credits.

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**

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. May be repeated up to 3 credits.

Prerequisite(s): MATH 190G and E T 262.

E T 210. Intermediate 3-D Modeling (Solid Works)**3 Credits (2+2P)**

Intermediate 3-D modeling. Applied modeling of techniques to prepare for SolidWorks certification (CSWA). May be repeated up to 3 credits.

Prerequisite(s): E T 110.

E T 217. Manufacturing Processes**3 Credits**

Introduction to manufacturing and processing, including: casting, forming, and machining. Emphasis on creating products with the appropriate techniques. May be repeated up to 3 credits. Crosslisted with: I E 217.

Prerequisite(s)/Corequisite(s): E T 217L. Prerequisite(s): E T 110 and MATH 121G.

E T 217 L. Manufacturing Processes Lab**1 Credit**

Hands-on laboratory in machine shop to apply topics from E T 217, including: casting, forming, and machining. May be repeated up to 1 credits.

Prerequisite(s)/Corequisite(s): E T 217.

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**

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**

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH191G.

Prerequisite(s): PHYS 211G or PHYS 215G.

E T 241. Applied Dynamics**3 Credits**

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. May be repeated up to 3 credits.

Prerequisite(s): E T 240, (MATH 235 or MATH 191G).

E T 245. Computer Hardware Fundamentals**3 Credits (2+2P)**

Computer hardware fundamentals including architecture, interfacing, peripherals, troubleshooting, system upgrades, and maintenance. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

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. May be repeated up to 4 credits.

Prerequisite(s): E T 190 or E T 184.

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(s): E T 155.

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**

Introduction to Linux system administration.

Prerequisite(s)/Corequisite(s): E T 160.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 182 or MATH 190G.

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. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH 191G.

Prerequisite(s): E T 246.

E T 273. Fundamentals of Networking Communications I**4 Credits (2+4P)**

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. Community Colleges only. May be repeated up to 4 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 153.

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 to WAN, protocols, switches, bridges, routers, NT server, TCP/IP networks, network diagnostics, voice over IP, wireless networks, and the OSI layers from physical to transport. May be repeated up to 3 credits.

Prerequisite(s): E T 182.

E T 280. Introduction to Multimedia**3 Credits**

Introduction to video, audio and other digital presentation methods.

Prerequisite(s): E T 255.

E T 282. Digital Electronics**4 Credits (3+3P)**

Applications of digital integrated circuits, multiplexers, counters, arithmetic circuits, and microprocessors. May be repeated up to 4 credits.

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**

Examines the field of information security within a real-world context of issues faced by today's IT professionals. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 283. **Prerequisite(s):** E T 156.

E T 286. Information Security Certification Preparation**4 Credits (3+1P)**

An overview of general security concepts for information technology systems.

Prerequisite(s): E T 285.

E T 287. PC Disaster and Data Recovery**3 Credits**

This course provides an overview of the various causes of personal computer data failure and methods to mitigate the loss of your personal computer data. The focus is on restoring your personal computer to full PC functionality and recovering lost and damaged files after one of these unforeseen problems. In addition, the course provides a means to lessen the impact of these inevitable events with the preparation of a disaster recovery plan.

Prerequisite(s): E T 120 or E T 122.

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**

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 - Associate of Applied Science

Branch Requirement

COLL 101	College/Life Success	3
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Common Core & Related Requirements

COMM 265G	Principles of Human Communication	3
or COMM 253G	Public Speaking	
ENGL 111G	Rhetoric and Composition	4
ENGL 218G	Technical and Scientific Communication	3
MATH 121G	College Algebra	3
Approved MATH Elective		3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Technical Requirements

BUSA 111	Introduction to Business	3
or ACCT 222	Principles of Accounting II (Managerial)	
E T 106	Drafting Concepts/Computer Drafting Fundamentals I	4
Approved E T Elective		3

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	Applied AC Circuits Lab	1
Approved E T Elective		4
Program Options		
Electronics Assembly or Manufacturing Processes Option		24-25
Total Credits		70-71

Electronics Assembly Option

E T 182	Digital Logic	3
Approved E T Elective		3
Approved E T Elective		3
E T 246	Electronic Devices I	4
E T 200	Special Topics	3
E T 272	Electronic Devices II	4
E T 282	Digital Electronics	4
Total Credits		24

Manufacturing Processes Option

Approved E T Elective		2
Approved E T Elective		2
Approved E T Elective		3
E T 217	Manufacturing Processes	3
E T 217 L	Manufacturing Processes Lab	1
Approved E T Elective		4
Approved E T Elective		4
E T 200	Special Topics	3
Approved Elective		3
Total Credits		25

Electronics Assembly Option

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		
E T 106	Drafting Concepts/Computer Drafting Fundamentals I	4
E T 120	Computation Software	2
E T 183 & 183 L	Applied DC Circuits and Applied DC Circuits Lab	4
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
	Credits	17
Spring		
Approved E T Elective		3
Approved E T Elective		4
E T 184 & 184 L	Applied AC Circuits and Applied AC Circuits Lab	4

MATH 121G	College Algebra	3
ENGL 218G	Technical and Scientific Communication	3
	Credits	17
Summer		
COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	3
	Credits	3

Second Year

Fall

Approved E T Elective		3
E T 246	Electronic Devices I	4
E T 200	Special Topics	3
E T 182	Digital Logic	3
Approved MATH Elective		3
	Credits	16

Spring

Approved E T Elective		3
E T 272	Electronic Devices II	4
E T 282	Digital Electronics	4
BUSA 111 or ACCT 222	Introduction to Business or Principles of Accounting II (Managerial)	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
	Credits	17
	Total Credits	70

Manufacturing Processes

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		
E T 106	Drafting Concepts/Computer Drafting Fundamentals I	4
E T 120	Computation Software	2
E T 183 & 183 L	Applied DC Circuits and Applied DC Circuits Lab	4
COLL 101	College/Life Success	3
ENGL 111G	Rhetoric and Composition	4
	Credits	17
Spring		
Approved E T Elective		3
Approved E T Elective		4
E T 184 & 184 L	Applied AC Circuits and Applied AC Circuits Lab	4
MATH 121G	College Algebra	3
ENGL 218G	Technical and Scientific Communication	3
	Credits	17

Summer

COMM 253G or COMM 265G	Public Speaking or Principles of Human Communication	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 MATH Elective		3
Elective		3
Credits		18

Spring

Approved E T Elective		2
Approved E T Elective		4
Approved E T Elective		4
BUSA 111 or ACCT 222	Introduction to Business or Principles of Accounting II (Managerial)	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
Credits		16
Total Credits		71

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 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 **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 111G Rhetoric and Composition 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.

Program Entrance Requirements

- BIOL 225 Human Anatomy and Physiology I
- CHEM 110G Principles and Applications of Chemistry, or one semester of high school chemistry with a C or higher.
- COLL 101 College/Life Success
- 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>).
- Students who have completed one year of anatomy with a C or higher at a New Mexico high school with an articulation agreement with NMSU may meet entrance requirements and should seek advisement from the nursing program. 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 110G Principles and Applications of Chemistry may not be used to fulfill elective credit. Note that CHEM 110G Principles and Applications of Chemistry is required for the BSN degree at NMSU Las Cruces.
- BIOL 226 Human Anatomy and Physiology II, C EP 110G Human Growth and Behavior, ENGL 111G Rhetoric and Composition, PSY 201G Introduction to Psychology, and SOC 101G Introductory Sociology must be completed by the second year of nursing.
- 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. 148)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Nursing - Associate Degree (p. 147)

NURS 120. Introduction to Pharmacology

3 Credits

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. Restricted to Allied Health majors. Restricted to: Community Colleges only.

NURS 130. Foundations of Pharmacology

3 Credits

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 147 & NURS 149.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 134, NURS 136 lab & NURS 137 or permission of the Program Director.

NURS 137. Care of Geriatric Patient**3 Credits**

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. Restricted to: NURS majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission into the nursing program.

Corequisite(s): NURS 134 & NURS 136 or permission of the Program Director.

NURS 140. Pathophysiology for Allied Health Professionals**3 Credits**

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. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 130, NURS 147 lab, & NURS 149, or permission of the Program Director.

NURS 148. Physical Assessment**2 Credits (1+3P)**

Introduction of concepts and techniques of interviewing, history taking, review of body systems, and physical assessment of an adult client. The student should be able to apply knowledge of anatomy and physiology, assessment skills, communication skills, cultural awareness, nursing process, critical thinking skills, teaching skills, and psychomotor skills. Restricted to: Community Colleges only.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 130, NURS 147, & NURS 149L, or permission of the Program Director.

NURS 150. Medical Terminology**3 Credits**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as OEHO 120 and BOT 150.

NURS 153. Medication and Dosage Calculation**1 Credit**

Techniques of dosage calculation for medication and fluid administration. RR applicable.

Prerequisite(s): Meet NMSU basic skills requirement in mathematics or consent of program director.

Corequisite(s): NURS156 and NURS154.

NURS 154. Physical Assessment**2 Credits**

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 154 or BIOL 225 or consent of program director.

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. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite(s): Consent of Program Director.

Corequisite(s): NURS 153, NURS 154.

NURS 157. Maternal/Child Health Deviations**8 Credits (6+6P)**

The concepts and principles of nursing care of the family from conception to adolescence. Utilizing the nursing process, the student provides safe client centered care to diverse clients and families. Theoretical instruction is applied to client care situation. Students collaborate with clients, families and the interdisciplinary team in meeting health care needs. Experiences may occur in any of the regional health care facilities. 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 156, NURS 153, and NURS 154 or consent of program director.

Corequisite(s): NURS 210.

NURS 182. Legal and Ethical Issues in Nursing Practice**2 Credits**

Introduction to legal and ethical implications of nursing practice (through the holistic approach to wellness) as a registered nurse. Restricted to: Community Colleges only.

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**

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. Restricted to: Carlsbad campus only.

Prerequisite(s): BIOL 225 and BIOL 226 or consent of instructor and NURS 153, NURS 154 and NURS 156.

Corequisite(s): NURS 157.

NURS 211. Pharmacological Requisites of Simple Health Deviations**1 Credit**

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 225 and BIOL 226 or consent of instructor 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**

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.

Restricted to: Carlsbad campus only.

Prerequisite(s): BIOL 225 and BIOL 226 or consent of instructor, and NURS 153, NURS 154, NURS 156, NURS 157, NURS 246, NURS 258, NURS 210 and NURS 211.

Corequisite(s): NURS 256 and NURS 260.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 224 lab, NURS 235, & NURS 236, or permission of the Program Director.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 224, NURS 226 lab, & NURS 235 or permission of the Program Director.

NURS 234. Community Health Nursing**1 Credit**

This course provides an introduction to community health, focusing on health care systems, epidemiology, and nursing care of individuals, families and aggregates of varied cultural backgrounds. Primary, secondary, and tertiary prevention are emphasized. Diverse roles of the community health nurse are examined. Educational theories and their applications are explored. Restricted to: Community Colleges only.

NURS 235. Nursing Leadership and Management**1 Credit**

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. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 224, NURS 226 & Clinical Or Permission of the Program Director.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 201, NCLEX Review or permission of the Program Director.

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 or consent of program director.

Corequisite(s): NURS 211, NURS 258.

NURS 256. Health Deviations II**8 Credits (4+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, 154, 156, 157, 210, 211, 246, and 258 or consent of program director.

Corequisite(s): NURS 212, NURS 260.

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, 154, 156, 157, 210, and 246 or consent of program director.

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, 154, 156, 157, 210, 211, 246, and 258 or consent of program director.

Corequisite(s): NURS 212, NURS 256.

NURS 270. The Adult Client II**5 Credits (2+9P)**

Care of adult clients experiencing chronic, life-threatening, and end-of-life health alterations with emphasis on the geriatric population using a holistic approach to wellness. Nursing process, pathophysiology, pharmacology, diet therapy, and alternative therapies are stressed throughout the course. Clinical component will provide an opportunity to apply the nursing process in both the hospital and community setting. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170, NURS 172, NURS 173L, NURS 180, and NURS 185.

Corequisite(s): NURS 285.

NURS 272. Care for the Aging Client**1 Credit**

Normal physiological changes of aging and nursing implications related to safety and wellness. Restricted to: Community Colleges only. Restricted to NURS majors.

NURS 275. Holistic Approach to Pharmacotherapeutic Interventions II 2 Credits

Level II. Holistic approach to the study of basic pharmacology concepts. Includes pharmacodynamic phases of drug interaction. Nursing process is discussed in relation to medication administration. Special emphasis on the role of the nurse and basic concepts related to specific drug categories. Restricted to majors. Community Colleges only.

Prerequisite(s): NURS 185.

Corequisite(s): NURS 280 and NURS 283.

NURS 280. Women's Health Issues 4 Credits (2+6P)

Consists of lecture and associated clinical/laboratory experiences that focus on the holistic health concerns for women and the care of families expecting birth. Emphasis placed on the wellness of normal and high-risk women's health, including maternal and newborn care. The nursing process will be utilized to develop caring interventions and effective community communication through teaching healthy strategies. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170 and NURS 180.

Corequisite(s): NURS 275 and NURS 283.

NURS 282 L. Practicum: Management of Client Care 1 Credit

Organization and delivery of wellness care services for groups of clients based on the nursing process. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170, NURS 172, NURS 173L, NURS 180, and NURS 185.

Corequisite(s): NURS 284L.

NURS 283. Pediatric Nursing 4 Credits (2+6P)

Consists of lecture and associated clinical and laboratory experiences which focus on the care of children from infancy through adolescence including acute and chronic health care problems. Employs nursing process, pathophysiology, pharmacology, and diet therapy through the holistic approach to wellness. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170 and NURS 180.

Corequisite(s): NURS 275, NURS 280.

NURS 284 L. Practicum: Preceptorship 3 Credits

Clinical experience in a leadership role in specific practice areas enhancing the transition from student to practitioner utilizing the holistic approach to wellness. Restricted to: Community Colleges only.

Prerequisite(s): NURS 182.

Corequisite(s): NURS 282L.

NURS 285. Holistic Approach to Pharmacotherapeutic Intervention III 1 Credit

Level III. Holistic approach to the study of basic pharmacology concepts. Includes pharmacodynamic phases of drug interaction. Nursing process is discussed in relation to medication administration. Special emphasis on the role of the nurse and basic concepts related to specific drug categories. Restricted to: Community Colleges only.

Prerequisite(s): NURS 185 and NURS 275.

Corequisite(s): NURS 270.

NURS 293. Introduction to Nursing Concepts 3 Credits

This course introduces the nursing student to the concepts of nursing practice and conceptual learning. Same as NMNEC course no.: NMNEC101. Restricted to: BSN,BSNP,BSNR,NURS majors. Restricted to Las Cruces campus only.

Prerequisite(s): Admission to Nursing Program.

Corequisite(s): NURS 294,NURS 362.

NURS 294. Principals of Nursing Practice 4 Credits

This course introduces the nursing student to the application of concepts through clinical skills in seminar, laboratory, and/or clinical settings.

Principles of communication, assessments, safety, and interventions including accurate calculation, measurement, and administration of medications will be included. Same as NMNEC course no.: NMNEC102. Restricted to: NURS majors. Restricted to Las Cruces campus only.

Prerequisite(s): Admission to the nursing program.

Corequisite(s): NURS 293,NURS 362.

Nursing - Associate Degree

Branch Requirement

COLL 101	College/Life Success	3
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Common Core & Related Requirements

English & Social Sciences

ENGL 111G	Rhetoric and Composition	4
C EP 110G	Human Growth and Behavior	3
SOC 101G	Introductory Sociology	3
PSY 201G	Introduction to Psychology	3

Biology with lab

BIOL 221 & 221 L	Introductory Microbiology and Introductory Microbiology Laboratory	4
BIOL 225	Human Anatomy and Physiology I	4
BIOL 226	Human Anatomy and Physiology II	4

Nursing Program Requirements

Freshman Year Courses

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
NURS 210	Pharmacological Requisites of the Childbearing Family	1

Sophomore Nursing Courses

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

Electives

Select 2 credits from electives	2
Total Credits	70

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.

Note: BIOL 225 Human Anatomy and Physiology I and NA 101 Nursing Assistant Theory and Lab must be completed prior to entering the nursing program.

Course	Title	Credits
First Year		
Fall		
NURS 153	Medication and Dosage Calculation	1
NURS 154	Physical Assessment	2
NURS 156	Basic Nursing Theory and Practice	6
PSY 201G	Introduction to Psychology	3
BIOL 225	Human Anatomy and Physiology I	4
	Credits	16
Spring		
NURS 157	Maternal/Child Health Deviations	8
NURS 210	Pharmacological Requisites of the Childbearing Family	1
ENGL 111G	Rhetoric and Composition	4
BIOL 226	Human Anatomy and Physiology II	4
	Credits	17
Summer		
COLL 101	College/Life Success	3
C EP 110G	Human Growth and Behavior	3
	Credits	6
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
BIOL 221 & 221 L	Introductory Microbiology and Introductory Microbiology Laboratory	4
	Credits	15
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
SOC 101G	Introductory Sociology	3
Elective		2
	Credits	16
	Total Credits	70

Core Curriculum Requirements

BIOL 225	Human Anatomy and Physiology I	4
BIOL 226	Human Anatomy and Physiology II	4
C EP 110G	Human Growth and Behavior	3
ENGL 111G	Rhetoric and Composition	4
PSY 201G	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
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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.

Note: BIOL 225 Human Anatomy and Physiology I and NA 101 Nursing Assistant Theory and Lab must be completed prior to entering the nursing program.

Course	Title	Credits
First Year		
Fall		
NURS 153	Medication and Dosage Calculation	1
NURS 154	Physical Assessment	2
NURS 156	Basic Nursing Theory and Practice	6
PSY 201G	Introduction to Psychology	3
BIOL 225	Human Anatomy and Physiology I	4
	Credits	16
Spring		
NURS 157	Maternal/Child Health Deviations	8
C EP 110G	Human Growth and Behavior	3
ENGL 111G	Rhetoric and Composition	4
BIOL 226	Human Anatomy and Physiology II	4
	Credits	19
Summer		
NURS 146	Common Health Deviations	6
	Credits	6
	Total Credits	41

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.

Practical Nursing - Certificate

Graduation Requirements

ENGL 111G Rhetoric and Composition 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.

Pre-Business - Associate in Pre-Business (p. 149)

Pre-Business - Associate in Pre-Business

General Education Common Core Requirements

Area I: English & Communications (10 credits)

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	

Area II: Mathematics

MATH 120	Intermediate Algebra	3
MATH 121G	College Algebra	3
MATH 142G	Calculus for the Biological and Management Sciences	3
STAT 251G	Statistics for Business and the Behavioral Sciences	3

Area III: Laboratory Science

Select two courses from the following: 8

ASTR 105G	The Planets	
or ASTR 110G	Introduction to Astronomy	
BIOL 111G & 111GL	Natural History of Life and Natural History of Life Laboratory	
CHEM 110G	Principles and Applications of Chemistry	
CHEM 111G	General Chemistry I	
CHEM 112G	General Chemistry II	
GEOG 111G	Geography of the Natural Environment	
GEOL 111G	Introductory Geology	
GEOL 212G	The Dynamic Earth	
PHYS 110G	The Great Ideas of Physics	
PHYS 211G & 211GL	General Physics I and General Physics I Laboratory	
PHYS 215G & 215GL	Engineering Physics I and Engineering Physics I Laboratory	
PHYS 216G & 216GL	Engineering Physics II and Engineering Physics II Laboratory	

Areas IV: Social/Behavioral Science (6 credits) ¹

Select two courses from the following: 6

ECON 251G	Principles of Macroeconomics	
ECON 252G	Principles of Microeconomics	
PSY 201G	Introduction to Psychology	

Area V: Humanities and Fine Arts (6 credits)

Select two courses from the following: 6

ART 101G	Orientation in Art	
ART 101G	Orientation in Art	
ENGL 244G	Literature and Culture	

HIST 101G	Roots of Modern Europe	
HIST 102G	Modern Europe	
HIST 201G	Introduction to Early American History	
HIST 202G	Introduction to Recent American History	
MUS 101G	An Introduction to Music	
MUS 201G	History of Jazz in Popular Music: A Blending of Cultures	
PHIL 101G	The Art of Wondering	
PHIL 136G	The Quest for God	
PHIL 223G	Ethics	
THTR 101G	The World of Theatre	

Select an additional course in either Area IV or V. 3

College of Business Lower Division Requirements

ACCT 221	Principles of Accounting I (Financial)	3
ACCT 222	Principles of Accounting II (Managerial)	3
BCIS 110	Fundamentals of Information Literacy and Systems	3
or C S 110	Computer Literacy	
BUSA 111	Introduction to Business	3

Electives 3

Total Credits 60

¹ Note: A total of 15 combined credits from Areas IV and V are required, with at least 9 credits in one of the two areas.

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		
ENGL 111G	Rhetoric and Composition	4
MATH 120	Intermediate Algebra (or higher)	3
BCIS 110	Fundamentals of Information Literacy and Systems	3
or C S 110	Computer Literacy	
Humanities/Fine Art G course		3
COMM 253G	Public Speaking	3
or COMM 265G	or Principles of Human Communication	
Credits		16
Spring		
ENGL 203G	Business and Professional Communication	3
MATH 121G	College Algebra	3
Humanities/Fine Art G course		3
Humanities/Fine Art G course or Social/Behavioral Science G course		3
Laboratory Science G course		4
Credits		16

Second Year

Fall

ACCT 221	Principles of Accounting I (Financial)	3
BUSA 111	Introduction to Business	3

ECON 251G	Principles of Macroeconomics	3
MATH 142G	Calculus for the Biological and Management Sciences	3
Laboratory Science G course		4
Credits		16
Spring		
ACCT 222	Principles of Accounting II (Managerial)	3
ECON 252G	Principles of Microeconomics	3
STAT 251G	Statistics for Business and the Behavioral Sciences	3
General Elective		3
Credits		12
Total Credits		60

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 111G Rhetoric and Composition 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. 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. 151)

Concentrations

(Concentrations are optional)

Biology Concentration

BIOL 111G Natural History of Life & BIOL 111GL Natural History of Life Laboratory (4 cr.)

BIOL 211G Cellular and Organismal Biology & BIOL 211GL Cellular and Organismal Biology Laboratory (4 cr.)

CHEM 111G General Chemistry I (4 cr.)

CHEM 112G General Chemistry II (4 cr.)

Natural Resources Concentration

E S 110G Introductory Environmental Science (4 cr.)

BIOL 111G Natural History of Life & BIOL 111GL Natural History of Life Laboratory (4 cr.)

CHEM 111G General Chemistry I (4 cr.)

CHEM 112G General Chemistry II (4 cr.)

Physical Sciences Concentration

CHEM 111G General Chemistry I (4 cr.)

CHEM 112G General Chemistry II (4 cr.)

PHYS 211G General Physics I & PHYS 211GL General Physics I Laboratory (4 cr.)

PHYS 212G General Physics II & PHYS 212GL General Physics II Laboratory (4 cr.)

Recommended electives for each concentration:

Biology Concentration

PHYS 211G General Physics I & PHYS 211GL General Physics I Laboratory (4 cr.)

PHYS 212G General Physics II & PHYS 212GL General Physics II Laboratory (4 cr.)

MATH 190G Trigonometry and Precalculus (4 cr.)

MATH 191G Calculus and Analytic Geometry I (4 cr.)

MATH 192G Calculus and Analytic Geometry II (4 cr.)

Natural Resources Concentration

BIOL 211G Cellular and Organismal Biology & BIOL 211GL Cellular and Organismal Biology Laboratory (4 cr.)

CHEM 211 Organic Chemistry (4 cr.)

GEOL 111G Introductory Geology (4 cr.)

MATH 191G Calculus and Analytic Geometry I (4 cr.)

MATH 192G Calculus and Analytic Geometry II (4 cr.)

FWCE 110G Introduction to Natural Resources Management (3 cr.)

FWCE 255 Principles of Fish and Wildlife Management (3 cr.)

PHYS 215G Engineering Physics I & PHYS 215GL Engineering Physics I Laboratory (4 cr.)

Physical Sciences Concentration

MATH 190G Trigonometry and Precalculus (4 cr.)

MATH 191G Calculus and Analytic Geometry I (4 cr.)

MATH 192G Calculus and Analytic Geometry II (4 cr.)

BIOL 111G Natural History of Life & BIOL 111GL Natural History of Life Laboratory (4 cr.)

BIOL 211G Cellular and Organismal Biology & BIOL 211GL Cellular and Organismal Biology Laboratory (4 cr.)

GEOL 111G Introductory Geology (4 cr.)

Associate of Science Degree

General Education/NM Common Core

Area I: English & Communication (10 credits)		10
ENGL 111G	Rhetoric and Composition	
ENGL 218G	Technical and Scientific Communication	
or ENGL 211G	Writing in the Humanities and Social Sciences	
COMM 253G	Public Speaking	
or COMM 265G	Principles of Human Communication	
Area II: Mathematics (3 - 4 credits)		3-4
MATH 121G	College Algebra ¹	
or MATH 190G	Trigonometry and Precalculus	
or MATH 191G	Calculus and Analytic Geometry I	
Area III: Laboratory Sciences (16 credits)		16
CHEM 111G	General Chemistry I	
12 additional credit Lab Science (8 credits must be G courses)		
Concentrations ²		
Areas IV Social/Behavioral Sciences (9 credits)		9
ECON 251G	Principles of Macroeconomics	
Any two additional Social/Behavioral Sciences 100-200 courses listed in the NM Common Core list.		
Area V: Humanities/Fine Arts (6 credits)		6
Any two Humanities/Fine Arts 100-200 G courses listed in the NM Common Core list.		
Electives:		16
Mathematics (Area II), Lab Science (Area III), or Engineering Electives to bring total to 60 credits ³		
Total Credits		60-61

¹ Students who place above MATH 121G College Algebra must take an additional 3 credits of higher-level MATH or science electives.

² See Concentration tab for recommended electives.

³ Work with an advisor to select appropriate courses to support the chosen bachelor degree.

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		
CHEM 111G	General Chemistry I	4
ENGL 111G	Rhetoric and Composition	4
Lab Science G course (see Concentration tab for recommendations)		4
MATH 121G	College Algebra	3-4
or MATH 190G	or Trigonometry and Precalculus	
or MATH 191G	or Calculus and Analytic Geometry I	
Credits		15-16

Spring

COMM 253G	Public Speaking	3
or COMM 265G	or Principles of Human Communication	
Elective (See Concentration tab for recommendations)		4
Social/Behavioral Science G course		3
Laboratory Science (See Concentration tab for recommendations)		4
Credits		14

Second Year

Fall

Elective (See Concentration tab for recommendations)		4
ENGL 218G	Technical and Scientific Communication	3
or ENGL 211G	or Writing in the Humanities and Social Sciences	
ECON 251G	Principles of Macroeconomics	3
Humanities/Fine Arts G course		3
Laboratory Science (see Concentration tab for recommendations)		4
Credits		17

Spring

Elective (See Concentration tab for recommendations)		4
Elective (See Concentration tab for recommendations)		4
Social/Behavioral Science G course		3
Humanities/Fine Arts G Course		3
Credits		14
Total Credits		60-61

LAB SCIENCE REQUIREMENT RECOMMENDATIONS: It is strongly recommended to choose a concentration. Please note: some classes are only offered in a particular semester and may have pre-requisites.

Biology Concentration

BIOL 111G Natural History of Life & BIOL 111G Natural History of LifeL (4 cr.)

BIOL 211G Cellular and Organismal Biology & BIOL 211G Cellular and Organismal BiologyL (4 cr.)

CHEM 111G General Chemistry I (4 cr.)

CHEM 112G General Chemistry II (4 cr.)

Natural Resources Concentration

E S 110G Introductory Environmental Science (4 cr.)

BIOL 111G Natural History of Life & BIOL 111GL Natural History of Life Laboratory (4 cr.)

CHEM 111G General Chemistry I (4 cr.)

CHEM 112G General Chemistry II (4 cr.)

Physical Science Concentration

CHEM 111G General Chemistry I (4 cr.)

CHEM 112G General Chemistry II (4 cr.)

PHYS 211G General Physics I & PHYS 211GL General Physics I Laboratory (4 cr.)

PHYS 212G General Physics II & PHYS 212GL General Physics II Laboratory (4 cr.)

Elective Recommendations: **Mathematics (Area II), Lab Science (Area III), or Engineering Electives to bring total to 60 credits. Electives with a science focus are strongly recommended.**

Biology Concentration

PHYS 211G General Physics I & PHYS 211GL General Physics I Laboratory (4 cr.)

PHYS 212G General Physics II & PHYS 212GL General Physics II Laboratory (4 cr.)

MATH 191G Calculus and Analytic Geometry I (4 cr.)

MATH 192G Calculus and Analytic Geometry II (4 cr.)

Natural Resources Concentration

BIOL 211G Cellular and Organismal Biology & BIOL 211GL Cellular and Organismal Biology Laboratory (4 cr.)

CHEM 211 Organic Chemistry (4 cr.)

GEOL 111G Introductory Geology (4 cr.)

MATH 191G Calculus and Analytic Geometry I (4 cr.)

MATH 192G Calculus and Analytic Geometry II (4 cr.)

PHYS 215G Engineering Physics I & PHYS 215G Engineering Physics II (4 cr.)

Physical Science Concentration

MATH 190G Trigonometry and Precalculus (4 cr.)

MATH 191G Calculus and Analytic Geometry I (4 cr.)

MATH 192G Calculus and Analytic Geometry II (4 cr.)

BIOL 111G Natural History of Life & BIOL 111GL Natural History of Life Laboratory (4 cr.)

BIOL 211G Cellular and Organismal Biology & BIOL 211GL Cellular and Organismal Biology Laboratory (4 cr.)

GEOL 111G Introductory Geology (4 cr.)

Security Guard Level One

The **Security Guard Level One Certificate** is designed to prepare students for entry-level employment as a security guard in office buildings, department stores, small businesses, colleges and universities. Graduates will be able to demonstrate mastery of state requirements for the minimum level of security entry, know and understand their role in security operations, administer basic first aid and CPR, and function effectively on teams.

Graduation Requirements

WorkKeys® scores of level 3 in Reading for Information, Locating Information, and Applied Mathematics; cumulative GPA of 2.0 or higher; the last 15 credits taken at NMSU.

Security Guard Level One - Certificate (p. 152)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

OEPS 150. Correctional Officer Training I 4 Credits (2+4P)

Introduction to corrections, departmental policies and procedures, report writing, officer safety, and physical conditioning. Restricted to majors.

Prerequisite: consent of instructor.

OEPS 180. Correctional Officer Training II 4 Credits (2+4P)

Criminal justice system, communications, ethics, correctional law and responsibilities, search procedures, hostage situations, institutional gangs. Restricted to majors OEPS 195.

Prerequisite: consent of instructor.

OEPS 250. Correctional Officer Training III 4 Credits (2+4P)

Use of force, firearms, baton, chemical agents, standard first aid, and CPR. Restricted to majors.

Prerequisite: consent of instructor.

OEPS 280. Correctional Officer Training IV 4 Credits (2+4P)

Stress management, supervision of special needs offender, defensive driving, preparation for certifying exams. Restricted to majors.

Prerequisite: consent of instructor.

Security Guard Level One - Certificate

Security Guard Level One - Certificate not available 2018-2019.

Certificate not offered 2018-2019

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

Certificate not offered 2018-2019.

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 112 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 111G Rhetoric and Composition 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 Services - Associate Degree (p. 153)

S WK 221G. Introduction to Social Welfare

3 Credits

A broad overview of current social problems and the role of social agencies and community members in addressing these problems.

S WK 251. Women's Issues in Social Work

3 Credits

Examines gender-specific social problems and their identification and resolution through the use of social agencies and community resources. Community Colleges only.

S WK 253. Case Management

3 Credits

Introduction to case management for social- and human-services workers. Overview of typical duties and responsibilities of a case manager, including setting goals, performing assessments, writing progress notes, and linking clients with other resources in the community. Recommended for students considering a career in social work or human services. Community Colleges only.

Prerequisites: PSY 201G and S WK 221G.

Social Work - Associate Degree

General Education/NM Common Core Requirements (39-42 credits)

Area I: English and Communication (10 credits)

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 211G	Writing in the Humanities and Social Sciences	
or ENGL 218G	Technical and Scientific Communication	
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	

Area II: Mathematics (6 credits)

MATH 120	Intermediate Algebra	3
or MATH 121G	College Algebra	
STAT 251G	Statistics for Business and the Behavioral Sciences	3

Area III: Laboratory Science (8 credits)

BIOL 101G	Human Biology	3
BIOL 101GL	Human Biology Laboratory	1
Any additional 4 credit Lab Science G course in the NM Common Core list.		4

Area IV: Social/Behavioral Sciences (12 credits)

C EP 110G	Human Growth and Behavior	3
PSY 201G	Introduction to Psychology	3
SOC 101G	Introductory Sociology	3
or SOC 201G	Contemporary Social Problems	
S WK 221G	Introduction to Social Welfare	3
Area V: Humanities/Fine Art (6 credits)		6
PHIL 101G	The Art of Wondering	
One additional Humanities/Fine Arts 100-200 G course from the NM Common Core list.		
Second Language (8 credits)		
SPAN 111	Elementary Spanish I	4
SPAN 112	Elementary Spanish II	4
Or two semesters of a second language		
Related Requirements (10 credits)		
C S 110	Computer Literacy	3
COLL 101	College/Life Success	1
PSY 266	Applied Psychology	3
or PSY 290	Psychology of Adjustment	
S WK 253	Case Management	3
Total Credits		60

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		
COLL 101	College/Life Success	1
C S 110	Computer Literacy	3
S WK 221G	Introduction to Social Welfare	3
PHIL 101G	The Art of Wondering	3
ENGL 111G	Rhetoric and Composition	4
Credits		14
Spring		
BIOL 101G	Human Biology	3
BIOL 101GL	Human Biology Laboratory	1
PSY 201G	Introduction to Psychology ¹	3
ENGL 203G	Business and Professional Communication	3
or ENGL 211G	Writing in the Humanities and Social Sciences	
or ENGL 218G	Technical and Scientific Communication	
Humanities/Fine Art		3
COMM 253G	Public Speaking	3
or COMM 265G	Principles of Human Communication	
Credits		16

Second Year

Fall		
PSY 266	Applied Psychology	3
or PSY 290	Psychology of Adjustment	
MATH 120	Intermediate Algebra	3
or MATH 121G	College Algebra	

C EP 110G	Human Growth and Behavior	3
SPAN 111 or GER 111	Elementary Spanish I or Elementary German I	4
SOC 101G or SOC 201G	Introductory Sociology or Contemporary Social Problems	3
Credits		16

Spring

S WK 253	Case Management	3
Laboratory Science G Course		4
STAT 251G	Statistics for Business and the Behavioral Sciences	3
SPAN 112 or GER 112	Elementary Spanish II ² or Elementary German II	4
Credits		14
Total Credits		60

¹ PSY 201G Introduction to Psychology is recommended as it is a pre-requisite for S WK 253 Case Management.

² Take elective if SPAN 112 Elementary Spanish II/SPAN 212 Intermediate Spanish II is completed prior to this term.

Solar Wind Energy

The **Solar-Wind Energy Certificate** is designed for students who intend to enter the industrial workforce and gives students a selection of courses to enhance professional opportunities in the growing field of wind and solar energy.

Solar-Wind Energy technology is devoted to installing and maintaining industrial, commercial, and residential solar-wind electrical systems, repair and maintenance of equipment, transmission systems, and maintenance of computer controlled process circuits.

The Solar-Wind Energy certificate program emphasizes knowledge of the National Electrical Code, wiring materials and methods, installation and maintenance of motors and electrical controls, and troubleshooting electrical systems. Coursework completed in this certificate program is applicable to the Associate of Applied Science degree in Electronics Technology.

Solar Wind Energy Certificate (p. 154)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

E T 125	Introduction to Renewable Energy	3
E T 182	Digital Logic	3
Approved E T Elective		3
Approved E T Elective		3
Approved E T Elective		2
E T 184	Applied AC Circuits	3
E T 184 L	Applied AC Circuits Lab	1
E T 183	Applied DC Circuits	3
E T 183 L	Applied DC Circuits Lab	1
OEET 115	Wiring Methods and Materials	5

OEET 205	National Electric Code	3
Total Credits		30

Solar Wind Energy Certificate

Solar Wind Energy Certificate is not being offered 2018-2019.

Core Curriculum Requirements

E T 125	Introduction to Renewable Energy	3
Approved E T Elective		3
Approved E T Elective		3
Approved E T Elective		2
E T 182	Digital Logic	3
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	Applied AC Circuits Lab	1
OEET 115	Wiring Methods and Materials	5
OEET 205	National Electric Code	3
Total Credits		30

Course	Title	Credits
First Year		
Fall		
E T 125	Introduction to Renewable Energy	3
Approved E T Elective		3
Approved E T Elective		3
Approved E T Elective		2
E T 182	Digital Logic	3
Credits		14
Spring		
E T 183	Applied DC Circuits	3
OEET 115	Wiring Methods and Materials	5
OEET 205	National Electric Code	3
E T 183 L	Applied DC Circuits Lab	1
E T 184	Applied AC Circuits	3
E T 184 L	Applied AC Circuits Lab	1
Credits		16
Total Credits		30

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 May 15. Students wishing to make application must complete all requirements set forth in the current application packet and submit to the Allied Health Director by October 15.

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. 156)

SURG 120. Surgical Technology Clinical I **2-4 Credits**

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.

Prerequisite(s): Admission to Surgical Technology Program, BIOL 221, BIOL 225, BIOL 226, NURS 150.

Corequisite(s): SURG 140, SURG 145.

SURG 140. Introduction to Surgical Technology **4 Credits**

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 221, BIOL 226, & 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 221, BIOL 225, BIOL 226, & 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**3 Credits**

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**4 Credits**

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. Restricted to Community Colleges campuses only.

Prerequisite(s): SURG 150, SURG 260.

SURG 230. Professional Readiness**2-3 Credits (2-3)**

This course transitions the student into professional readiness for employment, professional readiness for attaining certification and professional readiness for maintaining certification status. May be repeated up to 3 credits. 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**

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**3-7 Credits**

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. May be repeated up to 7 credits. Admission to Surgical Technology Program necessary to enroll in the course.

Prerequisite(s): SURG 260.

Surgical Technology - Associate of Applied Science

All courses must be completed with a C or higher.

Common Core & Related Requirements¹

ENGL 111G	Rhetoric and Composition	4
CHEM 110G	Principles and Applications of Chemistry	4
MATH 120	Intermediate Algebra	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Prerequisite Requirements

HIT 150	Introduction to Medical Terminology	3
BIOL 221	Introductory Microbiology	3
BIOL 221 L	Introductory Microbiology Laboratory	1
BIOL 225	Human Anatomy and Physiology I	4
BIOL 226	Human Anatomy and Physiology II	4

Technical Requirements²

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	3
SURG 150	Surgical Procedures I	5
SURG 260	Surgical Technology Clinical II	4
SURG 160	Surgical Procedures II	4
SURG 265	Surgical Technology Clinical III	7

SURG 230	Professional Readiness	3
Total Credits		68

- ¹ Students who are waived from CHEM 110G Principles and Applications of Chemistry must take an additional 4 credits of approved electives.
- ² Students must complete all Common Core & Related Requirement as well as Prerequisite Requirements to be accepted into the Surgical Technology program and enroll in SURG courses.

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		
ENGL 111G	Rhetoric and Composition	4
CHEM 110G	Principles and Applications of Chemistry (or elective)	4
BIOL 225	Human Anatomy and Physiology I	4
Credits		12
Spring		
BIOL 226	Human Anatomy and Physiology II	4
MATH 120	Intermediate Algebra	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
HIT 150	Introduction to Medical Terminology	3
Credits		13
Summer		
BIOL 221	Introductory Microbiology	3
BIOL 221 L	Introductory Microbiology Laboratory	1
Credits		4
Second Year		
Fall		
SURG 120	Surgical Technology Clinical I	4
SURG 150	Surgical Procedures I	5
SURG 160	Surgical Procedures II	4
Credits		13
Spring		
SURG 155	Pharmacology for the Surgical Technology	3
SURG 230	Professional Readiness	2
SURG 260	Surgical Technology Clinical II	4
SURG 265	Surgical Technology Clinical III	4
Credits		13
Summer		
SURG 140	Introduction to Surgical Technology	4
SURG 145	Fundamentals of Perioperative Concepts & Techniques	5
Credits		9
Total Credits		64

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; the last 15 credits taken at NMSU.

AAS in Welding Technology: ENGL 111G Rhetoric and Composition 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. TOTAL CREDITS REQUIRED FOR DEGREE: (64)

Welding Technology - Certificate (p. 159)

Gainful Employment Disclosure: Important information about the educational debt, earnings, and completion rates of students who attend this program can be found on the following Gainful Employment Disclosure (<https://carlsbad.nmsu.edu/about-us/gainful-employment>)

Welding Technology - Associate of Applied Science (p. 159)

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 101. Fundamentals of Welding 3 Credits

Set-up and adjustment of ARC and oxyacetylene equipment. Welding safety procedures and terminology. Skill development in laying weld beads with various patterns, positions, and processes.

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

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

Interpretation of prints related to welding. Emphasis on AWS standard symbols for welding, brazing, and nondestructive examination.

WELD 112. Professional Development and Leadership 1 Credit

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: WELD majors. S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

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**

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**

Enhancement of WELD 125. Development of more advanced pipe welding skills.

Prerequisites: WELD 110, WELD 130 and WELD 140.

Corequisite: 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**

Enhancement of WELD 150. Development of more advanced pipe welding skills. Emphasis on industry driven test.

Prerequisites: WELD 125 and WELD 126.

Corequisite: 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 205. Welding Equipment Maintenance**3 Credits (2+2P)**

Hands-on experience in the maintenance and repair of welding equipment, including welding machines and associate shop equipment, as well as the development of preventative maintenance programs. Basic safety, including MSDS and Right-to-Know will be introduced. Restricted to: Community Colleges only.

Prerequisite(s): WELD 100, WELD 130, WELD 140, WELD 160.

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 230. Weld Testing**3 Credits (2+2P)**

Covers destructive and nondestructive examination methods used to test welds. Tensile, compression, bend, hardness, impact, visual, dye-penetrant, magnetic particle, ultrasound, and radiographic methods of testing/examination. Restricted to: Community Colleges only.

Prerequisite(s): WELD 100, WELD 130, WELD 140, WELD 211, and OETS 104, or 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

Common Core & Requirements

ENGL 111G	Rhetoric and Composition	4
ENGL 203G	Business and Professional Communication	3
or ENGL 218G	Technical and Scientific Communication	
COMM 265G	Principles of Human Communication	3
PSY 201G	Introduction to Psychology	3
or SOC 101G	Introductory Sociology	

Core Curriculum 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

Electives

Select 3 credits from General Education Course Area 4: Social/Behavior Sciences or Area 5: Humanities and Fine Arts	3
Total Credits	64

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		
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 Area 4 or Area 5		3
	Credits	15

Summer

WELD 170	Welded Fabrication	3
PSY 201G or SOC 101G	Introduction to Psychology or Introductory Sociology	3
	Credits	6

Second Year**Fall**

WELD 110	Blueprint Reading (Welding)	3
WELD 126	Industrial Pipe Welding	3
OETS 118	Mathematics for Technicians	3
ENGL 111G	Rhetoric and Composition	4
	Credits	13

Spring

WELD 211	Welder Qualification	6
WELD 151	Industrial Pipe Welding II	3
COMM 265G	Principles of Human Communication	3
ENGL 203G or ENGL 218G	Business and Professional Communication or Technical and Scientific Communication	3
	Credits	15
	Total Credits	64

Welding Technology - Certificate

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

Visit with an advisor for help with creating a customized plan.

Course	Title	Credits
First Year		
Fall		
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 E-AEROSPACE ENGINEERING (A E) (p. 162)
- A S-ARTS AND SCIENCES (A S) (p. 162)
- A ST- APPLIED STATISTICS (A ST) (p. 163)
- ACCT-ACCOUNTING (ACCT) (p. 163)
- ACES-AGRI, CONSUMER & ENV SCIE (ACES) (p. 163)
- AERO-AEROSPACE STUDIES (AERO) (p. 163)
- AERT-AEROSPACE TECHNOLOGY (AERT) (p. 164)
- AG E-AGRICULTURAL ECONOMICS (AG E) (p. 164)
- AGRO-AGRONOMY (AGRO) (p. 165)
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B

- B A-BUSINESS ADMINISTRATION (B A) (p. 174)
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- BIOL-BIOLOGY (BIOL) (p. 176)
- BLAW-BUSINESS LAW (BLAW) (p. 178)
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C

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D

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- DENTAL HYGIENE/HYGIENIST (DHYG) (p. 200)
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E

- E E-ELECTRICAL ENGINEERING (E E) (p. 207)
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- EDUC-EDUCATION (EDUC) (p. 211)
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- ELT - ELECTRONICS TECHNOLOGY (ELT) (p. 212)
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- ENGR-ENGINEERING (ENGR) (p. 214)
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F

- FCS-FAMILY AND CHILD SCIENCE (FCS) (p. 215)
- FCSE-FAMILY & CONSUMER SCI EDU (FCSE) (p. 215)
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- FIRE-FIRE INVESTIGATION (FIRE) (p. 215)
- FREN-FRENCH (FREN) (p. 217)
- FSTE-FOOD SCIENCE & TECHNOLOGY (FSTE) (p. 217)
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G

- GENE-GENETICS (GENE) (p. 218)
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H

- HIST-HISTORY (HIST) (p. 219)
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- HRTM-HOTEL/RESTRNT/TOURISM MGT (HRTM) (p. 224)
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I

- I E-INDUSTRIAL ENGINEERING (I E) (p. 225)

- INMT - INDUSTRIAL MAINTENANCE (INMT) (p. 225)
- INTEGRATED NATURAL SCIENCES (NSC) (p. 227)

J

- JOUR-JOURNALISM (JOUR) (p. 227)
- JPNS-JAPANESE (JPNS) (p. 227)

L

- L SC-LIBRARY SCIENCE (L SC) (p. 227)
- LANG-LANGUAGE (LANG) (p. 230)
- LAWE-LAW ENFORCEMENT (LAWE) (p. 230)
- LIB-LIBRARY SCIENCE (LIB) (p. 230)
- LING-LINGUISTICS (LING) (p. 231)

M

- M E-MECHANICAL ENGINEERING (M E) (p. 231)
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- MAT-AUTOMATION & MANUFACTURING (MAT) (p. 232)
- MATH-MATHEMATICS (MATH) (p. 233)
- MGT-MANAGEMENT (MGT) (p. 234)
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- MUS-MUSIC (MUS) (p. 234)

N

- NA - NURSING ASSISTANT (NA) (p. 237)
- NAV-NAVAJO (NAV) (p. 238)
- NURS-NURSING (NURS) (p. 238)

O

- OEBM-BIOMEDICAL TECHNOLOGY (OEBM) (p. 243)
- OECS-COMPUTER TECHNOLOGY (OECS) (p. 243)
- OEEM- PARAMEDIC (OEEM) (p. 246)
- OEET- ELECTRICAL TRADES (OEET) (p. 248)
- OEGR-DIGITAL GRAPHIC TECH (OEGR) (p. 250)
- OEGS-GEOGRAPHIC INFO SYS (OEGS) (p. 250)
- OEPS-PUBLIC SAFETY (OEPS) (p. 250)
- OEPT-PHOTOGRAPHIC TRADES (OEPT) (p. 250)
- OETS-TECHNICAL STUDIES (OETS) (p. 250)

P

- P E-PHYSICAL EDUCATION (P E) (p. 251)
- PE-P-PHYSICAL EDUCATION (PE P) (p. 252)
- PHIL-PHILOSOPHY (PHIL) (p. 253)
- PHLS-PUBLIC HEALTH SCIENCES (PHLS) (p. 253)
- PHYS-PHYSICS (PHYS) (p. 253)
- PL-S-PARALEGAL SERVICES (PL S) (p. 255)
- PORT-PORTUGUESE (PORT) (p. 256)
- PSY-PSYCHOLOGY (PSY) (p. 256)

R

- RADT-RADIOLOGIC TECHNOLOGY (RADT) (p. 256)
- RESP - RESPIRATORY THERAPY (RESP) (p. 258)

- RGSC-RANGE SCIENCE (RGSC) (p. 259)

S

- S WK-SOCIAL WORK (S WK) (p. 259)
- SMET-SCIENCE/MATH/ENG/TECH (SMET) (p. 259)
- SOC-SOCIOLOGY (SOC) (p. 259)
- SOIL-SOIL (SOIL) (p. 260)
- SP M-SPORTS MEDICINE (SP M) (p. 260)
- SPAN-SPANISH (SPAN) (p. 261)
- SPCD-ENGLISH AS A SECOND LNG (SPCD) (p. 261)
- SPED-SPECIAL EDUCATION (SPED) (p. 261)
- STAT-STATISTICS (STAT) (p. 262)
- SUR-SURVEYING (SUR) (p. 262)
- SURG-SURGICAL TECHNOLOGY (SURG) (p. 262)

T

- TCEN-ENVIRONMENTAL/ENERGY TECH (TCEN) (p. 263)
- THTR-THEATRE (THTR) (p. 265)

U

- UNIV-UNIVERSITY STUDIES (UNIV) (p. 266)

W

- W S-WOMEN'S STUDIES (W S) (p. 267)
- WATR-WATER UTILITIES (WATR) (p. 267)
- WELD-WELDING TECHNOLOGY (WELD) (p. 268)

A E-AEROSPACE ENGINEERING (A E)

A E 102. Introduction to Aerospace Engineering

1 Credit

A survey course of aeronautical, aerospace, and astronautical engineering, with an emphasis on basic aerospace concepts and major aerospace principles without going into detailed math and analysis. Students are given the opportunity to listen to guest speakers and participate in projects utilizing the NMSU Ultralight and NMSU wind tunnel. Restricted to: Main campus only.

A S-ARTS AND SCIENCES (A S)

A S 100. Insights: University Experience for Future Careers

1 Credit

Research and investigation of college majors and career opportunities.

A S 101. Success Seminar

1 Credit

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

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.

A ST- APPLIED STATISTICS (A ST)

A ST 251G. Statistics for Business and the Behavioral Sciences**3 Credits**

Techniques for describing and analyzing data; estimation, hypothesis testing, regression and correlation; basic concepts of statistical inference. Same as STAT 251G.

Prerequisite: C- or better in MATH 120.

ACCT-ACCOUNTING (ACCT)

ACCT 101. Supplemental Instruction to ACCT 221**1 Credit**

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**

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 221. Principles of Accounting I (Financial)**3 Credits**

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.

ACCT 222. Principles of Accounting II (Managerial)**3 Credits**

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 221.

ACES-AGRI, CONSUMER & ENV SCIE (ACES)

ACES 101. Agricultural Leadership Development**1-3 Credits (1-3)**

This course will introduce the student to skill sets necessary to engage in the process of leadership through an applied project. A broad spectrum of principles and applications associated with the College of Agricultural, Consumer and Environmental Sciences will be employed. The development of a specific project through a collaborative process will be required. Students will be engaged in hands-on, real-time experiences applicable to agriculture. Course may be repeated once. Student must have a 3.5 GPA and above. Consent of Instructor required.

ACES 111. Freshman Orientation**1 Credit**

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.

ACES 121. Financial Fitness for College Students**1 Credit**

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.

ACES 199. 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.

ACES 201. Agricultural Leadership Development**1-3 Credits (1-3)**

This course will introduce the student to skill sets necessary to engage in the process of leadership through an applied project. A broad spectrum of principles and applications associated with the College of Agricultural, Consumer and Environmental Sciences will be employed. The development of a specific project through a collaborative process will be required. Students will be engaged in hands-on, real-time experiences applicable to agriculture. Course may be repeated once. Student must have a 3.5 GPA and above. Consent of Instructor required.

AERO-AEROSPACE STUDIES (AERO)

AERO 121. The Air Force Today I**2 Credits (1.25+2P)**

Survey course on the USAF and AFROTC. Includes mission and organization of the Air Force, officer ship and professionalism, military customs and courtesies, as well as basic communication skills. Leadership Lab practicum, AERO 000 is included.

AERO 122. The Air Force Today II**2 Credits (1.25+2P)**

Continuation of AERO 121, with emphasis on Air Force officer opportunities, group leadership problems, and further development of communication skills (oral and written). Includes Leadership Lab practicum, AERO 000.

AERO 221. The Air Force Way I**2 Credits (1.25+2P)**

Topics include: Air Force heritage, Air Force leaders, an introduction to ethics and values, and an application of communication skills. Facilitates the transition from Air Force ROTC cadet to Air Force ROTC candidate. Includes Leadership Lab practicum, AERO CIOD.

AERO 222. The Air Force Way II**2 Credits (1.25+2P)**

Continuation of AERO 221, including an introduction to leadership, quality Air Force, and continued application of communication skills. Includes Leadership Lab practicum, AERO 000.

AERO 223. Air Force Leadership Development**1 Credit**

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. Pre/ 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. Pre/ Restricted to: Community Colleges only.

Corequisite(s): AERT 221.

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.

AG E-AGRICULTURAL ECONOMICS (AG E)

AG E 100. Introductory to Food and Agribusiness Management**3 Credits**

Orientation to agricultural supply businesses, farm and ranch production, food markets, food processing and distribution, and food consumption. Microeconomic principles for managers. May be repeated up to 3 credits.

AG E 101. Careers in Food and Agribusiness**1 Credit**

Orientation to agribusiness management. 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. May be repeated up to 1 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Freshman status only or obtain consent of instructor.

AG E 200. 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.

AG E 210G. Survey of Food and Agricultural Issues**3 Credits**

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 210G.

AG E 236. Principles of Food and Agribusiness Management**3 Credits**

Description and application of management and financial principles, market planning, and organization theory in small business situations. May be repeated up to 3 credits.

AG E 250. Technology and Communication for Business Management**3 Credits (2+2P)**

Understanding and improving skills for data analysis, information management and communication is the focus of this course. Drawing examples from a variety of management, business, technological and research situations, students discover the versatility and variety of uses of computer applications such as spreadsheet, database, presentation and document software. Emphasizing a 'hands-on' approach students learn the foundations of these tools and their use.

AG E 260. Introduction to Food and Agribusiness Accounting**3 Credits**

Purpose and methods of keeping and analyzing farm and ranch records. Net worth and income statements, efficiency measures, analysis of the business, and tax computations. May be repeated up to 3 credits.

AGRO-AGRONOMY (AGRO)

AGRO 100G. 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 HORT 100G.

AGRO 200. 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.

AGRO 250. 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 250.

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**

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 116. Math for Health Occupations**3 Credits**

Principles of math and pharmacology necessary for administration of medications. Restricted to: Community Colleges only.

Prerequisite(s): CCDM 114N or equivalent.

AHS 120. Medical Terminology**3 Credits**

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 and BOT 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 110G, 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 165. Foundations to Allied Health Science**3 Credits (1+4P)**

A foundational course which will cover a multidisciplinary focus on success in the Allied Health care environment. Topics included, but not limited to: the health care system, personal and professional qualities of a health care worker, legal and ethical responsibilities, cultural diversity, nutrition and diets, medical math, infection control, preparing for the world of work, core measures and quality assurance, the prospective payment system, customer service, current trends in health care and communication, and promotion of safety. Laboratory time will cover library and library resource use, promotion of safety, vital sign, CPR & AED use, job interviewing practice, and 16 hours of job shadowing participation located in a healthcare facility. Open to all students seeking to pursue an Allied Health or Healthcare career pathway. Restricted to Community Colleges campuses only.

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 only.

Prerequisite(s): (BIOL 225 and 226) or (AHS 153 and 154).

AHS 202. Legal and Ethical Issues in Health Care**3 Credits**

Consideration of legal and ethical issues in modern health care delivery.

AHS 250. SPANISH FOR HEALTH PROFESSIONALS**3 Credits**

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.

Prerequisite(s)/Corequisite(s): AHS 190. 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 only.

Prerequisite(s): AHS 190.

AHS 295. Introduction to Allied Health**1 Credit**

An introductory course that covers a multidisciplinary focus needed for success in the allied health care environment. Topics include health care delivery systems and allied health careers, history of health care, law and ethics pertaining to health care, personal qualities of health care workers, confidentiality and reportable incidents. This course will also cover an orientation into safety and infection control, core measures and quality assurance, perspective payment system, customer service, current trends in health care and communication, skills to be a patient/client educator and a member of the Health Care team. Open to all students wanting to explore the allied health care industry. Restricted to Community Colleges campuses only.

ANSC-ANIMAL SCIENCE (ANSC)

ANSC 100. Introductory Animal Science**3 Credits**

Orientation and survey of livestock industry in the United States; introduction to feeding, breeding, and management practices for producing farm animals and select companion animals.

ANSC 100 H. Introductory Animal Science**3 Credits**

Orientation and survey of livestock industry in the United States; introduction to feeding, breeding and management practices for producing farm animals and select companion animals. Additional course work will be required. Restricted to Las Cruces campus only.

Prerequisite(s): Eligibility for membership in honors college.

ANSC 100 L. Introductory Animal Science Laboratory**1 Credit**

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. Pre/

Corequisite(s): ANSC 100.

ANSC 103. 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.

ANSC 112. Companion Animals in Society**3 Credits**

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.

ANSC 190. Western Equitation I**2 Credits**

Basic principles of Western riding, including care and management of the riding horse, equitation equipment, and development of riding skills.

ANSC 200. Introduction to Meat 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.

ANSC 201. Introduction to Genetics for Animal Production**3 Credits**

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 111G.

ANSC 205. Introduction to Dairy Science**3 Credits**

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 100. Restricted to Las Cruces campus only.

ANSC 220. Animal Science Career Development**1 Credit**

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.

ANSC 250. 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.

ANSC 261. Introduction to Animal Metabolism**3 Credits**

Principles underlying the mechanisms of animal metabolism as they relate to production, maintenance, and health of animals.

Prerequisite: CHEM 111G.

ANSC 262. 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.

ANSC 285. Introduction to Companion Animal Science**3 Credits**

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.

ANSC 288. Horse Fitting and Selling**3 Credits**

Preparation of horses for sale; planning and conduct of auction sale; application of marketing principles relating to selling horses.

Prerequisite: ANSC 103 or consent of instructor.

ANSC 289. Management of Equine Operations**3 Credits**

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 103 or consent of instructor.

ANSC 290. Western Equitation II**2 Credits**

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.

ANSC 295. Team Competition in Animal Science**1-2 Credits**

Training in team competition in the animal sciences. May be repeated for a maximum of 6 credits. May be repeated up to 6 credits. Consent of Instructor required.

ANTH-ANTHROPOLOGY (ANTH)

ANTH 115. Native Peoples of North America**3 Credits**

Provides an introduction to the geography, environment, prehistoric cultural origins, sociopolitical organization, language, economics, material culture and technology, religious beliefs and practices, and historic period culture change of Native peoples of North America.

ANTH 116. Native Peoples of the American Southwest**3 Credits**

Introduction to the early history and culture of native people of the Southwest.

ANTH 118. Introduction to Historic Preservation**3 Credits**

Introduction to historic preservation, its history, goals, methods, legal basis, and economic importance. Explores public role in decision-making. Community Colleges only.

ANTH 120G. Human Ancestors**3 Credits**

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.

ANTH 125G. Introduction to World Cultures**3 Credits**

Examine cross-cultural diversity and human universals through the lens of anthropological inquiry. Explore human thought and behavior in contemporary world cultures covering kinship, economic patterns, power structures, and religious practices and beliefs. The impact of cultural influence on everyday life is emphasized.

ANTH 130G. Human's Place in Nature: Introduction to Biological Anthropology**3 Credits**

This course uses scientific methods and principles to examine human evolutionary history and family tree relationships, as well as the biological foundations of human behavior. Through lectures, readings and laboratory assignments students are introduced to the history and development of modern evolutionary biology, molecular and population genetics, the primate and human fossil record and modern human biological diversity. By examining the social lives of apes and other primates, primitive and unique aspects of human behavior are identified and the lives of fossil ancestors are reconstructed.

Corequisite(s): ANTH 130GL.

ANTH 130GL. Human's Place in Nature Laboratory**1 Credit**

This one credit laboratory course uses scientific methods and principles to examine evidence for human evolutionary history and family tree relationships, primate ecology and behavior, and modern human diversity.

ANTH 201G. Introduction to Anthropology**3 Credits**

Exploration of human origins and the development of cultural diversity. Topics include biological and cultural evolution, the structure and functions of social institutions, belief systems, language and culture, human-environmental relationships, methods of prehistoric and contemporary cultural analysis, and theories of culture.

ANTH 202G. World Archaeology**3 Credits**

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.

ANTH 203G. Introduction to Language and Cultural Anthropology**3 Credits**

Provides an introduction to the methods, theories, and results of two subfields of anthropology: linguistics and cultural anthropology. Linguistics is the study of human language. Cultural anthropology is the study of the organizing principles of human beliefs and practices.

ANTH 297. Elementary Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

ARCT-ARCHITECTURE (ARCT)

ARCT 101. 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. Lectures and assignments will introduce students to the elements of current and likely future directions of architecture from experiential, aesthetic, structural, functional, and historical perspectives. The course will provide students with knowledge about the people and processes involved with professional issues of architectural practice. Students will be required to participate in individual and group presentations and projects, as well as compile a portfolio of their work completed in the course.

ARCT 104. Introduction to 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. Direct linkages with the Introduction to Architecture course provide exposure to a wide range of interconnected architectural concepts.

ARCT 111. 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.

ARCT 124. Global Issues and Sustainability**3 Credits**

This is a 'critical thinking' course. This course introduces students 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. Through extensive readings, research, dialogue, and debates, students will establish a personal position (opinion) on each of the topics covered. Guest speakers will also be invited. Students will develop reports and presentations on various related issues, as well as develop ideas for solutions to problems related to environmental issues. The impact on the design and construction industry, including 'Green Building' and 'LEED Accreditation and Certification/Criteria' will also be addressed on each issue. Restricted to Community Colleges only.

ARCT 150. 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, Environmental. Course is co-taught by a college instructor in conjunction with mentors who are local professionals in the fields of ACE. Students receive one-on-one mentoring, lectures, demonstrations, and attend field trips to construction sites, offices of Architects, Engineers and Designers, etc. Students also engage in hands-on activities such as Design (Architectural, Civil, Mechanical, Structural, Interior, Landscape, Environmental), analysis, model building, software, and research topics related to the ACE fields, as well as Sustainability, Interior Design, Landscape Design, Construction Materials and Fabrication processes. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

ARCT 154. 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 ARCT 101 and ARCT 104 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): ARCT 101 and ARCT 104.

ARCT 170. 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.

ARCT 204. 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 ARCT 101 and ARCT 104.

ARCT 210. 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.

ARCT 211. 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): ARCT 111 or consent of instructor.

ARCT 224. Sustainable Design in Architecture**3 Credits**

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). Restricted to Community Colleges only.

Prerequisite(s): DRFT 109 or DRFT 165 or consent of instructor.

ARCT 250. 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. Pre/ Restricted to: Community Colleges only.

Corequisite(s): DRFT 109.

ARCT 254. Architectural 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 ARCT 204.

ARCT 260. Architectural Delineation**3 Credits (2+2P)**

Continuation of ARCT 210 with an emphasis in color media.

Prerequisites: ARCT 210.

ARCT 274. LEED Accreditation Exam Prep**3 Credits**

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.

ARCT 290. 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.

ARCT 291. 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.

ARCT 295. 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.

ART-ART (ART)

ART 101G. 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.

ART 110G. Visual Concepts

3 Credits (2+4P)

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.

ART 150. Drawing I

3 Credits (2+4P)

Introduction to the skill of seeing through exercises that emphasize careful drawing from the still life and utilize a range of drawing materials and techniques. Outside assignments required. Intended for non-art majors on main campus. May be repeated up to 3 credits.

ART 151. Drawing II

3 Credits (2+4P)

Continued emphasis on drawing from observation by focusing on still life and other subject matter. Covers a range of materials, techniques and concepts. Outside assignments. Restricted to ART and ANVE/DFM majors.

Prerequisite(s): ART 150.

ART 155. 2-D Fundamentals

3 Credits

Introduction to two-dimensional space emphasizing visual elements and design principles as they apply to composition. A variety of materials are used in the studio projects and sketchbook exercises. Developing knowledge in vocabulary, color theory and skill in translating ideas into design are encouraged. Restricted to Community Colleges campuses only.

ART 156. 3-D Fundamentals

3 Credits

Compositional organization of three-dimensional space explored through a broad range of visual exercises. Resourceful and creative problem solving encouraged. Restricted to Community Colleges campuses only.

ART 157. Color Theory

3 Credits (2+4P)

Various color theories as they relate to compositional organization. Required for art education majors.

ART 160. 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: ART 150, ART 155, or consent of instructor.

ART 161. Digital Imaging I

3 Credits (2+4P)

Work with basic concepts, tools, and vocabulary of Adobe Photoshop to create effective visual communication. Includes selection tools, cloning, copying and pasting, color correction, image restoration, filters, and special effects. Community Colleges only.

ART 163. 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: ART 161.

ART 165. 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. Same as OEPT 165.

Prerequisite: ART 161.

ART 250. Introduction to Drawing

3 Credits (2+4P)

Introduction to drawing with a focus on technical, structural, and methodological skills. Subjects include still life and live figure models.

ART 252. Aspects of Drawing

2-3 Credits

Continued work in drawing with emphasis on personal creative endeavor. Community Colleges only.

Prerequisites: ART 150, ART 151, and ART 250.

ART 255. 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.

ART 260. Introduction to Painting

3 Credits (2+4P)

Introduction to basic skills of painting through various exercises that emphasize working from observation, images and imagination. May be repeated up to 3 credits.

Prerequisite(s): ART 250 or ART 150.

ART 261. Painting Methods, Techniques and Applications

3 Credits (2+4P)

The investigation of formal aspects of painting, an examination of painting techniques, and an exploration of various methodologies regarding form and content as applied to critical thinking skills through medium of paint.

Prerequisite(s): ART 150, ART 260.

ART 262. Aspects of Painting

2-3 Credits

Varied painting media: continued development of painting skills.

Prerequisites: ART 150, ART 155 (for art majors), ART 260, or consent of instructor.

ART 265. Introduction to Sculpture

3 Credits (2+4P)

Beginning sculpture students "explore space" while learning new processes and skills, including mold making, welding and woodworking.

ART 267. Art Portfolio Preparation

3 Credits (2+4P)

Refine general marketing strategies, personal portfolio and resumes.

Define, target, and penetrate personal target markets. Students develop individual promotional packages.

Prerequisites: ART 163, ART 269, and ART 272, or consent of instructor.

ART 269. Advanced Computer-Based 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: ART 157, ART 160, and ART 161, or consent of instructor.

ART 270. Introduction to Photography**3 Credits (2+4P)**

Introduction to the production of digital images within the context of contemporary art. Utilizes digital SLR cameras with an emphasis on basic camera operation, picture composition, image processing and digital workflow. A DSLR camera is required. May be repeated up to 3 credits.

ART 272. Digital Imaging II**3 Credits (2+4P)**

Refining of individual creative styles and technical skills using Adobe Photoshop. Emphasis on input and output predictability, and working with large file productions. Community colleges only. Restricted to: Community Colleges only.

Prerequisite(s): ART 161.

ART 275. Introduction to Ceramics**3 Credits (2+4P)**

Introduction to the technical processes and conceptual concerns of working with the ceramic material. Students will explore various methods of forming with earthenware to make both functional and expressive works out of clay.

ART 276. Ceramics I, B**3 Credits (2+4P)**

Beginning ceramics, complementary half to ART 275. (ART 275 and ART 276 do not need to be taken consecutively.) Basic building techniques of coil, slab, and throwing are introduced. High-fire and low-fire clays are used.

ART 280. Introduction to Printmaking**3 Credits (2+4P)**

Introduction to the field of printmaking through projects that focus on specific processes, such as relief, intaglio, collography, paper lithography, and a variety of transfer and stencil techniques. Students engage in several assignments that are collaborative, as well as individual projects designed for development of personal aesthetics.

ART 285. Introduction to Metals and Jewelry**3 Credits (2+4P)**

Introduction to fundamental processes, design, and conceptual development for metal fabrication of jewelry and functional/non-functional objects.

ART 286. 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.

ART 294. 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.

ART 295G. Introduction to Art History I**3 Credits**

An introduction to the principles of art history within a chronological framework of the art of the Western World. All media will be discussed. From prehistoric times to the fourteenth century.

ART 296G. Introduction to Art History II**3 Credits**

Continuation of ART 295, Art of the Western World from Late Gothic to the present. May be repeated up to 3 credits.

ART 298. Writing in Art**3 Credits**

This reading- and writing-intensive course will introduce students to various approaches of writing about historical art.

ASTR-ASTRONOMY (ASTR)

ASTR 105G. 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. This lecture/lab course satisfies the New Mexico Common Core Area III: Lab Sciences requirement

ASTR 110G. Introduction to Astronomy**4 Credits (3+2P)**

A survey of the universe. Observations, theories, and methods of modern astronomy. Topics include planets, stars and stellar systems, black holes and neutron stars, supernovas and gaseous nebulae, galaxies and quasars, and cosmology. Emphasis on physical principles involving gravity, light and optics (telescopes). Generally non-mathematical. Laboratory involves use of the campus observatory and exercises designed to experimentally illustrate principles of astronomy. This lecture/lab course satisfies the New Mexico Common Core Area III: Lab Sciences requirement.

ASTR 199. Introduction to Astronomy Lab, Special**1 Credit**

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 (e.g.

AUTO-AUTOMOTIVE TECHNOLOGY (AUTO)

AUTO 102. Electrical Measuring Instruments**2 Credits (1+2P)**

Selection, operation, and care of electrical measuring instruments.

AUTO 103. Auto Mechanics Fundamentals**4 Credits (2+4P)**

Theory and operation of all areas of auto mechanics. Basic repair and maintenance operations.

AUTO 105. Welding**4 Credits (2+4P)**

Set-up and adjustment of oxyacetylene and arc welding equipment, identification of metals and rod application. Skill development in laying weld beads and different weld positions.

AUTO 111. Automotive Mechanics Basics**4 Credits**

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. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): AUTO 113. Restricted to Community Colleges campuses only.

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 118. Technical Math for Mechanics**3 Credits (2+3P)**

Mathematical applications for the automotive trade.

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**

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 161. Non-Structural Repair**4 Credits (2+4P)**

This basic auto body course is designed to develop the students understanding of general shop safety using hand tools, pneumatic tools and power tools. This course will also cover straightening fundamentals, plastic and composite repair, panel replacement, and adjustments.

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.

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**

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**

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 295. Special Topics**1-6 Credits**

Topics to be announced in the Schedule of Classes.

AXED-AGRICULTURAL EXTN EDUC (AXED)

AXED 100. Introduction to Agricultural, Extension, and Technology Education**3 Credits**

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.

AXED 105. 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.

AXED 200. 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.

AXED 201G. Effective Leadership and Communication in Agricultural Organizations**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.

AXED 205. Metal Technology-Fabrication**3 Credits (2+4P)**

Processes and procedures of metal fusion, including gas and electric welding techniques and safety. Designed for any major wishing to improve mechanical skills needed in agriculturally related occupations in education and industry.

AXED 230. Early Field-Based Experience in Extension and Industry**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.

AXED 232. Early Field-Based Experience in Agricultural and Technology Education**2 Credits**

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.

AXED 240. Introduction to Agricultural Communication**3 Credits**

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

B A-BUSINESS ADMINISTRATION (B A)

B A 104. Introduction to Business**3 Credits**

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**

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

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 110. Fundamentals of Information Literacy and Systems

3 Credits

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.

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 and 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 and BCT 103.

BCT 103. Introduction to Construction Laboratory

3 Credits

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 and 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 and 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 and BCT 116.

BCT 116. Basic Carpentry Lab

2 Credits

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 or 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**

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 119. Plumbing 1B**3 Credits (2+2P)**

This course continues the introduction of 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.

Prerequisite(s): BCT 117.

BCT 130. Professional Development and Leadership**1 Credit**

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. S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

BCT 150. Forklift Operation**1 Credit**

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**

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 222. Alternative Building**3 Credits (2+2P)**

Exploration of different types of building techniques and materials other than the traditional wood framed structures. Materials and techniques will include adobe, straw bale, insulated concrete forms, rammed earth and structural insulated panels with an emphasis on "green building" methods. Restricted to: Community Colleges only.

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.

BIOL-BIOLOGY (BIOL)

BIOL 101G. Human Biology**3 Credits**

Introduction to modern biological concepts. Emphasis on relevance to humans and their relationships with their environment. Cannot be taken for credit after successful completion of BIOL 111G or BIOL 211G. Appropriate for non-science majors. Requires successful completion of BIOL 101GL in order to meet the NM Common Core Area III Laboratory Science requirements.

BIOL 101GL. Human Biology Laboratory**1 Credit**

Laboratory for BIOL 101G. Laboratory experiences and activities exploring biological concepts and their relevance to humans and their relationship with their environment.

Prerequisite(s)/Corequisite(s): BIOL 101G.

BIOL 110G. 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.

BIOL 111G. Natural History of Life**3 Credits (3)**

Survey of major processes and events in the genetics, evolution, and ecology of microbes, plants and animals, and their interactions with the environment. Appropriate for science and nonscience majors. Must be taken with BIOL 111L to meet general education requirements. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): Currently enrolled in MATH 120, grade of C- or better in MATH 120, or a Math Placement Exam score adequate to enroll in mathematics courses beyond MATH 120.

BIOL 111GL. Natural History of Life Laboratory**1 Credit**

Laboratory experiments, demonstrations and exercises on interrelationships among organisms, biodiversity, processes of evolution, and interaction of organisms and their environment. Appropriate for science and nonscience majors. May be repeated up to 1 credits.

Prerequisite(s)/Corequisite(s): BIOL 111G; Currently enrolled in MATH 120, grade of C- or better in MATH 120, or a Math Placement Exam score adequate to enroll in mathematics courses beyond MATH 120.

BIOL 150. Topics in Biology**1-3 Credits (1-3)**

Introductory level coverage of biological topics. May be repeated up to 9 credits.

BIOL 154. Introductory Anatomy and Physiology**4 Credits (3+3P)**

Survey of human structure and function (does not replace BIOL 190, BIOL 111G, or BIOL 211G as a prerequisite for advanced courses in biology). Restricted to: Community Colleges only.

BIOL 211G. Cellular and Organismal Biology**3 Credits**

Principles of cellular structure and function, genetics, and organismal physiology. This course prepares the student for continuation in science or allied health fields. Suitable for all majors. Must be taken with BIOL 211L to meet general education requirements. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): a C- or better in MATH 120 or higher and a C- or better in CHEM 110G or CHEM 111G or CHEM 115.

BIOL 211GL. Cellular and Organismal Biology Laboratory**1 Credit**

Laboratory demonstrations, experiments and exercises on molecular and cellular biology and organismal physiology. Must have passed BIOL 211G or be concurrently enrolled in BIOL 211G and BIOL 211L. Pre/ May be repeated up to 1 credits.

Prerequisite(s)/Corequisite(s): a C- or better in BIOL 211G, MATH 120 or higher, and a C- or better in CHEM 110G or CHEM 111G or CHEM 115.

BIOL 219. Public Health Microbiology**3 Credits**

The characteristics of pathogenic microorganisms and the diseases that they cause. Will not meet the microbiology requirements for biology or medical technology majors.

Prerequisite: BIOL 211G and BIOL 211GL.

BIOL 221. Introductory Microbiology**3 Credits**

Principles of isolation, taxonomy, and physiology of microorganisms. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEM 110G or CHEM 111G or CHEM 112G.

Corequisite(s): BIOL 221 L.

BIOL 221 L. Introductory Microbiology Laboratory**1 Credit**

A laboratory course to accompany BIOL 221 or BIOL 219.

Prerequisite: BIOL 221 or BIOL 219 or concurrent enrollment.

BIOL 225. Human Anatomy and Physiology I**4 Credits (3+3P)**

The first in a two-course sequence that covers the structure and function of the human body, including terminology of the human gross anatomy, chemistry overview, cell structure, cell physiology (including DNA, protein synthesis and cell division). The organization of cells and tissues and their metabolic and homeostatic processes and regulation are also covered. Physical and chemical operation of organs and systems of the human body include the integumentary, skeletal, muscular, and nervous systems. Pre/ Restricted to: Community Colleges only.

Corequisite(s): CHEM 110G or CHEM 111G.

BIOL 226. Human Anatomy and Physiology II**4 Credits (3+3P)**

The second in a two-course sequence that covers the structure and function of the human body. Includes the physical and chemical operation of the organs and systems of the human body, including endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproduction system. Concepts of nutrition, metabolism, energy, fluid and electrolyte balance, heredity pregnancy and human embryonic and fetal development are also covered. Restricted to: Community Colleges only.

Prerequisite(s): BIOL 225, CHEM 110G or CHEM 111G.

BIOL 227. Pathophysiology**3 Credits**

A study of the structure and function of the human body with specialized emphasis on disease processes.

Prerequisite(s): AHS 153 or BIOL 225 Corequisite/Prerequisites(s): AHS 154 or BIOL 226 Restricted to: Community Colleges only.

BIOL 250. 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.

BIOL 253. Human Anatomy**4 Credits (3+3P)**

Detailed presentations of human anatomy, with laboratory. For nursing, prenursing, and human nutrition and food science majors only. Restricted to: HNFS, PNUR majors.

Prerequisite(s): Grade of C- in BIOL 211G and either CHEM 111G or CHEM 110G.

BIOL 254. Human Physiology**3 Credits**

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 211G; BIOL 211GL; CHEM 111G or CHEM 110G.

BIOL 262. Human Pathophysiology I**3 Credits**

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 225 and BIOL 226.

BIOL 263. Pathophysiology II**3 Credits**

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 225, BIOL 226, and BIOL 262.

BLAW-BUSINESS LAW (BLAW)

BLAW 230. Business Law**3 Credits**

Introduction to law in general and application to business specifically; comprehensive study of the law of contracts; and the principal and agent relationship. Offered at all NMSU Community Colleges except Dona Ana Community College. Credit may not be earned in both BLAW 230 and BLAW 317.

BMGT-BUSINESS MANAGEMENT (BMGT)

BMGT 110. Introduction to Business**3 Credits**

Terminology and concepts of the business field. Role of accounting, computers, business management, finance, labor, and international business in our society. Restricted to: Community Colleges only.

BMGT 112. Banks and Your Money**3 Credits**

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**

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**

Analysis of customer behavior, persuasive communication, process of the sales interview. Restricted to: Community Colleges only.

BMGT 136. Fundamentals of Buying and Merchandising**3 Credits**

Covers operational aspects of procuring and selling merchandise for the retail store. Procedures covered are buying, receiving, pricing strategies, sales promotions and operational controls. Restricted to: Community Colleges only.

BMGT 138. Advertising**3 Credits**

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**

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**

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**

Introduction to business etiquette based on tradition, social expectations, and professional behavior standards. Restricted to: Community Colleges only.

BMGT 191. ENACTUS (Students in Free Enterprise)**1 Credit**

ENACTUS is an international organization promoting and teaching business entrepreneurship. Students learn teamwork, leadership, and networking skills by participating in regional and national business competitions and community service projects. May be repeated up to 6 credits. Restricted to: BMGT or Pre-Business majors. Restricted to Community Colleges only.

BMGT 201. Work Readiness and Preparation**3 Credits**

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**

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**

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 210. Marketing**3 Credits**

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. Crosslisted with: MKTG 203.

Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 212. Supervisory and Leadership Trends**3 Credits**

Current trends in marketing, merchandising, sales promotion and management; in manufacturing, merchandising and service types of businesses. Extensive use of practical student project. Restricted to Community Colleges only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 213. Consumer Lending**3 Credits**

Principles of credit evaluation, types of credit, marketing, collections, legal aspects, installment lending, leasing management, insurance, and rate structure and yields. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 112.

BMGT 215. Banks and the Money Supply**3 Credits**

Practical application of the economics of money and banking. Required of all students electing the banking option. Restricted to: Community Colleges only.

BMGT 216. Business Math**3 Credits**

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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

BMGT 225. Introduction to Commercial Lending**3 Credits**

Commercial lending overview, the lending process, portfolio management, and regulation and business development. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 112.

BMGT 231. Legal Issues in Business**3 Credits**

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. May be repeated up to 3 credits.

Restricted to Community Colleges campuses only.

BMGT 232. Personal Finance**3 Credits**

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 235. Credit Administration**3 Credits**

Covers factors influencing and determining loan policy: methods of credit investigation and analysis, credit techniques, credit problems, and types of loans. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 112.

BMGT 239. Visual Marketing Techniques**3 Credits**

Provides a basic understanding of visual marketing and merchandising techniques. The importance of effective presentation of a store and its merchandise is covered, as is line, balance and artistic display. Restricted to: Community Colleges only.

BMGT 240. Human Relations**3 Credits**

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 248. Introduction to Quality Management**3 Credits**

Introductory practices of total quality management practices aimed at all levels of an organization to continually improve performance to include competitiveness in today's business world. Restricted to: Community Colleges only.

BMGT 250. Diversity in the Workplace**3 Credits**

Concepts of culture, diversity, prejudice, and discrimination within the domestic workforce/society. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 260. Real Estate Practice**3 Credits**

This course is a requirement for licensure in real estate for the state of New Mexico. Topics covered include: real estate finance, settlement, foreclosure, federal taxation, valuation and appraisal, land descriptions and math skills. These topics are requirements of the New Mexico Real Estate Commission. Restricted to: Community Colleges only.

BMGT 264. Real Estate Law**3 Credits**

This course is a requirement for licensure in real estate for the state of New Mexico. Topics covered include: ownership of real estate, real estate brokerage relationships, contracts, environmental concerns and federal laws that affect real estate. These topics are requirements of the New Mexico Real Estate Commission. Restricted to: Community Colleges only. Crosslisted with: PL S 264

BMGT 268. Real Estate Broker's Basic Course**3 Credits**

State of New Mexico specific criteria that apply to real estate licensure: purchase agreements, listing agreements, New Mexico Rules and Regulations, and landlord tenant legislation. Restricted to: Community Colleges only.

Prerequisite(s): BMGT 260 & BMGT 264.

BMGT 272. E-Commerce Operations**3 Credits**

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 CS 110 or BCIS 110.

BMGT 275. Entrepreneur I**3 Credits**

Introduces students to the concept of entrepreneurship and the the process of business startups. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 277. Small Business Management**3 Credits**

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): BMGT 275.

BMGT 280. Introduction to Human Resources**3 Credits**

Personnel functions encompassing job analysis, recruitment, selection, training, appraisals, discipline, and terminations. Restricted to Community Colleges campuses only.

Prerequisite(s): BMGT 110 or BUSA 111 or B A 104.

BMGT 282. Introduction to International Business Management**3 Credits**

Overview of the social, economic and cultural environment of international business transactions. Restricted to Community Colleges only.

Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 285. Introduction to Manufacturing Operations**3 Credits**

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): (BMGT 110 or BUSA 111) and (BMGT 140 or MGT 201).

BMGT 286. Introduction to Logistics**3 Credits**

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**

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): BMGT 110 or BUSA 111.

BMGT 290. Applied Business Capstone**3 Credits**

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. May be repeated up to 3 credits. Restricted to: BMGT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): (BMGT 110 or BUSA 111), and (BMGT 140 or MGT 201), and (BMGT 240 or SOC 101 or PSY 201), and MKTG 203 and FIN 206.

BMGT 298. Independent Study**3 Credits**

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 101. Keyboarding Basics**3 Credits (2+2P)**

Covers correct fingering and mastery of the keyboard to develop skillful operation. Formatting basic business letters, memos, and manuscripts.

BOT 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: BOT 101 or consent of instructor.

BOT 105. Business English I**3 Credits**

Training and application of the fundamentals of basic grammar, capitalization and sentence structure (syntax).

BOT 106. Business Mathematics**3 Credits (2+2P)**

Mathematical applications for business, including training in the touch method of the 10-key calculator.

Prerequisite: CCDM 103 N or adequate score on math placement exam.

BOT 109. Business English II**3 Credits**

Training and application of the fundamentals of punctuation, numbers, basic writing and editing skills.

Prerequisite: C or better in BOT 105.

BOT 110. Records Management**3 Credits**

Principles, methods and procedures for the selection, operation and control of manual and automated records systems.

BOT 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.

BOT 121. Accounting Procedures II**3 Credits (2+2P)**

Continuation of BOT 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): BOT 120 or ACCT 221.

BOT 135. Keyboarding Technique Review**3 Credits**

Emphasis on improving keyboarding speed and accuracy.

Prerequisite: BOT 101 or equivalent.

BOT 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 221 or BOT 120.

BOT 150. Medical Terminology**3 Credits**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as NURS 150 and OEHO 120.

BOT 169. Spanish Grammar for Business Administration**3 Credits**

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.

BOT 170. Office Communications in Spanish I**3 Credits**

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. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 169, Spanish-speaking ability, and computer keyboarding ability.

BOT 171. Office Communications in Spanish II**3 Credits**

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.

Prerequisite: BOT 101 or BOT 170.

BOT 191. Taking Minutes & Proofreading**3 Credits**

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. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 109 or consent of instructor.

BOT 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.

Prerequisites: BOT 102 and BOT 109, or consent of instructor.

BOT 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.

Prerequisites: BOT 213 or C S 110G or consent of instructor.

BOT 205. Microcomputer Accounting I**3 Credits (2+2P)**

Introduction to automated accounting systems on microcomputers.

Prerequisite: working knowledge of computers and accounting or consent of instructor.

BOT 206. Microcomputer Accounting II**3 Credits (2+2P)**

Microcomputer accounting applications, integrating spreadsheets, word processing, graphics, and database. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 121 or BOT 215.

BOT 207. Machine Transcription**3 Credits (2+2P)**

Creating office documents using transcribing equipment and microcomputer software. Emphasis on proofreading, editing and grammar.

Prerequisites: minimum keyboarding of 45 wpm and C or better in BOT 105 or BOT 109 or equivalent and BOT 211 or BOT 213.

BOT 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. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 109 or ENGL 111G, HIT 150 or AHS 120, and computer keyboarding ability or consent of instructor.

BOT 209. Business and Technical Communications**3 Credits**

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 111G and computer keyboarding ability or consent of instructor.

BOT 211. Information Processing I**3 Credits (2+2P)**

Defining and applying fundamental information processing concepts and techniques using the current version of leading software. Restricted to Community Colleges only.

Prerequisite(s): BOT 101 or consent of instructor.

BOT 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: BOT 101 or keyboarding proficiency.

BOT 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: BOT 213 or consent of instructor.

BOT 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.

BOT 217. Powerpoint Presentation**3 Credits**

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: BOT 211 or ability to demonstrate keyboarding and Windows proficiency.

BOT 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: BOT 211 or consent of instructor.

BOT 220. Internship in Business Office Technology**2 Credits**

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.

BOT 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 6 credits. Consent of Instructor required. Restricted to: BOT & HIT majors. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

BOT 222. Internship II**1-3 Credits**

Continuation of BOT 221. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: BOT & HIT majors. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 221 and consent of instructor.

BOT 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 BOT 209.

BOT 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. Restricted to Community Colleges campuses only.

Prerequisite(s): HIT 150 or AHS 120 and BOT 208.

BOT 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): BOT 223 and HIT 130.

BOT 239. Personal Development**3 Credits**

Development of a marketable, employable office systems person, to include interview, voice, manners, and apparel.

BOT 240. Introduction to Individual Taxation**3 Credits**

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.

BOT 241. Auditing and Business Issues**3 Credits**

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): BOT 120 or ACCT 221.

BOT 244. Tax Preparation**3 Credits**

Introduces basic federal and state tax codes for preparing individual income tax returns. Emphasis on use of tax software.

Prerequisite: keyboarding proficiency.

BOT 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: BOT 211.

BOT 255. Special Topics**1-4 Credits**

Specific subjects to be announced in the Schedule of Classes.

BOT 260. Bookkeeping Simulation Capstone**3 Credits (2+2P)**

Refines the professional and technical skills students have learned while completing the BOT-Bookkeeping Assistant Option curriculum by demonstrating how coursework ties together. Designed as a bookkeeping assistant capstone course.

Prerequisite(s): BOT 121 or ACCT 221, BOT 140, BOT 205, and BOT 244, or consent of instructor.

BOT 270. Business Office Technology Capstone**3 Credits (2+2P)**

Refines professional skills learned in the BOT program and ties all BOT coursework together. Restricted to: Community Colleges only.

Prerequisite(s): BOT 102; and BOT 120; and BOT 209 or ENGL 203G or ENGL 218G; and BOT 211 or OECS 211.

BUSA-BUSINESS ADMINISTRATION (BUSA)

BUSA 111. Introduction to Business**3 Credits**

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. May be repeated up to 3 credits.

C D-COMMUNICATION DISORDERS (C D)

C D 221. Introduction to Communication Disorders**3 Credits**

Basic information about speech, language, and hearing disorders; orientation to the professions of speech-language pathology and audiology.

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**

Problem solving and use of computer software for civil engineering applications. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 190G. **Prerequisite(s):** ENGR 100.

C E 160. Geology for Engineers**4 Credits (3+3P)**

Basic concepts of geology, earth materials, and earth processes as they relate to engineering practice. Restricted to Las Cruces campus only.

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**

Engineering mechanics using vector methods. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): PHYS 215G. **Prerequisite(s):** MATH 192G and cumulative GPA of 2.0.

C E 234. Mechanics-Dynamics**3 Credits**

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 192G, PHYS 215G.

C E 256. Environmental Engineering and Science**3 Credits**

Principles in environmental engineering and science: physical chemical systems and biological processes as applied to pollution control.

Crosslisted with: E S 256

Prerequisite(s): CHEM 111 and MATH 191G.

C E 256 L. Environmental Science Laboratory**1 Credit**

Laboratory experiments associated with the material presented in C E 256. Same as E S 256L.

Corequisite: 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 EP-COUNSELING & EDUC PSY (C EP)

C EP 110G. Human Growth and Behavior**3 Credits**

Introduction to the principles of human growth and development throughout the life span.

C EP 199. Academic Excellence**1 Credit**

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. Students must enroll in course for both Fall and Spring semesters. Course does not count toward CEP minor. May be repeated up to 2 credits.

C EP 210. Educational Psychology**3 Credits**

Psychological foundations as they apply to the learner in the class room setting.

C EP 215. The Preschool Child**3 Credits**

Survey of psychological development from conception to age five.

C EP 240. Adolescence in School Settings**3 Credits**

Survey of psychological development during the adolescent years.

C EP 298. Exploration of Counseling & Community Psychology**3 Credits**

An exploration of careers, activities, & techniques in counseling, school, and community psychology. Course does not count towards CEP minor. May be repeated up to 6 credits.

C EP 298 H. Exploration of CCP**3 Credits**

An exploration of careers, activities, & techniques in counseling, school, and community psychology. Taught with 298 with differentiated instruction and/or independent project to be determined. Restricted to Las Cruces campus only.

C EP 299. Academic Excellence Classes**1-6 Credits (1-6)**

Academic curriculum of excellence that includes an in-depth understanding of the elements that promote student academic success. Students will develop leadership and presentation skills needed to forge effective student mentor relationships and conduct outreach to campus and local community leaders to cultivate a collaborative learning environment. May be repeated up to 6 credits.

C J-CRIMINAL JUSTICE (C J)

C J 101G. Introduction to Criminal Justice**3 Credits**

Examination of crime and justice within the broader social and cultural context of U.S. society from interdisciplinary social science perspectives. Includes critical analysis of criminal justice processes and the ethical, legal, and political factors affecting the exercise of discretion by criminal justice professionals.

C J 199. Special Topics in Criminal Justice I**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.

C J 205. Criminal Law**3 Credits**

Rules, principles, and doctrines of criminal liability in the United States. The historical development, limits, and functions of the substantive criminal law. May be repeated up to 3 credits.

C J 210. The American Law Enforcement System**3 Credits**

Historical and philosophical foundations of law and order. An in-depth examination of the various local, state, and federal law enforcement agencies.

C J 221. Fundamentals of Criminal Investigation**3 Credits**

Investigation procedures from crime scene searches, collection of evidence, and case preparation. Community Colleges only. (Note: students completing C J 221 may not take C J 321.)

C J 230. Introduction to Corrections**3 Credits**

Development of correctional philosophy, theory, and practice. Instructional and non-institutional alternatives available in the corrections process.

C J 250. Courts and the Criminal Justice System**3 Credits**

Structures and functions of American courts. Roles of attorneys, judges, and other court personnel; operation of petit and grand juries, trial and appellate courts.

C J 293. Field Experience in Criminal Justice**3-6 Credits**

Field experience in a public criminal justice agency or equivalent private sector organization. Supervised internship experience, conferences, and observations. Restricted to majors. Community Colleges only.

Prerequisites: C J 101G, prior arrangement and consent of instructor and a GPA of 2.0 or better in major.

C S-COMPUTER SCIENCE (C S)

C S 110. Computer Literacy**3 Credits**

This course provides a broad introduction to computing, including computer and information technology concepts; economic and social implications of technology; database management, spreadsheet, word processing, and presentation applications.

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 120 or higher.

C S 117. Introduction to Computer Animation**3 Credits**

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 150. C Programming**3 Credits (2+2P)**

Programming in the C language. May be repeated up to 3 credits.

Prerequisite(s): MATH 120 or higher.

C S 151. C++ Programming**3 Credits (2+2P)**

Introduction to object-oriented programming in the C++ language. May be repeated up to 3 credits.

Prerequisite(s): MATH 120 or higher.

C S 152. Java Programming**3 Credits (2+2P)**

Programming in the Java language. May be repeated up to 3 credits.

Prerequisite(s): MATH 120 or higher.

C S 153. Python Programming I**3 Credits**

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.

Prerequisite(s): MATH 120 or higher.

C S 154. Python Programming II**3 Credits**

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 155. Internet Programming I**3 Credits**

This course is an introduction to programming for the Web in PHP and Javascript, covering fundamental web scripting ideas, CSS, data types and variables, functions, simple object creation and usage. Javascript usage will focus on dynamic page content. No prior programming experience is required, though a basic understanding of HTML will be assumed.

Prerequisite(s): MATH 120 and a basic understanding of HTML.

C S 156. Internet Programming II**3 Credits**

This course covers advanced web scripting, including Javascript with AJAX, PHP integration with databases, object oriented features of PHP and Javascript, advanced CSS usage, and using web application frameworks.

Prerequisite(s): C S 155 or C S 455.

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**

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 121G.

C S 159. R Programming II**3 Credits**

This course covers advanced R programming, including advanced data collection processing, advanced data visualizations, object oriented features of R, and file processing. It is recommended that students have one statistics course before taking this course.

Prerequisite(s): C S 158 or C S 458.

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 210G or MATH 120 or higher.

C S 172. Computer Science I**4 Credits (3+2P)**

Computational problem solving; problem analysis; implementation of algorithms. Recursive structures and algorithms. Crosslisted with: C S 460.

Prerequisite(s): MATH 121G or higher; C S 111 or successful placement.

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. May be repeated up to 4 credits.

Prerequisite(s): C- or better in C S 172 or E E 112.

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, deques, trees; imperative and declarative programming. Internal sorting; time and space efficiency of algorithms.

Prerequisite(s): At least a C- in C S 172, or placement.

C S 273. Machine Programming and Organization**4 Credits (3+2P)**

Computer structure, instruction execution, addressing techniques; programming in machine and assembly languages.

Prerequisite(s): At least a C- in C S 172 or E E 161.

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. Crosslisted with: MATH 278.

Prerequisite(s): At least C- in C S 172.

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.

CCDL-DEVELOPMENTAL ESL (CCDL)

CCDL 101 N. Basic Skills in English as a Second Language I**4 Credits (3+2P)**

Developmental studies course for ESL students. Development of basic skills in speaking, listening, reading, and writing English as a second language with emphasis on speaking and listening. Pronunciation stressed. Course intended for U.S. citizens and residents who are nonnative speakers of English.

Prerequisite: English language screening or consent of instructor.

CCDL 103 N. Basic Skills in English as a Second Language II**4 Credits (3+2P)**

Continuation of CCDL 101N for ESL students. Course intended for U.S. citizens and residents who are nonnative speakers of English.

Prerequisite: English language screening or consent of instructor.

**CCDL 105 N. Intermediate Skills in English as a Second Language I
4 Credits (3+2P)**

Intermediate level with emphasis on reading and writing. Grammar and syntax stressed. Course intended for U.S. citizens and residents who are nonnative speakers of English.

Prerequisite: English language screening or consent of instructor.

**CCDL 107 N. Intermediate Skills in English as a Second Language II
4 Credits (3+2P)**

Continuation of CCDL 105N. Course intended for U.S. citizens and residents who are nonnative speakers of English.

Prerequisite: English language screening or consent of instructor.

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.

Prerequisite(s): Math Placement Exam.

**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 101 N. Introduction to Basic Reading
4 Credits (3+2P)**

Provides basic reading skills through comprehension and vocabulary development. Emphasis on oral language literacy and reading fluency. Course earns institutional credit but will not count toward degree requirements. May be repeated up to 4 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): Appropriate placement score.

**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 for a maximum of 3 credits.

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.

CHEF-CULINARY ARTS (CHEF)

CHEF 101. Culinary Arts Kitchen Orientation**3 Credits**

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**

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**

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**

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**

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**

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**

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**3 Credits (1+6P)**

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: HOST, CHEF majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Grade of "C" or above in CHEF 242.

CHEF 245. Pastry Art and Techniques**3 Credits (1+6P)**

Advanced skills for the pastry chef including pulled sugar work, spun sugar, chocolate art, pastillage, marzipan molding, butter carving and advanced decorating techniques are explored. Students prepare specialty items for display and competition. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: CHEF majors. Restricted to Community Colleges campuses only.

Prerequisite(s): CHEF 240.

CHEF 255. Special Topics**3 Credits**

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**

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 100. Basic Chemistry**3 Credits**

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.

CHEM 101. General Supplemental Instruction I**1 Credit**

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: CHEM 111G.

CHEM 102. General Supplemental Instruction II**1 Credit**

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: CHEM 112G.

CHEM 103. Principles of Supplemental Instruction III**1 Credit**

Collaborative workshop for students in CHEM 110G, Principles and Applications of Chemistry. Course does not count toward departmental degree requirements. May be repeated for maximum of 2 credits.

Co-requisite: CHEM 110G.

CHEM 110G. Principles and Applications of Chemistry**4 Credits (3+3P)**

A survey of the properties and uses of the elements and their compounds. In addition to classical chemistry, attention is paid to the materials from which consumer products are made, to the production of energy, and to environmental considerations.

Prerequisite: 3 years of high school math or CCDM 114N.

CHEM 111G. General Chemistry I**4 Credits (3+3P)**

Descriptive and theoretical chemistry. CHEM 111G/112G are General Education alternative to CHEM 110G.

Prerequisite: (1) grade of C or better in MATH 120 or a Mathematics Placement Exam Score adequate to enroll in mathematics courses beyond MATH 120; and (2) one of the following: B or better in a second semester high school chemistry course, or grade of at least C in CHEM 100, or an enhanced ACT score of at least 22.

CHEM 112G. General Chemistry II**4 Credits (3+3P)**

Descriptive and theoretical chemistry. CHEM 111G/112G are General Education alternative to CHEM 110G.

Prerequisite(s): CHEM 111G.

CHEM 115. Principles of Chemistry I**4 Credits (3+3P)**

Detailed introduction to analytical, inorganic and physical aspects of chemistry; both descriptive and theoretical explanations. Structured for chemistry and biochemistry majors but appropriate for other physical and life science students. CHEM 115/116 are General Education alternatives to CHEM 110G.

Prerequisite: Eligible to take MATH 190G and an ACT composite score of 22 or higher.

CHEM 116. Principles of Chemistry II**4 Credits (3+3P)**

Recommended for chemistry majors and other qualified students. CHEM 115/116 are General Education alternatives to CHEM 110G.

Prerequisites: grade of C or better in CHEM 115.

CHEM 210. Chemistry for the Allied Health Sciences**3 Credits**

Discussion and application of the established facts and concepts of general organic chemistry and biochemistry to acquire a molecular understanding of a variety of health related issues, from atmospheric ozone holes to human nutrition.

Prerequisite: CHEM 110G or CHEM 111G.

CHEM 211. Organic Chemistry**4 Credits (3+3P)**

A one-semester survey for students requiring a brief coverage of important classes of organic compounds. May be repeated up to 4 credits.

Prerequisite(s): CHEM 112G.

CHEM 217. 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 111G/112.

Prerequisite: CHEM 112G.

CHEM 241. 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.

CHEM 242. Explorations in Chemistry**1 Credit**

Historical and current developments, careers in chemistry, computer applications and use of the library by chemists. To be completed before the end of the sophomore year. Graded S/U.

CHEM 251. 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.

CHIN-CHINESE (CHIN)

CHIN 111. Elementary Chinese I**4 Credits**

Mandarin Chinese for beginners.

CHIN 112. Elementary Chinese II**4 Credits**

Mandarin Chinese for beginners.

Prerequisite: C or better in CHIN 111.

CHIN 211. Intermediate Chinese I**3 Credits**

Speaking, reading and writing Mandarin Chinese. Restricted to Las Cruces campus only.

Prerequisite(s): C or better in CHIN 112.

CHIN 212. Intermediate Chinese II**3 Credits**

Speaking, reading and writing Mandarin Chinese. Restricted to Las Cruces campus only.

Prerequisite(s): C or better in CHIN 211.

CHME-CHEMICAL & MATERIALS ENGR (CHME)

CHME 101. Introduction to Chemical Engineering Calculations

2 Credits

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 190G. Restricted to Las Cruces campus only.

CHME 102. Material Balances

2 Credits

Perform material balances in single- and multi-phase, reacting and non-reacting systems under isothermal conditions.

Prerequisite(s)/Corequisite(s): CHEM 111G or CHEM 115. Prerequisite(s): MATH 190G, CHME 101.

CHME 201. Energy Balances & Basic Thermodynamics

3 Credits

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. Restricted to Las Cruces campus only.

Prerequisite(s): CHME 102, CHEM 115 or CHEM 111G, and MATH 192G.

CHSS - COMM HEALTH/SOC SRVCS (CHSS)

CHSS 101. Overview of Health and Community Services

3 Credits

Health and community service professions with emphasis on public health, community health education, and environmental/occupational health.

CHSS 216. Ethical and Research Issues in Human and Community Service

3 Credits

Ethical and legal responsibilities of health personnel with emphasis on research applications. May not receive credit for both CHSS 216 and CHSS 316. Community Colleges only.

CHSS 295. Leadership/Mentorship Training for the CHSS Ambassadors Program

1 Credit

Leadership development for volunteers serving as CHSS ambassadors. Focus on public relations and CHSS undergraduate degree programs. Graded S/U.

Prerequisite: consent of instructor.

CHSS 299. Service Learning Experience in Human and Community Services

3 Credits

Exploration of contemporary social, civic, economic and ethical problems that require student participation in collaborative efforts within the community. Requires 30 clock hours of community based service for each credit. Graded: S/U. Contact instructor for approval.

Prerequisite(s): CHSS 101, HL S 150 and HL S 275 or consent of instructor.

Corequisite(s): HL S 295 or CHSS 216.

CMI - CINEMA & FILM/VIDEO PROD (CMI)

CMI 100. Introduction to the Creative Media Industry

3 Credits

This class is an introductory course for students interested in learning about the creative media industry and the Creative Media Institute. It offers a broad view of the entire industry including Marketing, Production, Budgets, Jobs, New Media Literacy, and Industry Standards. Students will listen to experts in the field, and become involved in open discussions about the industry and use new information to complete hands-on assignments in the laboratory. Restricted to Las Cruces campus only.

CMI 200. Sound Design 1

3 Credits

Focuses on the techniques for creating, recording and manipulating sounds through challenging sound design projects. Crosslisted with: CMT 206.

Prerequisite(s)/Corequisite(s): CMI 235. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

CMI 205. Cinematography I

3 Credits

Theories and techniques of visual design in videography and the aesthetics of lighting. Crosslisted with: CMT 205.

Prerequisite(s)/Corequisite(s): CMI 235. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

CMI 216. Editing I

3 Credits

Focuses on individual editing skills including capture, interface, basic cuts, and transitions. Crosslisted with: CMT 195.

Prerequisite(s)/Corequisite(s): CMI 235. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

CMI 220. Drawing for Animation

3 Credits

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.

CMI 228. History of Cinema I

3 Credits

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.

CMI 231. History of Animation

3 Credits

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.

CMI 232. Storyboarding**3 Credits**

Examines effective writing principles for creating storyboards that communicate the overall picture of a project. There are timing, scene complexity, emotion and resource requirements. Crosslisted with: ENGL 232. Restricted to: DFM,ANVE, G-CMI majors. Restricted to Las Cruces campus only.

CMI 233. Light, Shade, Render**3 Credits**

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): CMI 260, CMI 280, or Consent of Instructor.

CMI 235. Narrative: Principles of Story Across the Media**3 Credits**

Examines the various strategies of written and visual storytelling: narrative structure and its principle 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: ENGL 235. Restricted to: G-CMI, DFM, ANVE majors. Restricted to Las Cruces campus only.

CMI 240. Digital Illustration**3 Credits**

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.

CMI 245. 2-D Compositing & FX**3 Credits**

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.

CMI 250. Beginning 2-D Animation**3 Credits**

Learn the basics of digital 2D animation by creating an animated short from a storyboarded scene using professional animation, imaging, and editing software. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

CMI 260. Foundations of 3D Animation**3 Credits**

The objective of this course is to provide a hands-on overview of the 3D animation production process. 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. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

Prerequisite(s): CMI 235, CMI 232 or consent of instructor.

CMI 270. Rigging for 3D Animation**3 Credits**

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): CMI 260.

CMI 280. Modeling**3 Credits**

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. Restricted to: DFM,ANVE majors. Restricted to Las Cruces campus only.

CMI 290. 3-D Animation**3 Credits**

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): CMI 260, CMI 250 or consent of instructor.

CMT-CREATIVE MEDIA TECHNOLOGY (CMT)

CMT 100. Introduction to Visual Communications**3 Credits**

Overview of the process of crafting a digital product from conception to final. Incorporates basic principles of art and design, typography, layout, color and imagery, logos and advertising basics. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

CMT 108. Introduction to Media Technologies**1-3 Credits (1-3)**

Introduction to various media technologies. May be repeated up to 12 credits. Restricted to Community Colleges campuses only.

CMT 110. Introduction to Web Design**1 Credit**

Basics of creating simple web sites for personal use.

CMT 115. Digital Photography and Imaging I**3 Credits (2+2P)**

Principles and techniques of photography using digital equipment with an emphasis on lighting, focus, and composition.

CMT 120. Introduction to Creative Media**3 Credits (2+2P)**

Exploration and discovery of the creative processes through art, music, theater, narrative, and other avenues.

CMT 126. Film Crew Training I**9 Credits**

This course was designed in collaboration with the NM IATSE Local 480 union and the NM Film Office and focuses on providing hands-on training for students wishing to work on film crews. The course will offer an overview of the primary below-the-line craft areas of film production. Restricted to: Community Colleges only.

CMT 130. Introduction to Web Design**3 Credits (2+2P)**

Introduction to web development techniques, theory, and design. Incorporates HTML and industry-standard web editing software in developing various web sites. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): ART 161 OR CMT 145.

CMT 135. Introduction to 3D Computer Animation**3 Credits (2+4P)**

Learning to work in a 3D environment. Introduction to the basics of modeling, animation, dynamics, and rendering. Working with polygons, NURBS and subdivisions, and editing in multiple interfaces. May be repeated for a maximum of 6 credits.

CMT 140. Print Media I**3 Credits (2+2P)**

Creation and design of publications and presentation materials using page layout software. May be repeated for a maximum of 6 credits.

CMT 142. Computer Illustration**3 Credits (2+2P)**

Preparation of digital graphics with a vector or draw program for use in print, web, video, animations, and multimedia. May be repeated for a maximum of 6 credits.

CMT 145. Image Processing I**3 Credits (2+2P)**

Design and creation of digital graphics using a raster or bitmap program for use in print, multimedia, video, animation and web. May be repeated for a maximum of 6 credits.

CMT 150. 2D Animation**3 Credits (2+2P)**

Concepts and techniques in storyboarding and creating interactive 2D animations for web, multimedia and video.

Prerequisites: CMT 142.

CMT 151. 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.

CMT 155. 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. May be repeated up to 18 credits. Restricted to Community Colleges campuses only.

CMT 156. Film Crew Training II**9 Credits**

The purpose of this course is to provide applied training in a specific film production crew craft area, in which a student has decided to specialize. The various craft areas include but are not limited to, Art Dept., Grip., Electric, Sound, Production Office, Script Supervision, Props, Set Dressing, Locations, Special Effects, Hair/Makeup, Wardrobe, Production Assistant/Set Operations. Restricted to: Community Colleges only.

Prerequisite(s): CMT 126.

CMT 160. Modeling and Animation**3 Credits (2+2P)**

Building on student's knowledge of 2D animation, covers modeling, animating objects and scenes in a 3D environment using various camera and lighting effects. May be repeated for a maximum of 6 credits.

Restricted to: Community Colleges only.

CMT 165. Writing and Storyboarding**3 Credits (2+2P)**

Learning good writing principles to create storyboards and scripts that communicate the overall picture of the project, timing, scene complexity, emotion, and resource requirements.

Prerequisite: CMT 135 or CMT 160.

CMT 170. History of Film: A Global Perspective**3 Credits**

Explores the history of cinema from the earliest 19th century developments to the present digital video revolution. Offers students a broader base of understanding of the tools and methodologies used in the craft.

CMT 175. 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: CMT 135 or CMT 160.

CMT 180. Design Principles**3 Credits (2+2P)**

Techniques and theories of design principles, including layout foundations, logo building, type, color, and story-boarding and their application to print, web, animation and video. Restricted to: Community Colleges only.

Prerequisite(s): CMT 142 or CMT 146.

CMT 182. Environmental Modeling, Shading and Lighting**3 Credits (2+4P)**

Modeling design techniques to create natural and architectural environments to be used for animated films and gaming. Study of various lighting techniques, shading and shadowing.

Prerequisite: CMT 135 or CMT 160.

CMT 185. 3D Shading and Lighting Techniques**3 Credits (2+4P)**

Study of various global, scene and character lighting techniques, shading and shadowing, and creating atmospheres and reflections that bring computer generated 3D scenes to life. Examines environmental and studio lighting to bring real life experience into the digital production process.

Prerequisite: CMT 135 or CMT 160.

CMT 190. Digital Video Production I**3 Credits (2+4P)**

A hands-on study of the tools and techniques used to produce the independent video. Through the production of various short projects, the student explores how the ideas of the writer/director are translated into a visual story. May be repeated for a maximum of 6 credits.

CMT 195. Digital Video Editing I**3 Credits (2+2P)**

A study of the basic tools and techniques of non-linear digital video editing. May be repeated for a maximum of 6 credits.

CMT 200. 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.

CMT 205. Cinematography**3 Credits (2+2P)**

Theory and techniques of visual design in cinematography and the aesthetics of lighting. May be repeated for a maximum of 6 credits. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 190.

CMT 206. Principles of Sound**3 Credits (2+2P)**

Study of soundtrack design theory, and the use of audio editing software that is compatible with media editing software to create soundtracks for different visual media. Pre/ Restricted to: Community Colleges only.

Corequisite(s): CMT 195.

CMT 210. 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: CMT 190.

CMT 215. Digital Video 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. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 195.

CMT 216. 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): CMT 115.

CMT 217. Layer Animation & 3D Applications in Photoshop**1 Credit**

This is an advanced course in Photoshop 2D techniques and motion graphic applications pertaining to the animation of Photoshop Layers juxtaposed over time and space relationships. Restricted to: CMT majors. Restricted to Community Colleges only.

Prerequisite(s): CMT 145.

CMT 218. Video for Social Interaction and Informal Commerce**3 Credits**

The use of DSLR video has opened the way for photographers to be able to add video as a component of expression. This course shows the ways that this tool can be used for on-line instructional videos, demonstrations and presentations. As more and more commercial entities become involved in YouTube and other social media, this becomes a vocationally viable form of visual communication. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: Community Colleges only.

CMT 220. 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: CMT 135 or CMT 160.

CMT 221. 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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): Consent of instructor.

CMT 222. Pre-production Management**3 Credits (2+2P)**

Pre-production planning paperwork breakdowns, budgeting, and scheduling; taking a project from start to finish from a producers standpoint.

Prerequisite: CMT 190.

CMT 223. Media Production Services**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: CMT 180 or ART 163.

CMT 224. Environmental Scene Design II**3 Credits**

Second level of 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. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 220.

CMT 225. Anatomical Character Design**3 Credits (2+4P)**

Focus on building anatomy-based 3D characters. Advanced study in NURBS, subdivisions, and polygon modeling techniques used to create fully functional and realist models. May be repeated for a maximum of 6 credits.

Prerequisite: CMT 175.

CMT 226. 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): CMT 156.

CMT 227. 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): CMT 160.

CMT 228. 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: CMT 200

CMT 229. 3D Digital Sculpting**3 Credits**

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): CMT 160.

CMT 230. Web Design II**3 Credits (2+2P)**

Creating and managing well-designed, organized web sites using HTML and web development software. May be repeated for a maximum of 6 credits. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 130.

CMT 235. Web Design for Small Businesses**3 Credits (2+2P)**

Technology and techniques for designing and building a web presence for small business. May be repeated for a maximum of 6 credits. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 130.

CMT 236. Digital Audio Fundamentals**3 Credits (2+2P)**

Advanced digital audio post production and recording techniques using current entertainment industry-standard software and hardware. Restricted to: Community Colleges only.

CMT 240. Print Media II**3 Credits (2+2P)**

Refining of technical design skills using advanced features of page layout software in preparing a variety of business-related documents. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 140.

CMT 242. 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): CMT 142.

CMT 245. Image Processing II**3 Credits (2+2P)**

Advanced techniques in editing and manipulation of raster images for digital graphics for print, multimedia and web. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 145.

CMT 247. Production Audio**3 Credits (2+2P)**

Essential tools and techniques in: field and studio recording and mixing, environmental assessment, film set protocol, various microphones, audio documentation, wildlines, ambient audio. Restricted to: Community Colleges only.

Prerequisite(s): CMT 190 and CMT 236.

CMT 248. Music Production and Mastering**3 Credits (2+2P)**

Introduction to fundamental tools and techniques in music production and mastering. Including: microphones and microphone techniques, live and studio recording, editing, mixing, and introduction to mastering digital audio. Restricted to: Community Colleges only.

Prerequisite(s): CMT 206 and CMT 236.

CMT 249. Layer Animation and 3D Applications in Photoshop**3 Credits**

This is an advanced course in Photoshop 3D techniques and motion graphic applications pertaining to the animation of Photoshop Layers juxtaposed over time and space relationships. May be repeated up to 6 credits. Restricted to Community Colleges only.

Prerequisite(s): CMT 245.

CMT 251. Gaming Platform and Standards**3 Credits (2+2P)**

Focus on the different gaming platforms and their corresponding gaming demographics and standards. May be repeated up to 6 credits. Restricted to: CMT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 200.

CMT 252. 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: CMT 200.

CMT 254. History of Media Design**3 Credits**

An introduction to the principles of design history and theory within a chronological framework of historical and emerging media.

CMT 255. Special Topics**1-4 Credits**

Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits.

CMT 256. Typography**3 Credits**

Foundation in typography with an emphasis on history of typography and the practical application and impact of font choices for print, web, animation and video. Deals with studies in font or letter construction and font choices focusing on design, application, incorporation, and visual impact. Restricted to: Community Colleges only.

Prerequisite(s): CMT 142.

CMT 258. 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: CMT 190.

CMT 260. 3D 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: CMT 160 or CMT 225.

CMT 265. Personal Character Development**3 Credits (2+4P)**

Focus on the development of personal character(s), from sketch to render. Develop complete biographies of character, then build, skin and animate with as many personal attributes as possible.

Prerequisite: CMT 225.

CMT 275. 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.

Prerequisites: CMT 145 and CMT 230.

CMT 276. Advanced Photography Workshops**1 Credit**

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): CMT 115.

CMT 285. Print Media III**3 Credits (2+2P)**

Refinement of skills needed to prepare a variety of documents for print and the service bureau. May be repeated for a maximum of 6 credits.

Prerequisite: CMT 140 or CMT 240.

CMT 290. 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.

Prerequisite: consent of instructor.

Corequisite: CMT 291.

CMT 291. 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.

Prerequisite: consent of instructor.

Corequisite: CMT 290.

CMT 292. 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.

Prerequisites: CMT 190 and CMT 195 or CMT 160.

CMT 294. Creative Media Studio II**3 Credits**

Second level of studio environment where students specialize in creating film-festival quality and portfolio ready projects under the supervision of faculty. Restricted to Community Colleges campuses only.

Prerequisite(s): CMT 292.

CMT 295. Professional Portfolio Design and 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.

Prerequisite(s): Consent of instructor.

CMT 298. 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.

COLL-COLLEGE (COLL)

COLL 101. College/Life Success**1-3 Credits**

Provides students with an opportunity to cultivate the skills, values, and attitudes necessary to become confident, capable students, and contributing community members. Topics include time management, memory techniques, relationships, health issues, money management, and college and community resources.

COLL 103. Managing Your Money**1 Credit**

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.

COLL 108. 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.

COLL 111. Academic Skills for Mathematics**1-3 Credits (1-3)**

Emphasis on study skills for success in math, up to the calculus level, tailored to meet individual student needs. Topics include test preparation strategies, efficient time management and practice methods, and introduction to and practice with learning software. Consent of instructor required.

COLL 120. Career Exploration**1 Credit**

Survey of careers possible with community college associate degrees. Information on how to make a career choice.

COLL 155. 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.

COLL 201. Critical Thinking Skills**3 Credits**

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: placement scores for CCDE 110 N or higher.

COMM-COMMUNICATION (COMM)

COMM 250. Introduction to the Communication Major**1 Credit**

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 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.

COMM 253G. Public Speaking**3 Credits**

Principles of effective public speaking, with emphasis on preparing and delivering well-organized, logical, and persuasive arguments adapted to different audiences.

COMM 265G. Principles of Human Communication**3 Credits**

Study and practice of interpersonal, small group, and presentational skills essential to effective social, business, and professional interaction.

COMM 285. Survey of Communication Theory**3 Credits**

Exploration of major theories, concepts and methods of research in the study of human communication. Primarily for majors.

COMM 290. 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 265G and sophomore standing.

COMM 291. 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.

CSEC - CYBERSECURITY (CSEC)

CSEC 275. Introduction to Cryptography**3 Credits**

Introduction to the foundation of cryptography, principles behind cryptographic design, and cryptographic applications. Topics include encryption techniques, common cryptographic protocols and security functions. Restricted to Community Colleges campuses only.

Prerequisite(s): MATH 120.

CSEC 280. Introduction to Cyber Defense**3 Credits**

Introduction to computer network attacks and countermeasures used to reduce threat exposure to individuals and organizations. This course will examine common types of cyber threats and current industry standard techniques to defend against common cyber-attacks.

Prerequisite(s)/Corequisite(s): OECS 269. Restricted to Community Colleges campuses only.

CSEC 285. Introduction to Managing Information Security**3 Credits**

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): A ST 251G or STAT 251G. Restricted to Community Colleges campuses only.

CTFM-CLTHNG/TXTLS/FSHN MRCHDSG (CTFM)

CTFM 178. Fundamentals of Fashion**3 Credits**

Survey of the fashion business from fiber to end product.

CTFM 202. 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.

CTFM 270. Fashion Illustration**3 Credits (1+4P)**

Human figure sketches and fashion illustration as a form of communication. Emphasis on color, proportion, cut, and fabric detail.

Prerequisites: ART 110G.

CTFM 273. Concepts in Apparel Construction**3 Credits (1+4P)**

Application of generalizations and principles of garment construction to varied fabrics and designs. Analysis and evaluation of apparel merchandise with emphasis on the quality of garment construction. Restricted to: Main campus only. Restricted to CTFM, FCSE majors.

CTFM 289. Fashion Studio I**3 Credits**

Applied principles in the criteria of pattern making: flat pattern and draping techniques. Projects will require three dimensional approaches in apparel design. Restricted to: CTFM majors. Restricted to Las Cruces campus only.

DANC-DANCE (DANC)

DANC 101G. Dance Appreciation**3 Credits**

An investigation of movement, dance and choreographic work as a vehicle for understanding culture. Includes concepts in dance appreciation, themes and purposes of dance analysis of dance works, exposure to different styles of dance and understanding the roles and effects of major historical periods. Restricted to: Main campus only.

DANC 102. Introduction to Hip-Hop Dance**1 Credit**

This course is an introduction to 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. No previous dance experience required. May be repeated up to 4 credits. Restricted to Las Cruces campus only.

DANC 109. Argentine Tango I**1 Credit**

Introduction to skills and techniques of Argentine Tango.

DANC 118. West Coast Swing I**1 Credit**

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.

DANC 120. Ballet Folklorico I**1 Credit**

Introductory course in folklorico dances of New Mexico and Mexico. May be repeated for a maximum of 2 credits.

DANC 121. Beginning Country Western Dance**1 Credit**

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.

DANC 122. Introduction to Latin Social Dance**1 Credit**

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.

DANC 123. Ballet Technique I**1 Credit**

Introduction to basic ballet technique, vocabulary, and history. Includes practical application of anatomical placement, posture and control through participation and academic study. May be repeated for a maximum of 2 credits.

DANC 124. Jazz Technique I**1 Credit**

Introduction to basic jazz technique, styles, and history through participation and academic study. May be repeated for a maximum of 2 credits.

DANC 125. Introduction to Ballroom Dance**1 Credit**

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.

DANC 126. Modern Dance Technique I**1 Credit**

Introduction to and development of basic modern dance technique, history, and aesthetics through participation and academic study. May be repeated for a maximum of 2 credits.

DANC 127. Tap Dance I**1 Credit**

Introduction to skills and techniques of tap dance. May be repeated for a maximum of 2 credits.

DANC 128. Latin Club Dance**1 Credit**

Introduction to the most popular Latin Club Dances to include the Salsa, Merengue, and Bachata. May be repeated up to 2 credits. Restricted to Las Cruces campus only.

DANC 129. Flamenco I**1 Credit**

Introduction to skills and techniques of flamenco dance. May be repeated for a maximum of 2 credits.

DANC 151. Master Works**1 Credit**

This course investigates the work of master choreographers in contemporary, Spanish, and social dance styles. Students will engage in exploring concepts in dance appreciation, themes and purposes of dance by analyzing dance works using principles, elements, and process of compositional design. This course will require students to communicate their opinions through verbal discussions, group projects, and written assignments. Restricted to Las Cruces campus only.

DANC 200. Dance Pedagogy: Educational Theory**1 Credit**

This course will examine how people learn cognitively, physically, and emotionally so that students can become better at self-teaching and self-assessment. Students will study several educational theories and how they relate to dance. Restricted to Las Cruces campus only.

DANC 202. Dance Ensemble**1 Credit**

This course will include learning the elements of dance composition. The students in this course will be the dancers for the students in Dance Choreography II. This course is a requirement for freshman dance majors whose emphasis is in contemporary dance. May be repeated up to 2 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

DANC 203. Dance Production I**1 Credit**

Students will learn the production process of dance events which may include performances, festivals, workshops, conferences. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

DANC 204. Dance Sport I**1 Credit**

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.

Prerequisite(s): Consent of instructor and one of DANC 121, DANC 122, DANC 125, or DANC 128.

DANC 205. Contemporary Dance Ensemble I**1 Credit**

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.

DANC 206. Spanish Dance Ensembles I**1 Credit**

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.

DANC 209. Argentine Tango II**1 Credit**

Intermediate study in Argentine tango. Learn advanced patterns, techniques and partnering skills. May be repeated up to 2 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): Consent of instructor.

DANC 210. 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 129.

DANC 212. Intermediate Hip-Hop Dance**2 Credits**

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.

DANC 218. West Coast Swing II**2 Credits**

Students will take their West Coast Swing & Hustle to the next level. Learn Intermediate and Advanced figures and techniques in both dances. Students will also enjoy advanced study on musicality and blending to create new amalgamations as well as practice in advanced leading & following techniques. May be repeated up to 8 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): DANC 118.

DANC 221. Country Western Dance**2 Credits**

Intermediate skills in country/western two-step, nightclub two-step, polka, and Western line dances. May be repeated up to 4 credits. Restricted to Las Cruces campus only.

Prerequisite(s): DANC 121 or consent of instructor.

DANC 222. Bronze American Rhythm**2 Credits (1+2P)**

Bronze level American Rhythm patterns, techniques, and partnering with emphasis on elements of dance. Consent of Instructor required. Restricted to Las Cruces campus only.

DANC 223. Ballet Technique II**2 Credits**

Continued study of classical ballet technique, vocabulary, and history through participation and academic study. May be repeated up to 8 credits. Restricted to Las Cruces campus only.

DANC 224. Jazz Technique II**2 Credits**

Continued study of jazz technique and history through participation and academic study. May be repeated up to 8 credits. Restricted to Las Cruces campus only.

DANC 225. Bronze American Smooth**2 Credits (1+2P)**

Bronze level American Smooth patterns, technique, and partnering with an emphasis on the elements of dance. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): DANC 125 or consent of instructor.

DANC 226. Modern Dance Technique II**2 Credits**

Continued study of postmodern dance technique and history through participation and academic study. May be repeated up to 8 credits. Restricted to Las Cruces campus only.

DANC 227. Tap Dance II**1 Credit**

Continued study of skills and techniques of tap dance at the advanced level. May be repeated for a maximum of 2 credits.

Prerequisite: DANC 127 or consent of instructor.

DANC 229. Flamenco II**2 Credits**

The study of theory, techniques and practice of Flamenco at the intermediate level. Includes historical and cultural contexts of this art form. May be repeated up to 8 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Dance 129.

DANC 232. Bronze International Latin**2 Credits**

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 and the techniques. May be repeated up to 8 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): DANC 222.

DANC 235. Bronze International Standard**2 Credits**

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 8 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): DANC 225.

DANC 269. DanceSport Choreography I**2 Credits**

An introduction to the process and theory behind creating original choreography for both performance and competition level dance. With focus on the individual couple, gain necessary skills, knowledge and practice in choreographing Ballroom, Latin, Swing &/or Nightclub dance routines in various practical settings. Consent of Instructor required. Restricted to Las Cruces campus only.

DANC 275. Dance Studio Management**3 Credits**

The study and practice of studio management. Includes study of financial procedures, marketing, entrepreneurship, leadership, management, fund-raising and other related topics. Restricted to majors and minors.

DANC 279. Flamenco Choreography I**2 Credits**

Students develop and perform solo dance studies with an emphasis placed on the development of personal movement vocabulary, phrase building, and the exploration of choreographic tools for Flamenco on stage. Discussion, critiquing, and descriptive writing about their choreographic processes will supplement direct physical work. May be repeated up to 4 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

DANC 280. Improvisation I**1 Credit**

Introduction and development of basic movement improvisation skills.

DANC 289. Principles of Choreography I**2 Credits**

Solo dance choreography technique. Course must be passed with a grade of C or higher. Consent of instructor required. Restricted to: Main campus only. Restricted to Dance Majors Dance Minors majors.

DAS-DENTAL ASSISTING (DAS)

DAS 101. Introduction to Dental Assisting**2 Credits**

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): PSY 201G, PHLS 150G, and HNDS 251.

Prerequisite(s): ENGL 111G, BIOL 154, and (COMM 253G or COMM 265G).

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): PSY 201G, PHLS 150G, and HNDS 251.

Prerequisite(s): ENGL 111G, BIOL 154, and (COMM 253G or COMM 265G).

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): PSY 201G, PHLS 150G, and HNDS 251.

Prerequisite(s): ENGL 111G, BIOL 154, and (COMM 253G or COMM 265G).

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): PSY 201G, PHLS 150G, and HNDS 251.

Prerequisite(s): ENGL 111G, BIOL 154, and (COMM 253G or COMM 265G).

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**

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**

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**

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**

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 111G. Restricted to Alamogordo, Carlsbad and Dona Ana campuses.

DAS 133. Dental Office Management II**3 Credits**

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 111G, 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.

DENTAL HYGIENE/HYGIENIST (DHYG)

DHYG 110. Preclinical Dental Hygiene**3 Credits**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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. Introduction to Vascular Technology**2 Credits**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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. Sonographic Procedures Lab**1 Credit**

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 Community Colleges campuses only.

DMS 216. Vascular Technology II**2 Credits**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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 101. Introduction to Drafting and Design Technologies**1 Credit**

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**

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 120. Survey Equipment Fundamentals**2 Credits**

Introduces the application and the setup to the following surveying equipment: Automatic Level, Total station, and Global Positioning Systems. Field safety knowledge is required. Restricted to Community Colleges 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 161. Introduction to Construction Management**3 Credits**

Introduction to the construction industry and construction management; construction documents and contracts; project planning, scheduling and administration; construction site management; and the role of Building Information Modeling (BIM) in construction management. Pre/ Restricted to: Community Colleges only.

Corequisite(s): DRFT 151 or consent of instructor.

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. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 176. Solid Modeling, Rendering and Animation**3 Credits (2+2P)**

Introduction to three dimensional drafting and solid modeling, rendering and animation for architecture and engineering fields. Material application, mapping, and scene lighting will be introduced. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

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. May be repeated up to 3 credits. 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. Pre/ Restricted to: Community Colleges only.

Prerequisite(s): DRFT 109.

Corequisite(s): DRFT 180.

DRFT 190. Finding and Maintaining Employment**2 Credits**

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 215. Construction Site Safety Management**3 Credits**

Construction safety, compliance, documentation, and reporting requirements for individuals with construction site safety management responsibilities. Students will have the opportunity to earn a 30-hour construction industry OSHA card. Consent of Instructor required.

Restricted to Community Colleges campuses only.

DRFT 222. Surveying Fundamentals**3 Credits (2+2P)**

Elementary surveying and civil drafting theory and techniques for non engineering majors. Includes traverse plotting, site plans, mapping, cross sections, and development of plan and profile drawings. Actual basic field measurement/surveying as well as extensive manual and CAD projects will be assigned. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): DRFT 109 and MATH 190G.

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 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. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 180 or DRFT 181.

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. Restricted to: Community Colleges only.

Prerequisite(s): DRFT 180 or DRFT 181.

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 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**

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 100. Introduction to Electrical and Computer Engineering 4 Credits (3+3P)

Introduction to analog (DC) and digital electronics. Includes electric component descriptions and equations, Ohm's law, Kirchhoff's voltage and current laws, ideal op-amp circuits, Boolean algebra, design of combinational and sequential logic circuits and VHDL or VERILOG. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): C- or better in MATH 190G.

E E 112. Embedded Systems 4 Credits (3+3P)

Introduction to programming through microcontroller-based projects. Extensive practice in writing computer programs to solve engineering problems with microcontrollers, sensors, and other peripheral devices.

Prerequisite(s): C- or better in E E 100.

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(s): C- or better in E E 112 and MATH 192G.

E E 201. Electric Circuit Analysis 3 Credits

Electric component descriptions and equations. Kirchhoff's voltage and current laws, formulation and solution of RLC network equations using time domain concepts. For nonmajors only. Minimum 2.0 GPA.

Prerequisite(s): C or better in MATH 192G.

E E 212. Introduction to Computer Organization 4 Credits (3+3P)

Concepts of modern computer organization, CPU control, pipelining, memory hierarchies, memory mapping, hardware-software interface, and operating systems.

Prerequisite(s): C- or better in E E 112 and MATH 190G.

E E 230. AC Circuit Analysis and Introduction to Power Systems 4 Credits (3+3P)

Electric component descriptions and equations; complete solutions of RLC circuits; steady-state analysis of AC circuits; application to power system analysis. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): PHYS 216G. **Prerequisite(s):** C- or better in E E 100 and MATH 192G.

E E 240. Multivariate and Vector Calculus Applications 3 Credits

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(s): C- or better in MATH 192G and E E 112.

E S-ENVIRONMENTAL SCIENCE (E S)

E S 110G. Introductory Environmental Science 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.

E S 256. Environmental Engineering and Science 3 Credits

Principles in environmental engineering and science: physical chemical systems and biological processes as applied to pollution control.

Restricted to: Main campus, Alamogordo campus, Grants campus, Carlsbad campus. Crosslisted with: C E 256

Prerequisite(s): CHEM 111G and MATH 191G.

E S 256 L. Environmental Science Laboratory 1 Credit

Laboratory experiments associated with the material presented in E S 256. Same as C E 256L.

Corequisite: E S 256.

E T-ENGINEERING TECHNOLOGY (E T)

E T 101. Introduction to Engineering Technology 1 Credit

The development of engineering technology, with an introduction to engineering technology, education, and practice. Graded S/U.

E T 104. Soldering Techniques 1 Credit

Fundamentals of soldering, desoldering, and quality inspection of printed circuit boards.

E T 106. 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. Community Colleges only. Same as DRFT 112.

Prerequisite: OECS 125, OECS 207, or consent of instructor.

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

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 153. Introduction to Computer Networks 3 Credits

Introduction to basic computer network fundamentals including International Open Systems Interconnect (OSI), the seven-layer model, and various networking hardware devices. Community Colleges only.

E T 154. Construction Methods and Communications 3 Credits

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**

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. Introduction to Information Engineering Technology**3 Credits**

An information engineering technology approach to the basics of computer systems and data, computer architecture, hardware and software operation, networks, and data communications. May be repeated up to 3 credits.

E T 182. Digital Logic**3 Credits**

The use of truth tables, Boolean equations, and diagrams to define, simplify, and implement logic-valued functions.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 121G.

E T 183 L. Applied DC Circuits Lab**1 Credit**

DC applied circuits lab. May be repeated up to 1 credits.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 190G. Prerequisite(s): E T 183.

E T 184 L. Applied AC Circuits Lab**1 Credit**

AC applied circuits lab May be repeated up to 1 credits.

Corequisite(s): E T 184.

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(s)/Corequisite(s): MATH 190G.

E T 191. Applied Circuits Laboratory**1 Credit**

Applied Circuits Lab May be repeated up to 1 credits.

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**

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. May be repeated up to 3 credits.

Prerequisite(s): MATH 190G and E T 262.

E T 210. Intermediate 3-D Modeling (Solid Works)**3 Credits (2+2P)**

Intermediate 3-D modeling. Applied modeling of techniques to prepare for SolidWorks certification (CSWA). May be repeated up to 3 credits.

Prerequisite(s): E T 110.

E T 217. Manufacturing Processes**3 Credits**

Introduction to manufacturing and processing, including: casting, forming, and machining. Emphasis on creating products with the appropriate techniques. May be repeated up to 3 credits. Crosslisted with: I E 217.

Prerequisite(s)/Corequisite(s): E T 217L. Prerequisite(s): E T 110 and MATH 121G.

E T 217 L. Manufacturing Processes Lab**1 Credit**

Hands-on laboratory in machine shop to apply topics from E T 217, including: casting, forming, and machining. May be repeated up to 1 credits.

Prerequisite(s)/Corequisite(s): E T 217.

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**

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**

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH 191G.

Prerequisite(s): PHYS 211G or PHYS 215G.

E T 241. Applied Dynamics**3 Credits**

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. May be repeated up to 3 credits.

Prerequisite(s): E T 240, (MATH 235 or MATH 191G).

E T 245. Computer Hardware Fundamentals**3 Credits (2+2P)**

Computer hardware fundamentals including architecture, interfacing, peripherals, troubleshooting, system upgrades, and maintenance. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

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. May be repeated up to 4 credits.

Prerequisite(s): E T 190 or E T 184.

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(s): E T 155.

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**

Introduction to Linux system administration.

Prerequisite(s)/Corequisite(s): E T 160.

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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 182 or MATH 190G.

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. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): MATH 235G or MATH 191G.

Prerequisite(s): E T 246.

E T 273. Fundamentals of Networking Communications I**4 Credits (2+4P)**

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. Community Colleges only. May be repeated up to 4 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): E T 153.

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 to WAN, protocols, switches, bridges, routers, NT server, TCP/IP networks, network diagnostics, voice over IP, wireless networks, and the OSI layers from physical to transport. May be repeated up to 3 credits.

Prerequisite(s): E T 182.

E T 280. Introduction to Multimedia**3 Credits**

Introduction to video, audio and other digital presentation methods.

Prerequisite(s): E T 255.

E T 282. Digital Electronics**4 Credits (3+3P)**

Applications of digital integrated circuits, multiplexers, counters, arithmetic circuits, and microprocessors. May be repeated up to 4 credits.

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**

Examines the field of information security within a real-world context of issues faced by today's IT professionals. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): E T 283. **Prerequisite(s):** E T 156.

E T 286. Information Security Certification Preparation**4 Credits (3+1P)**

An overview of general security concepts for information technology systems.

Prerequisite(s): E T 285.

E T 287. PC Disaster and Data Recovery**3 Credits**

This course provides an overview of the various causes of personal computer data failure and methods to mitigate the loss of your personal computer data. The focus is on restoring your personal computer to full PC functionality and recovering lost and damaged files after one of these unforeseen problems. In addition, the course provides a means to lessen the impact of these inevitable events with the preparation of a disaster recovery plan.

Prerequisite(s): E T 120 or E T 122.

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**

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 115. Child Growth, Development, and Learning**3 Credits**

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.

ECED 125. Health, Safety, and Nutrition**2 Credits**

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.

ECED 135. Family and Community Collaboration**3 Credits**

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.

Prerequisite(s): ECED 115 and ENGL 111G.

ECED 215. Curriculum Development Through Play**3 Credits**

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 and 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 diverse abilities and the development of IFSP's and IEP's is included. Consent of instructor required.

Prerequisite(s): ECED 115 and ENGL 111G.

Corequisite(s): ECED 220.

ECED 220. Early Childhood Education Practicum I**2 Credits**

The beginning practicum course will provide experiences that address curriculum content that is relevant for children birth through age four in developmentally and culturally sensitive ways. Consent of instructor required.

Prerequisite(s): ECED 115 and ENGL 111G.

Corequisite(s): ECED 215.

ECED 225. Curriculum Development and Implementation II**3 Credits**

The second 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 diverse abilities and the development of IEP's is included. Consent of instructor required.

Prerequisite(s): ECED 115, ENGL 111G.

Corequisite(s): ECED 230.

ECED 230. Early Childhood Education Practicum II**2 Credits**

The second field-based curriculum course focuses on practicing developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Consent of instructor required.

Prerequisite(s): ECED 115, ENGL 111G.

Corequisite(s): ECED 225.

ECED 235. Introduction to Language, Literacy and Reading**3 Credits**

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.

Prerequisite(s): ECED 115 and ENGL 111G.

ECED 245. Professionalism**2 Credits**

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.

ECED 255. Assessment of Children and Evaluation of Programs**3 Credits**

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. Crosslisted with: SPED 255

Prerequisite(s): ECED 115 and ENGL 111G.

ECED 265. Guiding Young Children**3 Credits**

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.

ECED 270. Program Management**3 Credits**

Technical knowledge necessary to develop and maintain a quality early care and education program. The course will focus on sound financial management and vision, laws and legal issues that affect programs and state and national standards including accreditation requirements.

Prerequisite: consent of instructor.

ECED 275. Curriculum for Diverse Learners and Their Families**3 Credits**

Implementation of family-centered programming that includes developmentally appropriate and culturally responsive curriculum. The course will also cover the establishment and maintenance of healthy and safe learning environments. Consent of instructor required.

ECED 276. Effective Program Development for Diverse Learners and Their Families**2 Credits**

Practical experience in observing and carrying out the role of the director/administrator in the implementation of family-centered programming that includes individually appropriate and culturally responsive curriculum in a healthy and safe learning environment. Consent of instructor required. Restricted to ECED majors.

Corequisite(s): ECED 275.

ECED 280. Professional Relationships**3 Credits**

Development of staff relationships that will foster strong professional relationships with and among families, communities and advisory boards. Issues of staff recruitment, retention, support and supervision will lay a foundation for positive personnel management. Working effectively with board, advisory groups and community members and agencies will be addressed. Consent of instructor required.

Corequisite(s): ECED 281.

ECED 281. Professional Relationships Practicum**2 Credits**

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 280.

ECON-ECONOMICS (ECON)

ECON 201G. Introduction to Economics**3 Credits**

Economic institutions and current issues with special emphasis on the American economy.

ECON 251G. Principles of Macroeconomics**3 Credits**

Macroeconomic theory and public policy: national income concepts, unemployment, inflation, economic growth, and international payment problems.

ECON 252G. Principles of Microeconomics**3 Credits**

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.

EDUC-EDUCATION (EDUC)

EDUC 101. Freshman Orientation**1 Credit**

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.

EDUC 102. Internship I**3 Credits**

Supervised experience in elementary education settings.

EDUC 103. Introduction with Internship in 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.

EDUC 150. Math for Paraprofessionals**3 Credits**

Applied math skills for paraprofessionals working with children.

Prerequisite: CCDM 103.

EDUC 151. Math for Paraprofessionals II**3 Credits**

Applied math skills for paraprofessionals working under the direction of a teacher.

Prerequisite: EDUC 150.

EDUC 181. Field Experience I**1 Credit**

Introduction to public school teaching, school visits, classroom observations and discussion seminar.

EDUC 195. Individual Topics in Education**1-3 Credits**

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.

EDUC 202. Internship II**3 Credits**

Supervised experience in junior high settings.

Prerequisite: must be a co-op student.

EDUC 204. Foundations of Bilingual/ESL Education**3 Credits**

Explore and review the historical, legal, philosophical, theoretical and pedagogical paradigms of bilingual/ESL education.

EDUC 219. Pre-Teacher Preparation**3 Credits**

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.

EDUC 250. Introduction to Education**2 Credits**

An overview of the American education system with emphasis on organization, governance, law, demographics, and professional practice. Restricted to Las Cruces campus only.

EDUC 281. Introduction to Secondary Education and Youth**3 Credits**

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.

ELA - EDUC LEADERSHIP & ADMIN (ELA)

ELA 215. Multicultural Leadership in Education

3 Credits

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.

ELA 255. Leadership and Change in Education

3 Credits

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.

ELA 298. Special Topics in Education

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.

ELT - ELECTRONICS TECHNOLOGY (ELT)

ELT 103. Math Study Skills for Electronics

1 Credit

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

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 120 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 120).

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 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.

ELT 295. Professional Development/Leadership**1 Credit**

As members and/or officers of student professional organizations, electronics technology students gain experience in leadership, team building, and community services. May be repeated for a maximum of 6 credit. Restricted to ELT and ET E majors.

ENGL-ENGLISH (ENGL)

ENGL 111 M. Rhetoric and Composition for International and Multilingual Students**4 Credits**

For international and multilingual students. Students will build on your prior knowledge of writing in English as a second or additional language by engaging in several genres of writing and reading, including reading responses, discussion posts, formal academic papers (Rhetorical Analysis and Documented Argument), and peer review. 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. Fulfills English 111 Gen-ed requirement. 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.

ENGL 111G. Rhetoric and Composition**4 Credits**

Skills and methods used in writing university-level essays.

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 the ACT or 35-75 on the Compass, successful completion of a developmental writing course; for those scoring 12 or below on the ACT standard score in English or 34 or below on the Compass, successful completion of two developmental writing courses.

ENGL 111GH. Rhetoric and Composition Honors**4 Credits**

Individualized assignments and independent study. Satisfies 4 credits of General Education English Composition requirement.

Prerequisite: ACT standard English score of 25 or higher and departmental approval.

ENGL 112. Rhetoric and Composition II**2 Credits**

A continuation of English 111G for those desiring more work in composition. Weekly themes based on outside reading.

Prerequisite: successful completion of ENGL 111G or the equivalent.

ENGL 115G. Perspectives on Literature**3 Credits**

Examines literature by writers from culturally diverse backgrounds and from different cultural and historical contexts. Explores various strategies of critical reading.

ENGL 116G. Perspectives on Film**3 Credits (3+3P)**

Explores narrative and documentary film and examines significant developments in the history of cinema. Criticism of film as an art form, technical enterprise, business venture, and cultural phenomenon.

ENGL 203G. Business and Professional Communication**3 Credits**

Effective writing for courses and careers in business, law, government, and other professions. Strategies for researching and writing correspondence and reports, with an emphasis on understanding and responding to a variety of communication tasks with a strong purpose, clear organization, and vigorous professional style. May be repeated up to 3 credits.

Prerequisite(s): Grade of C- or better in ENGL 111G or SPCD 111G or ENGL 111 M.

ENGL 211G. Writing in the Humanities and Social Sciences**3 Credits**

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 111G or ENGL 111M.

ENGL 218G. Technical and Scientific Communication**3 Credits**

Effective writing for courses and careers in sciences, engineering, and agriculture. Strategies for understanding and presenting technical information for various purposes to various audiences. May be repeated up to 3 credits.

Prerequisite(s): Grade of C- or better in ENGL 111G or ENGL 111M.

ENGL 220G. Introduction to Creative Writing**3 Credits**

Examines classic and contemporary literature in three genres. Various forms, terminologies, methods and technical aspects of each genre, and the art and processes of creative writing. May be repeated up to 3 credits.

Prerequisite(s): ENGL 111G or SPCD 111G or ENGL 111 M.

ENGL 232. Script Development and Storyboarding**3 Credits**

Examines effective writing principles for creating storyboards that communicate the overall picture of a project, timing, scene complexity, emotion and resource requirements. Crosslisted with: CMI 232.

ENGL 235. Narrative: Principles of Story Across the Media**3 Credits**

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: CMI 235

ENGL 243. The Bible as Literature**3 Credits**

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.

ENGL 244G. Literature and Culture**3 Credits**

Intensive reading of and discussion and writing about selected masterpieces of world literature. Emphasizes cultural and historical contexts of readings to help students appreciate literary traditions. Core texts include works by Homer, Dante, and Shakespeare, a classic novel, an important non-Western work, and modern literature.

ENGL 251. Survey of American Literature I**3 Credits**

From the colonial period to the transcendentalists.

ENGL 252. Survey of American Literature II**3 Credits**

From Whitman to the present.

ENGL 263. History of Argument**3 Credits**

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 111G.

ENGL 271. Survey of English Literature I**3 Credits**

From Beowulf through the eighteenth century.

ENGL 272. Survey of English Literature II**3 Credits**

From the pre-Romantics to the present.

ENGL 299. 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.

ENGR-ENGINEERING (ENGR)

ENGR 100. 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.

Prerequisite(s)/Corequisite(s): MATH 121G.

ENGR 100H. 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. Pre/

Corequisite(s): MATH 190G.

ENGR 111. Mathematics for Engineering Applications**3 Credits**

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 190G. Prerequisite(s): MATH 121G.

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.

EPWS-ETMLGY/PLNT PTHLGY/WD SCI (EPWS)

EPWS 100. Applied Biology**3 Credits**

Introduction to applied biology and ecology focusing on insects, plants and pathogens in natural areas, crops and urban settings. EPWS 100L is strongly recommended to take in the same semester. May be repeated up to 3 credits. Restricted to Las Cruces campus only.

EPWS 100 L. Applied Biology Lab**1 Credit**

Study of applied biology and ecology of insects, plants and pathogens in natural areas, crops, and urban settings. EPWS 100 strongly recommended to take in the same semester. May be repeated up to 1 credits. Restricted to Las Cruces campus only.

EPWS 200. 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.

FCS-FAMILY AND CHILD SCIENCE (FCS)

FCS 181. Interpersonal Skills in Intimate Relationships**3 Credits**

Developing social skills within friendships, dating relationships, marriage, parenting, and families. May be repeated up to 3 credits. Restricted to Las Cruces and Dona Ana campuses.

FCS 210. Infancy and Early Childhood in the Family**3 Credits**

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.

FCS 211. Middle Childhood Development in the Family**3 Credits**

Research and theory relevant to the physical, mental, social, and emotional development of the child from age five to age twelve. Attitudes, knowledge, and skills related to working with school-age children in the family system. Observation in a variety of settings may be required. Restricted to Las Cruces campus only.

FCS 212. Adolescent Development and the Family**3 Credits**

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.

FCS 213. Adult Development and Aging**3 Credits**

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.

FCSE-FAMILY & CONSUMER SCI EDU (FCSE)

FCSE 235. Housing and Interior Design**3 Credits**

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.

Prerequisite(s): No prerequisites.

FCSE 245. Overview of Family and Consumer Sciences Teaching**3 Credits**

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.

FIN-FINANCE (FIN)

FIN 206. Introduction to Finance**3 Credits**

Theory and techniques of financial management for business firms. Includes application of financial analysis tools and techniques needed for business financial administration and decision making. Restricted to Community Colleges campuses only.

Prerequisite(s): BOT 106 or higher; BOT 120 or ACCT 221; ECON 201 or ECON 251.

FIN 210. Financial Planning and Investments**3 Credits**

Individual financial planning and related financial markets and institutions. Community Colleges only.

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**

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**

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**

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**

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**

This course will train students on 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. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): FIRE 128. Restricted to Community Colleges campuses only.

FIRE 126. Fire Prevention**3 Credits**

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**

This course is a pre/co-requisite to FIRE 120. 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**

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**

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**

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**

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**

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**

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**

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 226. Fire Investigations II**3 Credits**

This course is intended to provide the student with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and court-room testimony. Restricted to: Community colleges only.

FIRE 230. Fire Service Instructor**3 Credits**

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**

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**

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 111. Elementary French I**4 Credits**

French language for beginners.

FREN 112. Elementary French II**4 Credits**

French language for beginners.

Prerequisite: C or better in FREN 111.

FREN 211. Intermediate French I**3 Credits**

Speaking, reading and writing.

Prerequisite: C or better in FREN 112.

FREN 212. Intermediate French II**3 Credits**

Speaking, reading and writing.

Prerequisite: C or better in FREN 211.

FSTE-FOOD SCIENCE & TECHNOLOGY (FSTE)

FSTE 164G. Introduction to Food Science and Technology**4 Credits (3+2P)**

An introductory course in the scientific study of the nature and composition of foods and their behavior during all aspects of their conversion from raw materials to consumer food products.

FSTE 175. ACES in the Hole Foods I**4 Credits**

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.

Prerequisite(s): Students enrolled in this class must possess A Food Handler Card.

FSTE 200. 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.

FSTE 210G. Survey of Food and Agricultural Issues**3 Credits**

Same as AG E 210G.

FSTE 263G. 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.

FSTE 275. ACES in the Hole Foods II**4 Credits**

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. May be repeated up to 4 credits.

Prerequisite(s): FSTE 175 and Have a Food Handler Card.

FWCE-FISH,WILDLF,CONSERV ECOL (FWCE)

FWCE 109. Contemporary Issues in Wildlife and Natural Resources Management

3 Credits

Ecological, socioeconomic, and political issues surrounding the management of our natural resources with an emphasis on fish and wildlife resources.

FWCE 110G. 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.

FWCE 255. Principles of Fish and Wildlife Management**3 Credits**

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 110.

GENE-GENETICS (GENE)

GENE 110. Experimental Systems in Genetics**1 Credit**

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.

GEOG-GEOGRAPHY (GEOG)

GEOG 111G. Geography of the Natural Environment**4 Credits (3+3P)**

Introduction to the physical processes that shape the human environment: climate and weather, vegetation dynamics and distribution, soil development and classification, and geomorphic processes and landform development.

GEOG 112G. World Regional Geography**3 Credits**

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.

GEOG 120G. Culture and Environment**3 Credits**

Study of human-environmental relationships: how the earth works and how cultures impact or conserve nature. Introduction to relationships between people and natural resources, ecosystems, global climate change, pollution, and conservation.

GEOG 257. Introduction to Weather Science**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. Crosslisted with: SOIL 257 and AGRO 257

Prerequisite(s): None.

GEOG 259. Introduction to Oceanography**4 Credits (3+3P)**

Introduces the origin and development of the ocean and marine ecological concepts. Examines physical processes such as waves, tides, and currents and their impact on shorelines, the ocean floor, and basins. Investigates physical processes as they relate to oceanographic concepts. Includes media via the Internet and laboratory examination of current oceanic data as an alternative to the actual oceanic experience. Students will gain a basic knowledge and appreciation of the ocean's impact on the world's ecology. Branch campuses only. Consent of Instructor required.

GEOG 281. Map Use: Reading, Analysis and Interpretation**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.

GEOG 291. Special Topics**1-3 Credits**

Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

GEOG 295. Introduction to Climate Science**4 Credits (3+3P)**

Examines fundamentals and related issues of Earth's climate system, climate variability, and climate change. Develops solid understandings of Earth's climate system framed in the dynamic, Earth system based approach to the science. Branch Campuses only. May be repeated up to 4 credits.

GEOL-GEOLOGY (GEOL)

GEOL 111G. Introductory Geology**4 Credits (3+3P)**

Covers the fundamental principles of physical geology, including the origin of minerals and rocks, geologic time, rock deformation, and plate tectonics. May be repeated up to 4 credits.

GEOL 212G. The Dynamic Earth**4 Credits (3+3P)**

Introduction to earth systems. Geology and the solid earth, geologic time and earth history, water and the world oceans, atmosphere and weather, the solar system. Community Colleges only.

GEOL 220. 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.
May be repeated up to 12 credits.

GER-GERMAN (GER)**GER 111. Elementary German I****4 Credits**

German for beginners. Stress on speaking skills.

GER 112. Elementary German II**4 Credits**

German for beginners and students with one year of high school German.
Stress on speaking skills.

Prerequisite: C or better in GER 111.

GER 211. Intermediate German I**3 Credits**

Speaking, reading and writing.

Prerequisite: C or better in GER 112.

GER 212. Intermediate German II**3 Credits**

Speaking, reading and writing.

Prerequisite: C or better in GER 211.

GOVT-GOVERNMENT (GOVT)**GOVT 100G. American National Government****3 Credits**

Class critically explores political institutions and processes including: the U.S. constitutional system; legislative, executive and judicial processes; political parties, elections, media, policy making, civic participation, popular and group influence

GOVT 101. Introductory Government Seminar**1 Credit**

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.

GOVT 110G. Introduction to Political Science**3 Credits**

This class covers fundamental concepts such as justice, sovereignty and power; political theories and ideologies; and government systems that range from democratic to authoritarian.

GOVT 150G. American Political Issues**3 Credits**

Major contemporary problems of American society and their political implications.

GOVT 160G. International Political Issues**3 Credits**

Current developments and issues in world politics.

GOVT 201. Special Topics**3 Credits**

Specific topics to be announced in Schedule of Classes. Community Colleges only. May be repeated for a maximum of 12 credits.

HIST-HISTORY (HIST)**HIST 101G. Roots of Modern Europe****3 Credits**

Economic, social, political, and cultural development from earliest times to about 1700.

HIST 102G. Modern Europe**3 Credits**

Economic, social, political, and cultural development from 1700 to the present.

HIST 110G. Making History**3 Credits**

General introduction to history: how historians carry out research and develop interpretations about the past.

HIST 111G. Global History to 1500**3 Credits**

Global economic, social, political and cultural developments to 1500. Thematic approach.

HIST 112G. Global History Since 1500**3 Credits**

Global economic, social, political and cultural developments since 1500. Thematic approach.

HIST 201G. Introduction to Early American History**3 Credits**

History of the United States to 1877, with varying emphasis on social, political, economic, diplomatic, and cultural development.

HIST 202G. Introduction to Recent American History**3 Credits**

History of the United States since 1877, with varying emphasis on social, political, economic, diplomatic, and cultural development.

HIST 211G. East Asia to 1600**3 Credits**

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.

HIST 212G. East Asia since 1600**3 Credits**

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.

HIST 221G. Islamic Civilizations to 1800**3 Credits**

History of Islamic civilizations to 1800.

HIST 222G. Islamic Civilizations since 1800**3 Credits**

History of Islamic civilizations since 1800.

HIST 261. New Mexico History**3 Credits**

Economic, political, and social development of New Mexico from exploration to modern times. Community Colleges only.

HIST 269. 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.

HIT-HEALTH INFO TECHNOLOGY (HIT)

HIT 110. Electronic Health Records

3 Credits

Current electronic health record principles, methods and procedures, and computerized medical record concepts and software applications will be introduced. Restricted to: Community Colleges only.

Prerequisite(s): C S 110 or OECS 105.

HIT 120. Health Information Introduction to Pharmacology

3 Credits

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.

HIT 130. Health Information Technology Anatomy & Physiology

3 Credits

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

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

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. Restricted to: Community Colleges only.

HIT 158. Advanced Medical Terminology

3 Credits

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

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 6 credits. Consent of Instructor required. Restricted to: HIT & BOT majors. S/U Grading (S/U, Audit). Restricted to Dona Ana campus only.

HIT 228. Medical Insurance Billing

3 Credits

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

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

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

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.

HNDS-HUMAN NUTRITION & DIET (HNDS)

HNDS 201. Seminar 1- The Field of Dietetics

1 Credit

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. Restricted to Las Cruces and Dona Ana campuses.

HNDS 251. Human Nutrition**3 Credits**

Principles of normal nutrition. Relation of nutrition to health. Course contains greater amounts of chemistry and biology than HNDS 163. Open to nonmajors.

HON-HONORS (HON)

HON 115. Journeys of Discovery**1 Credit**

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.

HON 205G. Life, Energy, and Evolution**4 Credits (3+3P)**

Principles of modern biological science with discussion on the impact of this science in today's world. Selected topics include principles of metabolism, genetics, physiology, evolution, and ecology. Students who pass HON 205G will fulfill the same requirements fulfilled by BIOL 111G and BIOL 111GL.

HON 208G. Music in Time and Space**3 Credits**

Survey of music as it interacts with art, mathematics, science (acoustics), and ideas from exotic cultures through the history of Western civilization.

HON 214. Successful Fellowship Writing**1 Credit**

Same as HON 314, for freshmen and sophomores.

HON 216G. Encounters with Art**3 Credits**

A multicultural examination of the principles and philosophies of the visual arts and the ideas expressed through them.

HON 218. Women Across Cultures**3 Credits**

Historical and critical examination of women's contributions worldwide with emphasis on the issues of representation that have contributed to exclusion and marginalization of women and their achievements. Restricted to: Main campus only. Crosslisted with: W S 202G

HON 219G. 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 111G.

HON 220G. The World of the Renaissance: Discovering the Modern**3 Credits**

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.

HON 222G. Foundations of Western Culture**3 Credits**

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.

HON 227G. Plato and the Discovery of Philosophy**3 Credits**

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.

HON 228G. Religion and the State**3 Credits**

Moral and political questions that arise in connection with church-state relations, including religious toleration, separation of church and state, the individual's moral duty to ignore religious convictions when performing functions of democratic citizenship, and the extent to which these ideas are embodied in our nation's traditions.

HON 229G. The New Testament as Literature**3 Credits**

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.

HON 230G. Bamboo and Silk: The Fabric of Chinese Literature**3 Credits**

Introductory survey of traditional and modern Chinese prose and poetry in translation with emphasis on genre, theme, and social/historical context.

HON 232G. The Human Mind**3 Credits**

Examination of the current understanding of the intricate relationship between mind and matter, with particular emphasis on the functional organization of the human brain. Evolutionary origins of this functional design and its implications for understanding human emotional and cognitive processes.

HON 233. Social Problems**3 Credits**

Introduction to contemporary social problems from multiple perspectives. Discussions of definition, impact, and prospective solutions to major social issues, such as crime, drug abuse, social inequality, family, population, environment, and social change.

HON 234G. The Worlds of Arthur**3 Credits**

Arthurian texts and traditions from medieval chronicle histories to modern novels. Emphasis on both the continuities of the Arthurian tradition and the diversity of genres, media, and cultures that have given expression to the legend.

HON 235G. Window on Humanity**3 Credits**

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.

HON 237G. Archaeology: Search for the Past**3 Credits**

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.

HON 239G. Medieval Understandings: Literature and Culture in the Middle Ages**3 Credits**

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.

HON 242G. Claiming an American Past**3 Credits**

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.

HON 248G. The Citizen and the State: Great Political Issues**3 Credits**

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.

HON 249G. American Politics in a Changing World**3 Credits**

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.

HON 265G. Principles of Human Communication Honors**3 Credits**

Study and practice of interpersonal, small group, and presentational skills essential to effective social, business, and professional interaction.

HON 270G. Theatre: Beginnings to Broadway**3 Credits**

Intercultural and historical overview of live theatre production and performance, including history, literature and professionals. Students attend and report on stage productions.

HORT-HORTICULTURE (HORT)

HORT 100G. 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 100G.

HORT 110. Athletic Field and Golf Course Management**1 Credit**

Survey of proper management of athletic fields, golf courses and other turfgrass stands. Career opportunities in athletic field and golf course management will be discussed. Course includes field trips to local and regional sports turf facilities.

HORT 200. 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.

HORT 205. Introduction to Horticulture**3 Credits**

Principles and practices of horticulture. Basic chemical, physical, and biological principles that govern plant growth in different environments. Economics of plant science as related to the field of horticulture. Online course entirely. Intended for non-majors.

HORT 210. Ornamental Plants I**4 Credits (3+2P)**

Covers identification, botanical characteristics, culture, and landscape uses of woody plants. Emphasis on deciduous trees, native shrubs, and evergreens.

HORT 211. Ornamental Plants II**4 Credits (3+2P)**

Identification, botanical characteristics, culture, and landscape uses of woody plants. Emphasis on flowering trees, cacti, and members of the pea and rose families.

HORT 240. 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.

HORT 241. Floriculture Field Practicum**1 Credit**

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 240 or consent of instructor.

HORT 250. 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 250.

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**

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**

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**

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**

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**

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**

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**

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**

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**

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 252.

HOST 210. Catering and Banquet Operations**3 Credits**

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**

Technical purchasing concepts, product selection, and specifications. Safety and sanitation as they relate to food service establishments. Prepares student for work with HACCP programs. Restricted to Community Colleges campuses only.

HOST 216. Event, Conference and Convention Operations**3 Credits**

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**

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 220. Experiential Travel**1-3 Credits (1-3)**

Course provides an opportunity for students to plan, prepare for and experience travel to destinations they might not otherwise have visited. Students experience local culture and peoples. May be repeated up to 9 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HOST 201 or consent of instructor.

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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

HOST 222. Cooperative Experience II**3 Credits**

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 223. Travel Agency Principles**3 Credits**

Travel agents are called upon to exhibit broad knowledge about many different tourism products. This course prepares students to undertake the challenging job of an agent in a travel agency. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

HOST 224. Travel Agency Booking & Operations**3 Credits**

Course trains students to use the common electronic booking software that is found in travel agencies. Familiarization with operational procedures of travel agencies. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): HOST 223.

HOST 230. Wedding Events Management**3 Credits**

This course will address various issues that could potentially arise in the preparation and management of a wedding or related event. All aspects of planning and attention to details that will ensure that students are prepared to provide services as a professional wedding planner. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

HOST 239. Introduction to Hotel Management**3 Credits**

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**

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 111. Freshman Orientation**1 Credit**

Orientation to university life, including available resources and methods to promote success at NMSU. Open to all freshmen and transfer students. Graded S/U.

HRTM 200. 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.

HRTM 201. Introduction to Tourism**3 Credits**

Survey of travel and tourism development and operating characteristics.

HRTM 221. Introduction to Hospitality Management**3 Credits**

Overview of the major segments of the hospitality industry, with a focus on basic management principles.

HRTM 231. Safety, Sanitation and Health in the Hospitality Industry**2 Credits**

Addresses public health, HACCP, safety and culinary nutrition responsibilities in the hospitality industry. Sanitation certification test allows students to receive national credential.

HRTM 263. 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. Restricted to Las Cruces campus only.

Prerequisite(s): HRTM 221 or FSTE 263G.

HVAC-HEATING/AC/REFRIGERATION (HVAC)

HVAC 100. EPA Clean Air Act: Section 608**1 Credit**

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**

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. S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

HVAC 113. Job Shadowing**1 Credit**

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**

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 110. Industrial Engineering Orientation**1 Credit**

Introduction to Industrial Engineering Department, Facility Research and Resources. Overview of where industrial engineering fits into larger view of all of engineering. Introduction to university resources for industrial engineering students. Restricted to majors.

I E 151. Computational Methods in Industrial Engineering**3 Credits**

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 121G.

I E 152. Introduction to Industrial Engineering**2 Credits**

Historical development of industrial engineering, present practice and trends.

Prerequisite: MATH 120.

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**2 Credits**

Manufacturing methods and industrial processes which include casting, forming and machining. May be repeated up to 2 credits. Crosslisted with: E T 217. M E 159.

Prerequisite(s): MATH 121G.

Corequisite(s): I E 217 L.

I E 217 L. Manufacturing Processes Laboratory**1 Credit**

Laboratory associated with I E 217. May be repeated up to 1 credits.

Prerequisite(s): M E 159.

INMT - INDUSTRIAL MAINTENANCE (INMT)

INMT 133. Process Technology and Systems**4 Credits**

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**

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**

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**

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): Computer Literacy (CS 110).

INMT 223. Electrical Repairs**4 Credits**

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**

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 236. Lubrication Process**3 Credits**

This course teaches the technical skills needed to operate, install, tune, maintain and troubleshoot automatic lubrication systems. Lubrication concepts, setup and tuning, pneumatic pumps, series-progressive valve systems and microprocessor based lubrication controllers will be covered. The course covers the principles of and importance of lubrication, oils and grease types and applications, lube management (storage, handling, and purity), and PDM and PM. Restricted to Carlsbad campus only.

INMT 237. Hydraulics I**2 Credits**

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**

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**

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 demansoning and tolerancing will taught. Restricted to Carlsbad campus only.

INMT 263. Mechanical Drives II**4 Credits**

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**

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**

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**

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.

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.

JOUR-JOURNALISM (JOUR)

JOUR 102. Grammar for Journalists**2 Credits**

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**

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**

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.

JPNS-JAPANESE (JPNS)

JPNS 111. Elementary Japanese I**4 Credits**

Japanese language for beginners.

JPNS 112. Elementary Japanese II**4 Credits**

Japanese language for beginners.

Prerequisite: grade of C or better in JPNS 111 or consent of instructor.

JPNS 211. Intermediate Japanese I**3 Credits**

Speaking, reading and writing the Japanese language.

Prerequisite: grade of C or better in JPNS 112 or consent of instructor.

JPNS 212. Intermediate Japanese II**3 Credits**

Speaking, reading and writing the Japanese language.

Prerequisite: grade of C or better in JPNS 211 or consent of instructor.

L SC-LIBRARY SCIENCE (L SC)

L SC 100. Introduction to Libraries**3 Credits**

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**

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**

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 112. Introduction to Consumer Health Information Literacy in an Electronic Environment**3 Credits**

Introduction to consumer health information literacy; the process and organization, location, and evaluation of online information. Restricted to: Community Colleges only.

L SC 120. Cataloging Basics I: Descriptive Cataloging**3 Credits**

Introduction to descriptive cataloging. Restricted to: Dona Ana campus only.

L SC 125. Cataloging Basics II: Classification and MARC Cataloging**3 Credits**

Continuation of descriptive cataloging basics. Introduction to subject analysis, classification and MARC coding. Restricted to: Dona Ana campus only.

L SC 130. Introduction to Technical Services in Libraries**3 Credits**

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**

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 150. Library Services for Children and Young Adults**3 Credits**

Library services for children and young adults with an overview of materials, programs, and services for this population. Restricted to: Dona Ana campus only.

L SC 153. Picture Books and Young Children**1 Credit**

If children are to enjoy reading they need to be exposed to books at an early age. This course will provide information to help guide librarians, preschool teachers, parents, and care givers in choosing appropriate books for those younger than six, and how to use books with this age group. Restricted to Dona Ana campus only.

L SC 154. State Children's Book Awards**1 Credit**

Students will explore the state book award offered by their state. Students will read some of the books and plan library programs to promote the award. Restricted to: Dona Ana campus only.

L SC 155. Award Winning Books for Children**1 Credit**

A review of book awards and how to integrate award winning books into school curriculum or public school programming. Restricted to: Community Colleges only.

L SC 156. Boys and Books**1 Credit**

This course looks at why, in general, boys are less interested in books than girls. Students will discover ways libraries can encourage boys to read and develop activities and programs which entice them to do so. Students will also be reading some books recommended for boy readers. Restricted to Dona Ana campus only.

L SC 160. Introduction to Public Services in Libraries**3 Credits**

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 191. Children's Books and their Movie Adaptations**1 Credit**

For almost as long as there have been popular books for children in the United States, there have been dramatic adaptations of them. What is gained, and lost, when children's books are adapted for the big screen? What is the relationship-or what should the connection be-between works of children's literature and their seemingly inevitable film adaptations? Students will be expected to read several children's books and view the movies based on them and make comparisons. Restricted to: Community Colleges only.

L SC 192. Myths and Legends in Children's Literature**1 Credit**

The student will explore myths and legends from diverse cultures; from European and Asian to those who have their roots in Africa and the Americas. Myths which are similar across several cultures will be compared.

L SC 193. Poetry for Children**1 Credit**

This course will explore the genre of poetry for children. In this class, participants will focus on reading and reviewing poetry for kids, exploring poetry on the Web, and trying interactive approaches for sharing poetry with children. Topics include: study and analysis of poetry, ways to use poetry in the classroom, writing poetry with children. Restricted to: Community Colleges only.

L SC 195. Mysteries for Children**1 Credit**

In this course the student will become familiar with a wide variety of mysteries for children. Ways to use mysteries in the classroom and school library will also be covered. Restricted to Community Colleges campuses only.

L SC 196. Historical Fiction for Children**1 Credit**

This course looks at historical fiction as a genre. Topics include: fiction vs. history, American history in children's literature, world history in children's literature, activities for using historical fiction in a school setting. Restricted to: Community Colleges only.

L SC 197. Fantasy and Speculative Fiction**1 Credit**

This course offers professionals serving school students the opportunity to increase your appreciation and knowledge of fantasy and speculative fiction through intense reading and discussion of representative works. The course will also investigate and consider options using fantasy and speculative fiction in a school setting. Restricted to: Community Colleges only.

L SC 200. Collection Management and Development in Libraries**3 Credits**

Principles of identifying, selecting, acquiring, managing, and evaluating resources for libraries. Restricted to Dona Ana campus only.

L SC 201. Public Libraries**3 Credits**

A study of the American public library and its place in communities. Topics may include history, philosophy, and standards, operations and procedures, governance, funding, personnel materials, user services, outreach and advocacy. Restricted to: Dona Ana campus only.

L SC 203. School Library Media Specialist**3 Credits**

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**

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 220. Innovative Technology Applications for Libraries**3 Credits**

A look at uses for innovative technologies in libraries. Topics may include blogs, wikis, podcasting and virtual reality libraries. 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. S/U Grading (S/U, Audit). Restricted to Dona Ana campus only.

Prerequisite(s): Consent of instructor.

L SC 222. Experiential Learning II**1-3 Credits**

Continuation of L SC 221. Each credit requires specified number of hours of on-the-job work experience. Consent of Instructor required. S/U Grading (S/U, Audit). Restricted to Dona Ana campus only.

Prerequisite(s): L SC 221 and consent of instructor.

L SC 230. Issues and Ethics in Libraries**3 Credits**

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 234. Intellectual Freedom in Libraries**1 Credit**

Philosophical and practical information related to library policies about access to library materials. Restricted to: Dona Ana campus only.

L SC 236. Banned Books**1 Credit**

Banned books, selection policies, and responding to challenges. Restricted to: Dona Ana campus only.

L SC 240. Internet Resources and Research Strategies**3 Credits**

Introduction to retrieving and evaluating information found on the Internet and in selected Internet-accessible databases. Restricted to: Dona Ana campus only.

L SC 250. Reference and Information Resources II**3 Credits**

Evaluation and use of specialized information resources to offer reference services. Emphasis is on virtual reference and other innovative techniques. 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 260. Cataloging Non-Book Formats**3 Credits**

Introduction to cataloging of various non-book formats and MARC coding. Restricted to: Dona Ana campus only.

L SC 270. Library Science Capstone**3 Credits**

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 275. Fundamentals of Library Supervision**3 Credits**

An introduction to supervision of library employees, including student assistants, to create a productive workplace. Restricted to: Dona Ana campus only.

L SC 281. Grant Writing for Libraries**1 Credit**

Introduction to grant writing for libraries. Restricted to: Dona Ana campus only.

L SC 286. Children's Literature and the Primary Curriculum**3 Credits**

The student will research the use of picture books and other children's literature across the curriculum with students in kindergarten through second grade. Topics include: using literature to teach writing, using literature to teach science, using literature to teach math, using literature to teach social studies. Restricted to: Community Colleges only.

L SC 287. Children's Literature and the Intermediate Curriculum**3 Credits**

The student will research the use of picture books and other children's literature across the curriculum with students in grades three through five. Topics include: using literature to teach writing, using literature to teach science, using literature to teach math, using literature to teach social studies. Restricted to: Community Colleges only.

L SC 288. Children's Literature and the Middle School Curriculum**3 Credits**

The student will research the use of picture books and other children's literature across the curriculum in grades six through eight. Topics include: using literature to teach writing, using literature to teach science, using literature to teach math, using literature to teach social studies. Restricted to: Community Colleges only.

L SC 290. Introduction to Children's Literature for Libraries**3 Credits**

This course will introduce current and potential library personnel to a wide variety of literature written for children. The course explores the history of children's literature and the path it has taken. Students will read many books from a variety of genre, explore the literary elements found in those books, and develop some evaluation criteria and ways for children to respond to the literature they read. Restricted to Dona Ana campus only.

L SC 291. Southwestern Children's Literature**1 Credit**

This course will introduce students to books which can teach the children visiting your library more about the people and places of the southwest. Restricted to: Dona Ana campus only.

L SC 292. Native American Children's Literature**1 Credit**

This course will introduce students to some children's and young adult books written by and about Native Americans. Restricted to: Dona Ana campus only.

L SC 295. Introduction to Young Adult Literature**3 Credits**

The course will expose students to quality adolescent literature available for reading and study in middle and high school classes. It provides a broad survey of young adult literature and focuses on building an appreciation of literature, encouraging student reading, developing life-long readers, and developing activities for critical thinking. Restricted to: Community Colleges only.

L SC 296. Multicultural Books for Children and Youth**3 Credits**

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**

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.

LANG 112. Beginning Language II**4 Credits**

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 instructor.

LANG 211. Intermediate Language I**3 Credits**

Developing language skills through study abroad for languages not offered at NMSU main campus. Specific languages to be identified with course subtitles.

LANG 212. Intermediate Language II**3 Credits**

Developing language skills through study abroad for languages not offered at NMSU main campus. Specific languages to be identified with course subtitles.

Prerequisite: Language placement exam or consent of instructor.

LAWE-LAW ENFORCEMENT (LAWE)

LAWE 201. Introduction to Juvenile Delinquency**3 Credits**

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**

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**

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**

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): C J 101.

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): C J 101 and C J 221.

LAWE 206. Traffic Enforcement and Crash Investigations**3 Credits**

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**

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**

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**

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

LIB-LIBRARY SCIENCE (LIB)

LIB 101. Introduction to Research**1 Credit**

A practical, hands-on, step-by-step introduction to the basics of university-level library research. Topics include the academic method, plagiarism, selection and use of information resources. (Eight-week course.)

LIB 111. Introduction to Information Literacy in an Electronic**Environment****3 Credits**

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.

LING-LINGUISTICS (LING)

LING 200G. Introduction to Language

3 Credits

Traditional fields of language study (sound, grammar, meaning) and newer ones (language as social behavior, language and cognition, language variation, animal communication).

M E-MECHANICAL ENGINEERING (M E)

M E 102. Mechanical Engineering Orientation

1 Credit

Emphasis on tours of M E labs and NMSU facilities that illustrate possible career paths for mechanical engineers. Students are introduced to department faculty, student organizations, and support services at NMSU. Topics include role of good communication skills, using modern technology, team building, and intellectual property. Students are advised in planning balance of their academic program. Restricted to majors.

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. Pre/

Corequisite(s): MATH 190G.

M E 201. Supplemental Instruction to Dynamics

1 Credit

Optional workshop for students in M E 237. The workshop focuses on problem solving skills associated with M E 237. Course does not count toward departmental degree requirements. May be repeated up to 1 credits. Restricted to Las Cruces campus only.

Corequisite(s): M E 237.

M E 202. Supplemental Instruction to Thermodynamics

1 Credit

Optional workshop for students in ME 240. The workshop focuses on problem solving skills associated with ME240. Course does not count toward departmental degree requirements. Restricted to Las Cruces campus only.

Corequisite(s): M E 240.

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(s): MATH 192.

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.

Prerequisite: M E 159.

M E 228. Engineering Analysis I

3 Credits

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 291.

M E 234. Mechanics-Dynamics

3 Credits

Kinematics and dynamic behavior of solid bodies utilizing vector methods.

Prerequisite(s)/Corequisite(s): MATH 291G. **Prerequisite(s):** C E 233.

M E 236. Engineering Mechanics I

3 Credits

Force systems, resultants, equilibrium, distributed forces, area moments, friction, and kinematics of particles. Pre/ Restricted to: Main campus only.

Prerequisite(s): MATH 192G.

Corequisite(s): PHYS 215G.

M E 237. Engineering Mechanics II

3 Credits

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 291. **Prerequisite(s):** M E 236 or C E 233.

M E 240. Thermodynamics

3 Credits

First and second laws of thermodynamics, irreversibility and availability, applications to pure substances and ideal gases.

Prerequisite: PHYS 215G.

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(s): MATH 192.

M SC-MILITARY SCIENCE (M SC)

M SC 110. Introduction to Military Science

2 Credits (2+1P)

Concepts of leadership, including basic drill, fitness sessions, rappelling, first aid, map reading, and basic marksmanship. Optional physical fitness sessions and weekend exercises.

M SC 111. Introduction to Leadership

2 Credits (2+1P)

Learning and application of leadership, as well as relating organizational ethics to effective leadership using communication skills to improve individual performance. Optional physical fitness sessions and weekend exercises.

M SC 210. Self/Team Development

3 Credits (3+1P)

Learning and application of leadership skills to building effective teams, using oral/written skills, planning, and coordination of group efforts. Include advanced first aid, land navigation, and basic military tactics. Leadership Lab and three physical fitness sessions per week required.

M SC 211. Leadership in Action and Team Building**3 Credits (3+1P)**

Individual and team aspects of military tactics in small unit operations. Use of radio, movement, planning for safety/security and pre-execution checks. Continued leadership development and techniques for training others. Leadership Lab and three physical fitness sessions per week required.

M SC 225. Directed Studies**1-3 Credits**

Individual directed studies under supervision of designated faculty. May be repeated for a maximum of 12 credits. No S/U option.

Prerequisite: 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. Introduction Crosslisted with: AERT 113. Restricted to: Community Colleges only.

MAT 105. Introduction to Manufacturing**3 Credits**

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 120 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 107. Computer Integrated Manufacturing PLTW**3 Credits (2+2P)**

Applies principles of robotics and automation to Computer Aided Design (CAD) design. The course builds on computer solid modeling skills developed in Introduction to Engineering Design, and Design and Drawing Production. Students use Computer Numerical Control (CNC) equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing, and design analysis are included. Restricted to: Community Colleges only.

MAT 108. Metrology, Safety and Quality Control for Manufacturing**3 Credits (2+2P)**

Use of measuring tools in manufacturing process and quality control. These tools include: vernier and digital micrometers, calipers, height gauges, hole gauges, pin gauges, electrical pressure/flow, temperature measuring, stress/strain measurements, and non-destructive testing (eddy currents, magnetic particle, ultrasonic, bubble emission, x-ray, Gamma ray, radiography, visual inspection, ring test, taping & Zygo). Instruction to use of coordinate machine while covering the safety issues that pertains to these types of tools and equipment. 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 120 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 149. Industrial Mechanical Elements**3 Credits (2+2P)**

Introduction to mechanical systems, theory, characteristics and uses for the different types of mechanical power transmission systems used in the industry, and related industrial safety practices. Topics include: safety, drives, shafts, maintenance and lubrication. Restricted to: Community Colleges only.

MAT 151. Introduction to Metalworking I**3 Credits (2+2P)**

Measuring instruments, including steel rules, combination and transfer tools, micrometers, vernier instruments, bevel instruments, and indicators. Shop safety and first aid, introduction to cutting fluids, saws and sawing, and drill presses. Restricted to: Community Colleges only.

MAT 205. Statistical Controls for Manufacturing Technicians**3 Credits (2+2P)**

Use of hardware and software for quality assurance to include the design of experiments, sampling techniques, SPC, control chart application and development, and process reliability. Restricted to: Community Colleges only.

Prerequisite(s): ELT 120 or MATH 120.

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 235. Programmable Logic Controllers Pneumatics**2 Credits (1+2P)**

Introduction to theory and application of pneumatic power transfer and control. Programmable logic controllers (PLC s) introduced as controlling elements for electropneumatic systems. Restricted to: Community Colleges only.

MAT 240. 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: AERT 211

Prerequisite(s): MAT 160 and (MAT 105 or (MAT 110 & MAT 135)). Restricted to: Community Colleges only.

MAT 245. Electromechanical Systems**3 Credits (2+2P)**

Electromechanical system interfacing. Principles and applications of preventive and corrective maintenance procedures on industrial production machines using system technical and maintenance manuals to develop troubleshooting procedures using systems block and schematic diagrams. Crosslisted with: AERT222.

Prerequisite(s)/Corequisite(s): AERT 211 or MAT 240. **Prerequisite(s):** ELT 135 and ELT 160. 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)

MATH 101. General Supplemental Instruction I**1 Credit**

Collaborative workshop for students enrolled in Intermediate Algebra. S/U Grading (S/U, Audit).

Corequisite(s): MATH 120.

MATH 102. General Supplemental Instruction II**1 Credit**

Collaborative workshop for students enrolled in College Algebra. S/U Grading (S/U, Audit).

Corequisite(s): MATH 121G.

MATH 107. 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.

MATH 111. Fundamentals of Elementary Mathematics I**3 Credits**

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): ENGL 111G and grade of C or better in MATH 120.

MATH 112G. Fundamentals of Elementary Math II**3 Credits**

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 111.

MATH 120. Intermediate Algebra**3 Credits**

Linear and algebraic functions as they arise in real world problems. Exponential and logarithmic functions. Equations and inequalities and their solutions considered symbolically, graphically and numerically.

Prerequisite: adequate score on the Mathematics Placement Examination.

MATH 121G. College Algebra**3 Credits**

Fundamental concepts of functions, including algebraic and graphical properties. Fitting functions to data. Finding zeroes and extreme values. Solving systems of equations.

Prerequisites: Adequate math placement score or C or better in MATH 120.

MATH 142G. Calculus for the Biological and Management Sciences**3 Credits (2+2P)**

Review of functions. Derivatives, exponential and logarithmic functions, antiderivatives and indefinite integrals, basic ordinary differential equations and growth models, with an emphasis on applications. Includes a significant writing component.

Prerequisite(s): C or better in MATH 121G.

MATH 190G. Trigonometry and Precalculus**4 Credits (3+2P)**

Elementary functions used in the sciences with emphasis on trigonometric functions and their inverses. Polar coordinates. Complex numbers and Euler's formula. Analytic geometry and vectors.

Prerequisite: adequate score on Mathematics placement exam or a C or better in MATH 121G.

MATH 191G. Calculus and Analytic Geometry I**4 Credits**

Limits and continuity, theory and computation of derivatives, applications of derivatives, extreme values, critical points, derivative tests, L'Hopital's Rule.

Prerequisite(s): C or better in MATH 190G.

MATH 192G. Calculus and Analytic Geometry II**4 Credits**

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 191G.

MATH 192GH. Calculus and Analytic Geometry II Honors**4 Credits (3+1P)**

A more advanced treatment of the material of MATH 192G with additional topics. Consent of Instructor required. Restricted to Las Cruces campus only.

Prerequisite(s): Consent of Department.

MATH 200. Directed Study**1-3 Credits**

May be repeated for a maximum of 6 credits. Graded S/U.

Prerequisite: consent of the instructor.

MATH 210G. Mathematics Appreciation**3 Credits**

Mathematics and its role in the development and maintenance of civilization.

Prerequisites: High school algebra, and an adequate score on the Mathematics Placement Examination.

MATH 215. Fundamentals of Elementary Mathematics III**3 Credits**

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 112.

MATH 235. Calculus for the Technical Student I**3 Credits**

Intuitive differential and integral calculus with applications to engineering.

Prerequisite: C or better in MATH 190G.

MATH 236. Calculus for the Technical Student II**3 Credits**

A continuation and extension of the material in MATH 235.

Prerequisites: C or better in MATH 235 or in MATH 192G.

MATH 279. Introduction to Higher Mathematics**3 Credits**

Logic; sets, relations, and functions; introduction to mathematical proofs.

Prerequisite(s): C- or better in MATH 192.

MATH 280. Introduction to Linear Algebra**3 Credits**

Systems of equations, matrices, vector spaces and linear transformations. Applications to computer science.

Prerequisite(s): Grade of C- or better in MATH 192G.

MATH 291G. Calculus and Analytic Geometry III**3 Credits**

Vector algebra, directional derivatives, approximation, max-min problems, multiple integrals, applications, cylindrical and spherical coordinates, change of variables.

Prerequisite: grade of C or better in MATH 192G.

MGT-MANAGEMENT (MGT)

MGT 201. Introduction to Management**3 Credits**

Covers the functioning and administration of different types of complex organizations. Concepts and theories of management and organizational behavior.

MKTG-MARKETING (MKTG)

MKTG 180. PGA Golf Management Freshman Orientation**3 Credits**

Introduction to the Policies and Procedures of the PGA Golf Mgt. Program and the PGA of America Students will also be introduced to the Qualifying Level of the PGA's Educational Program, Rules of Golf, PGA Constitution and the History of the PAG. Additional course fee required. Consent of Instructor required. Restricted to: PGA Golf Management Students. MKTG/PGM majors.

MKTG 181. Level 1, PGA's PGM Education Program (Part 1)**3 Credits**

Introduction of Level 1 of the PGA's Educational Program. This class will focus on Business Planning and Operations, Customer Relations, and the corresponding PGA Work Experience Activities. Additional course fee required. Consent of Instructor required. Restricted to: MKTG/PGM majors.

MKTG 203. Introduction to Marketing**3 Credits**

Covers processes, functions and principles in the current marketing system. Includes role of marketing in the economy, types of markets, product development, distribution channels, pricing and promotion strategies, market research and management of the processes. Community Colleges only.

MKTG 280. Level 1, PGA's PGM Education Program (Part 2)**3 Credits**

Continuation of Level 1 of the PGA's PGM Education Program. This class will focus on Tournament Operations, Golf Car Fleet Management 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/PGM majors.

MKTG 281. Level 1, PGA's PGM Education Program (Part 3)**1.5 Credits**

Completion of Level 1 of the PGA's PGM Education Program. This class will focus on Introduction to Teaching and Golf Club Performance and the corresponding PGA Work Experience Activities. Additional course fee required. Consent of Instructor required. Restricted to: MKTG/PGM majors.

MUS-MUSIC (MUS)

MUS 101G. An Introduction to Music**3 Credits**

An introduction to music for the non-music major to encourage the enjoyment of listening to and understanding the world's great music from the past to the present.

MUS 102. Fundamentals of Music**3 Credits**

Introduction to music notation, meter and rhythm, scales, intervals, triads, seventh chords, fundamentals of harmonic progression, and aural skills. For students with little or no music theory background. Traditional Grading with RR.

MUS 103. Ear Training I**1 Credit**

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 MUS 102.

MUS 104. Ear Training II**1 Credit**

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 MUS 103.

MUS 105. Music Theory I**3 Credits**

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 MUS 102.

MUS 106. Music Theory II**3 Credits**

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 MUS 105.

MUS 121. Concert and Recital Laboratory**0.5 Credits**

Serves as a resource and performance lab for all applied areas of musical study. Music majors are expected to perform during the weekly student recital and must attend a designated number of musical performances during the semester. 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.

MUS 130. 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.

MUS 141. Class Voice I**1 Credit**

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.

MUS 145. Functional Piano I**2 Credits**

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.

MUS 146. Functional Piano II**2 Credits**

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: MUS 145 or consent of instructor.

MUS 147. Functional Piano III**2 Credits**

For music majors preparing for the Piano Proficiency Examination. May be taken for unlimited credit. Restricted to music majors. No S/U option.

Prerequisite: MUS 146 or consent of instructor.

MUS 150. Orchestra**1 Credit**

Participation in the Las Cruces Symphony at NMSU. This is a full symphony orchestra concentrating on masterworks of the literature. May be taken for unlimited credit.

MUS 151. Philharmonic Orchestra**1 Credit**

The University Philharmonic Orchestra is open to all students and performs a wide variety of standard orchestral literature. The orchestra performs each semester and the objectives include refining technique, stylistic characteristics, intonation, balance, bowings, color, rhythmic integrity and dynamics. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): by audition only.

MUS 160. University Singers**1 Credit**

Select concert and touring choir of undergraduate and graduate students performing a cappella and accompanied choral literature. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): By audition only.

MUS 161. Concert Choir**1 Credit**

Campus choir composed of both music and non-music majors. Emphasis on vocal techniques, sight-singing, and basics of choral musicianship. May be taken for unlimited credit.

MUS 162. Master Works Chorus**1 Credit**

Combination campus and community chorus. This group will perform the major chorale compositions for orchestra and/or wind ensemble. May be taken for unlimited credit.

MUS 163. Jazz Ensembles**1 Credit**

Performance ensemble that explore repertoire written for big band, including (but not limited to) dance band, swing, and contemporary compositions. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): By audition only.

MUS 164. Chamber Ensembles**1 Credit**

Small groups of singers and/or instrumentalists that perform chamber music. May be repeated up to 16 credits. Restricted to Las Cruces campus only.

Prerequisite(s): by audition only.

MUS 170. Wind Symphony**1 Credit**

This elite ensemble of 50 highly qualified graduate and undergraduate students performs a varied repertoire of the highest quality literature for winds. Members will also perform concerts of chamber winds literature each semester. This ensemble is dedicated to professional level performance while fostering the musical growth of its members. Conducted by the Director of Bands, this group serves as the flagship for the entire university bands program. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): By audition only.

MUS 171. Roadrunner Revue Pep Band**1 Credit**

For both music and nonmusic majors. Opportunity to perform a variety of music in a showband setting. May be taken for unlimited credit.

Prerequisite: by audition only; contact band office for date and time.

MUS 172. Marching Band**1 Credit**

For both music and nonmusic majors. Opportunity to perform all varieties of music in a contemporary styled marching unit. May be taken for unlimited credit.

MUS 174. Percussion Ensemble**1 Credit**

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.

MUS 180. Symphonic Band**1 Credit**

This is a select large ensemble, chosen by audition. It provides a challenging musical environment for skilled performers by programming repertoire that ranges from works for chamber winds, to standards of the wind band literature, to cutting edge literature. Conducted by the Associate Director of Bands, this ensemble is comprised of music majors and non-music majors alike and provides the less experienced student an opportunity to hone and refine performance skills. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

Prerequisite(s): By audition only.

MUS 181. Campus Band**1 Credit**

This is a non-auditioned ensemble designed to meet the needs of students from all majors across campus. Music majors are encouraged to enroll while performing on a secondary instrument. Marching band members are also encouraged to take the course to build skills and leadership. This ensemble provides an educational experience and serves as an outlet for students who wish to remain musically active in a less intense setting. May be repeated up to 10 credits. Restricted to Las Cruces campus only.

MUS 201G. History of Jazz in Popular Music: A Blending of Cultures**3 Credits**

Jazz in popular music as it relates to music history and the development of world cultures.

MUS 202. An Introduction to World Music, Jazz and Music Research**3 Credits**

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. majors. Restricted to Las Cruces campus only.

MUS 203. Ear Training III**1 Credit**

Continuation of MUS 104, advanced sight singing, dictation. Restricted to Las Cruces campus only.

Prerequisite(s): Grade of C- or better in MUS 104.

MUS 204. Ear Training IV**1 Credit**

Continuation of MUS 203, advanced sight singing, dictation. Restricted to Las Cruces campus only.

Prerequisite(s): Grade of C or better in MUS 203 and MUS 205.

MUS 205. Music Theory III**3 Credits**

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 MUS 106.

MUS 206. Music Theory IV**3 Credits**

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 MUS 205.

MUS 207. Music History and Literature: Antiquity through Baroque**3 Credits**

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, MUS majors.

Prerequisite(s): A grade of C- or better in MUS 103, 105, and 202.

MUS 230. 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.

MUS 250. Introduction to Music Education**2 Credits**

Overview of the basic principals and practices of the music education profession in K-12 settings, emphasizing philosophy and history of music education, methodologies commonly utilized in school curricula, music in special education, classroom/rehearsal management and lesson planning. Explores many aspects of public school teaching through class discussions and directed observations. Restricted to Las Cruces campus only.

MUS 251. Opera Workshop**1 Credit**

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.

MUS 260. Special Topics I**1-3 Credits**

Emphasis on special areas of music; designed for highly motivated students. May be taken for unlimited credit.

MUS 261. Functional Piano IV**2 Credits**

For music majors preparing for Piano Proficiency Examination. May be taken for unlimited credit. Restricted to music majors. No S/U option.

Prerequisite: MUS 147 or consent of instructor.

MUS 262. Diction I**2 Credits**

Introduction to the international phonetic alphabet, and its application to English, Italian, Spanish, and Latin song literature. Main campus only. Restricted to Las Cruces campus only.

MUS 263. Diction II**2 Credits**

Advanced grammar and detailed study of Italian, German and French diction and song literature for vocal students. Restricted to music majors. Main campus only.

Prerequisite: MUS 262 or consent of instructor.

MUS 273. Introduction to Music Technology**1 Credit**

Introduction to uses of technology in musical settings. Practical applications in digital music notation, MIDI sequencing, and digital audio recording. Restricted to: MUS, M ED majors. Traditional Grading with RR. Restricted to Las Cruces campus only.

Prerequisite(s): MUS 105.

NA - NURSING ASSISTANT (NA)

NA 101. Nursing Assistant Theory and Lab**6 Credits (5+3P)**

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. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.

Prerequisite(s): (CCDR 110N with C or better OR appropriate placement score) and (CCDE 110N with C or better OR appropriate placement score) and (CCDM 103N with C or better OR appropriate placement score).

NA 104. Nursing Assistant Fundamentals**3 Credits**

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. Restricted to Community Colleges campuses only.

Prerequisite(s): Test out of all CCDE and CCDR courses and eligible to take ENGL 111G.

Corequisite(s): NA 104 L.

NA 104 L. Nursing Assistant Fundamentals Lab**1 Credit**

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 108. Disabilities Support Services**4 Credits (3+2P)**

Beginning level preservice preparation for providing in-home care for individuals with disabilities. Crosslisted with: AHS 108. Restricted to: Community Colleges only.

Prerequisite(s): NA 101 or 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 154 or BIOL 226. Restricted to Community Colleges campuses only.

NA 110. Electrocardiogram Technician Basic**4 Credits (3+3P)**

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.

Prerequisite(s): BIOL 154 OR BIOL 225 & BIOL 226.

NA 111. Alzheimer/Dementia Care Focus**3 Credits**

Students will learn respectful care of Alzheimer/Dementia persons while ensuring their dignity, maximizing safe independence focusing on strengths and abilities. Pre/

Prerequisite(s)/Corequisite(s): NA 104 or NA 101. Restricted to: Community Colleges only.

NA 112. Patient Care Assistant**4 Credits (2+4P)**

This course prepares students to become patient care assistants (certified nursing assistant [CNA]). The course prepares students in the areas of critical thinking, collaboration with healthcare team members and performance of Certified Nursing Assistant skills within acute care units including: out-patient care unit (pre-operative), medical-surgical unit, orthopedic unit, mother-baby (obstetrics) and the mental health inpatient unit. Lab and clinical time will include learning skills in a practice setting with mannequins and in a hospital for acute care skill learning and application. Must pass course with a C- or better.

Prerequisite(s): NA-101 or current State of New Mexico Certified Nursing Assistant (CNA) certificate (CNA certification must remain current through end of course).

Corequisite(s): Current Basic Life Support (BLS) for the Health Care Provider (American Heart Association) (BLS certification must remain current through end of course).

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.

Prerequisite(s)/Corequisite(s): OEEM 101. Restricted to Community Colleges campuses only.

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 154 or (BIOL 225 & BIOL 226))).

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 154 or (BIOL 225 & BIOL 226))) Currently CNA Certified.

Corequisite(s): NA 204.

NA 212. Medical Assistant Capstone Course**5 Credits (4+3P)**

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. May be repeated up to 5 credits. CNA Certification within the last 5 years.

Prerequisite(s): NA 105, NA 110, NA 109, AHS 120, BIOL 154, HIT 110, BOT 208, HIT 228, HIT 248, HIT 258.

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. May be repeated up to 6 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): NA 212. Prerequisite(s): NA 105, NA 110, NA 109, AHS 120, BIOL 154, HIT 110, BOT 208, HIT 228, HIT 248, HIT 258. CNA Certified within the last 5 years. Restricted to Community Colleges campuses only.

NAV-NAVAJO (NAV)

NAV 101. Introduction to Navajo Studies**3 Credits**

Covers geography, demography, institutions of modern Navajo society with historical overview. Restricted to: Community Colleges only.

NAV 111. Elementary Navajo I**4 Credits**

Navajo for beginners with emphasis on speaking skills.

Prerequisite: not open to Navajo-speaking students except by consent of instructor.

NURS-NURSING (NURS)

NURS 120. Introduction to Pharmacology**3 Credits**

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. Restricted to Allied Health majors. Restricted to: Community Colleges only.

NURS 130. Foundations of Pharmacology**3 Credits**

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 147 & NURS 149.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 134, NURS 136 lab & NURS 137 or permission of the Program Director.

NURS 137. Care of Geriatric Patient**3 Credits**

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. Restricted to: NURS majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission into the nursing program.

Corequisite(s): NURS 134 & NURS 136 or permission of the Program Director.

NURS 140. Pathophysiology for Allied Health Professionals**3 Credits**

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. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 130, NURS 147 lab, & NURS 149, or permission of the Program Director.

NURS 148. Physical Assessment**2 Credits (1+3P)**

Introduction of concepts and techniques of interviewing, history taking, review of body systems, and physical assessment of an adult client. The student should be able to apply knowledge of anatomy and physiology, assessment skills, communication skills, cultural awareness, nursing process, critical thinking skills, teaching skills, and psychomotor skills.

Restricted to: Community Colleges only.

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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 130, NURS 147, & NURS 149L, or permission of the Program Director.

NURS 150. Medical Terminology**3 Credits**

Understanding of the basic elements of medical words. Use of medical abbreviations. Same as OEHO 120 and BOT 150.

NURS 153. Medication and Dosage Calculation**1 Credit**

Techniques of dosage calculation for medication and fluid administration. RR applicable.

Prerequisite(s): Meet NMSU basic skills requirement in mathematics or consent of program director.

Corequisite(s): NURS156 and NURS154.

NURS 154. Physical Assessment**2 Credits**

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 154 or BIOL 225 or consent of program director.

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. Restricted to: NURSING majors. Restricted to Carlsbad campus only.

Prerequisite(s): Consent of Program Director.

Corequisite(s): NURS 153, NURS 154.

NURS 157. Maternal/Child Health Deviations**8 Credits (6+6P)**

The concepts and principles of nursing care of the family from conception to adolescence. Utilizing the nursing process, the student provides safe client centered care to diverse clients and families. Theoretical instruction is applied to client care situation. Students collaborate with clients, families and the interdisciplinary team in meeting health care needs. Experiences may occur in any of the regional health care facilities. 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 156, NURS 153, and NURS 154 or consent of program director.

Corequisite(s): NURS 210.

NURS 182. Legal and Ethical Issues in Nursing Practice**2 Credits**

Introduction to legal and ethical implications of nursing practice (through the holistic approach to wellness) as a registered nurse. Restricted to: Community Colleges only.

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**

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. Restricted to: Carlsbad campus only.

Prerequisite(s): BIOL 225 and BIOL 226 or consent of instructor and NURS 153, NURS 154 and NURS 156.

Corequisite(s): NURS 157.

NURS 211. Pharmacological Requisites of Simple Health Deviations**1 Credit**

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 225 and BIOL 226 or consent of instructor 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**

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.

Restricted to: Carlsbad campus only.

Prerequisite(s): BIOL 225 and BIOL 226 or consent of instructor, and NURS 153, NURS 154, NURS 156, NURS 157, NURS 246, NURS 258, NURS 210 and NURS 211.

Corequisite(s): NURS 256 and NURS 260.

**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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 224 lab, NURS 235, & NURS 236, or permission of the Program Director.

**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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 224, NURS 226 lab, & NURS 235 or permission of the Program Director.

**NURS 234. Community Health Nursing
1 Credit**

This course provides an introduction to community health, focusing on health care systems, epidemiology, and nursing care of individuals, families and aggregates of varied cultural backgrounds. Primary, secondary, and tertiary prevention are emphasized. Diverse roles of the community health nurse are examined. Educational theories and their applications are explored. Restricted to: Community Colleges only.

**NURS 235. Nursing Leadership and Management
1 Credit**

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. Restricted to: NUR majors. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 224, NURS 226 & Clinical Or Permission of the Program Director.

**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. Restricted to: NUR majors. Restricted to: Community Colleges only.

Prerequisite(s): Admission into the Nursing Program.

Corequisite(s): NURS 201, NCLEX Review or permission of the Program Director.

**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 or consent of program director.

Corequisite(s): NURS 211, NURS 258.

NURS 256. Health Deviations II**8 Credits (4+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, 154, 156, 157, 210, 211, 246, and 258 or consent of program director.

Corequisite(s): NURS 212, NURS 260.

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, 154, 156, 157, 210, and 246 or consent of program director.

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, 154, 156, 157, 210, 211, 246, and 258 or consent of program director.

Corequisite(s): NURS 212, NURS 256.

NURS 270. The Adult Client II**5 Credits (2+9P)**

Care of adult clients experiencing chronic, life-threatening, and end-of-life health alterations with emphasis on the geriatric population using a holistic approach to wellness. Nursing process, pathophysiology, pharmacology, diet therapy, and alternative therapies are stressed throughout the course. Clinical component will provide an opportunity to apply the nursing process in both the hospital and community setting. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170, NURS 172, NURS 173L, NURS 180, and NURS 185.

Corequisite(s): NURS 285.

NURS 272. Care for the Aging Client**1 Credit**

Normal physiological changes of aging and nursing implications related to safety and wellness. Restricted to: Community Colleges only. Restricted to NURS majors.

NURS 275. Holistic Approach to Pharmacotherapeutic Interventions II**2 Credits**

Level II. Holistic approach to the study of basic pharmacology concepts. Includes pharmacodynamic phases of drug interaction. Nursing process is discussed in relation to medication administration. Special emphasis on the role of the nurse and basic concepts related to specific drug categories. Restricted to majors. Community Colleges only.

Prerequisite: NURS 185.

Corequisites: NURS 280 and NURS 283.

NURS 280. Women's Health Issues**4 Credits (2+6P)**

Consists of lecture and associated clinical/laboratory experiences that focus on the holistic health concerns for women and the care of families expecting birth. Emphasis placed on the wellness of normal and high-risk women's health, including maternal and newborn care. The nursing process will be utilized to develop caring interventions and effective community communication through teaching healthy strategies. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170 and NURS 180.

Corequisite(s): NURS 275 and NURS 283.

NURS 282 L. Practicum: Management of Client Care**1 Credit**

Organization and delivery of wellness care services for groups of clients based on the nursing process. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170, NURS 172, NURS 173L, NURS 180, and NURS 185.

Corequisite(s): NURS 284L.

NURS 283. Pediatric Nursing**4 Credits (2+6P)**

Consists of lecture and associated clinical and laboratory experiences which focus on the care of children from infancy through adolescence including acute and chronic health care problems. Employs nursing process, pathophysiology, pharmacology, and diet therapy through the holistic approach to wellness. Restricted to: Community Colleges only.

Prerequisite(s): NURS 170 and NURS 180.

Corequisite(s): NURS 275, NURS 280.

NURS 284 L. Practicum: Preceptorship**3 Credits**

Clinical experience in a leadership role in specific practice areas enhancing the transition from student to practitioner utilizing the holistic approach to wellness. Restricted to: Community Colleges only.

Prerequisite(s): NURS 182.

Corequisite(s): NURS 282L.

NURS 285. Holistic Approach to Pharmacotherapeutic Intervention III**1 Credit**

Level III. Holistic approach to the study of basic pharmacology concepts. Includes pharmacodynamic phases of drug interaction. Nursing process is discussed in relation to medication administration. Special emphasis on the role of the nurse and basic concepts related to specific drug categories. Restricted to: Community Colleges only.

Prerequisite(s): NURS 185 and NURS 275.

Corequisite(s): NURS 270.

NURS 293. Introduction to Nursing Concepts**3 Credits**

This course introduces the nursing student to the concepts of nursing practice and conceptual learning. Same as NMNEC course no.: NMNEC101. Restricted to: BSN,BSNP,BSNR,NURS majors. Restricted to Las Cruces campus only.

Prerequisite(s): Admission to Nursing Program.

Corequisite(s): NURS 294,NURS 362.

NURS 294. Principals of Nursing Practice**4 Credits**

This course introduces the nursing student to the application of concepts through clinical skills in seminar, laboratory, and/or clinical settings.

Principles of communication, assessments, safety, and interventions including accurate calculation, measurement, and administration of medications will be included. Same as NMNEC course no.: NMNEC102. Restricted to: NURS majors. Restricted to Las Cruces campus only.

Prerequisite(s): Admission to the nursing program.

Corequisite(s): NURS 293,NURS 362.

OEBM-BIOMEDICAL TECHNOLOGY (OEBM)

OEBM 140. Applied Human Biology for Biomedical Technology**3 Credits**

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.

OEBM 141. Medical Electronics and Safety in Healthcare**3 Credits**

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): OEBM 140.

OEBM 200. Biomedical Internship**3 Credits**

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 9 credits. Consent of Instructor required. Restricted to Community Colleges campuses only.

Prerequisite(s): OEBM 140 and OEBM 141.

OEBM 210. Biomedical Clinical**4 Credits (1+9P)**

Clinical experiences to include advanced biomedical equipment maintenance, inventory control, and medical facility and industry standards. Restricted to Biomedical majors.

Prerequisite(s): OEBM 200.

OEBM 211. CBET Exam Preparation**1 Credit**

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): OEBM 241 AND OEBM 240. Restricted to Community Colleges campuses only.

OEBM 240. Medical Imaging Systems**3 Credits**

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**

Hands-on instruction to introduce computer use and commonly used software. Graded S/U.

OECS 105. Introduction to Information Technology**3 Credits**

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**

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 150. Visual Basic Programming**3-4 Credits (3-4)**

Introduction to algorithmic problem-solving concepts, structured programming design-oriented application programming interface development. Solutions to problems are implemented using the Visual Basic programming language in the Windows environment, with connection to Access databases as applicable.

Prerequisite(s)/Corequisite(s): OECS 220. 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**

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**

Fundamental accounting principles using popular microcomputer software to include G/L, A/R, A/P, purchase order, billing, inventory, and forecasting modules.

Prerequisite: ACCT 221 or BOT 121.

OECS 203. UNIX Operating System**1-3 Credits**

Introduction to the UNIX operating system using Telnet to access a remote UNIX system. Basic UNIX commands and file system concepts.

Prerequisite: C S 110, BCIS 110 or OECS 105.

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**

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. Prerequisite(s): . 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, C S 110, 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: C S 110, BCIS 110 or OECS 105.

OECS 213. Image Processing**1 Credit**

Introduction to digital imaging acquisition and editing. Use of digital cameras and computer graphic software for business and personal use. Graded S/U.

Prerequisites: C S 110, BCIS 110 or OECS 105.

OECS 214. Creating a Web Page**1 Credit**

Introduction to creating Web pages for business and personal use. Graded S/U.

Prerequisites: C S 110, BCIS 110 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: C S 110, BCIS 110 or OECS 105.

OECS 216. Programming for the Web**3 Credits**

Designing web-based applications using appropriate programming language(s) such as, but not limited to HTML, PHP, MySQL, SQL, Java, Perl, C or C++. May be repeated up to 6 credits. Restricted to: Community Colleges only.

Prerequisite(s): One semester of any programming course.

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): C S 110 OR BCIS 110 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. 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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 221 and consent of instructor.

OECS 227. Computer Applications for Technicians**3 Credits**

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 232. Implementing and Supporting Networks I**3 Credits**

Knowledge and skills relating to post-installation and day-to-day administration tasks in a single-domain or multiple-domain network.

Prerequisite: OECS 230 or OECS 261.

OECS 234. Linux Server**3 Credits**

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 6 credits.

Prerequisite(s): OECS 128, OECS 203 or OECS 204.

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 Credits**

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. Restricted to: Community Colleges only.

Prerequisite(s): OECS 207.

OECS 245. Game Programming I**3 Credits**

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**

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**

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 255. Special Topics**1-4 Credits**

Topics to be announced in the Schedule of Classes.

OECS 260. Hypertext Markup Language (HTML)**1-3 Credits**

Coverage of HTML as used for web-page development for Internet and Intranet. Text manipulation, graphics, hypertext links, lists, and tables. May be repeated for a maximum of 3 credits.

Prerequisite: C S 110, BCIS 110 or OECS 105.

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. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 261.

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. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 262.

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. Restricted to Community Colleges campuses only.

Prerequisite(s): OECS 263.

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**

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 BOT 280.

Prerequisites: either BCIS 110, C S 110, 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. DAS Occupational Education, Dental Assisting. Restricted to: Community Colleges only.

OEEM- PARAMEDIC (OEEM)

OEEM 101. CPR for the Health Care Professional**1 Credit**

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**

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 106. Advanced First Aid**2 Credits**

Theory and advanced first aid skills taught emphasizing recognition and providing care for injury or sudden illness until professional medical help arrives. Course meets and/or exceeds the Red Cross or National Safety Council standards.

Corequisite: OEEM 101 or consent of instructor.

OEEM 115. First Responder Prehospital Professional**3 Credits (2+3P)**

Provides training in prehospital medical and traumatic emergencies. Requires a C or better to pass. Restricted to majors.

Prerequisite: consent of instructor.

Corequisite: OEEM 101.

OEEM 116. Emergency Medical Technician Bridge**5 Credits (3+6P)**

Enhanced skill instruction and didactic integration designed to meet the requirements for an EMT-Basic certificate. Requires a "C" or better to pass. May be repeated up to 5 credits. Consent of Instructor required.

Corequisite(s): OEEM 121.

Prerequisite(s)/Corequisite(s): OEEM 153. Prerequisite(s): OEEM 101, OEEM 115. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

OEEM 120. Emergency Medical Technician Basic**6 Credits**

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**

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**

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**

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**

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**

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**

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**

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 158. Emergency Medical Technician-Combination Refresher
2 Credits**

A comprehensive review of prehospital medicine for the prehospital care provider from the first responder level through the EMT Intermediate. New material relevant to recertification of the New Mexico First Responder, EMT Basic and EMT Intermediate licensure included. Graded S/U.

**OEEM 177. Emergency Medical Services Instructor
4 Credits**

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: 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: 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, OEEM 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**

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**

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**

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**

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**

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**

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. Pre/ Requires a C- or better to pass.

Corequisites: OEEM 240 Restricted to majors.

OEEM 242. EMT-Paramedic Field Internship**3 Credits**

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**

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 247. Emergency Medical Technician - Paramedic Refresher**2 Credits (1+3P)**

A comprehensive review of prehospital emergency medicine for the EMT Paramedic. New material relevant to recertification of the New Mexico and Nationally Registered Paramedic licensure. Graded S/U.

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 112. Math Study Skills for Electrical**1 Credit**

Covers specific math study skills and critical thinking processes to reinforce practical uses of math relating to electrical apprenticeship applications. The student will be introduced to electrical mathematical formulas during the problem-solving steps required for electrical circuit design and analysis. May be repeated up to 4 credits.

Prerequisite(s)/Corequisite(s): OEET 151 OR OEET 152. Restricted to: Community Colleges only.

OEET 115. Wiring Methods and Materials**5 Credits (2+6P)**

Application of electrical code in selection of wiring materials; proper methods of installation.

Corequisite: OEET 110 or consent of instructor.

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 130. Introduction to Electrical Power Systems**2 Credits**

An overview of electrical power systems, equipment, safety practices, first aid and CPR. Restricted to majors.

Prerequisite: acceptance into the electrical lineworker program.

Corequisite: OEET 110 and OEET 131.

OEET 131. Electrical Lineworker Lab I**6 Credits**

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. Restricted to majors.

Prerequisite: acceptance into the electrical lineworker program.

Corequisite: OEET 110 and OEET 130.

OEET 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. Restricted to majors.

Prerequisites: acceptance into the electrical lineworker program and OEET 130.

Corequisite: OEET 141.

OEET 141. Electrical Lineworker II**6 Credits**

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. Restricted to: Community Colleges only.

Prerequisites: Acceptance into the lineworker program and OEET 131.

Corequisite: OEET 140.

OEET 151. Electrical Apprenticeship I**6 Credits**

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**

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**

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**

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**

Interpretation and application of the National Electric Code.

Prerequisite: OEET 110.

OEET 210. Intermediate Electricity**5 Credits (3+4P)**

Introduction to inductance, capacitance, reactances, and power factor correction.

Prerequisite: OEET 110.

OEET 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.

OEET 251. Electrical Apprenticeship V**6 Credits**

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**

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**

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**

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.

OEGR-GEOGRAPHIC INFO SYS (OEGR)

OEGR 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.

OEGR 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): OEGR 181.

OEGR 231. Introduction to GIS Spatial Analysis**4 Credits (3+3P)**

This course aims to provide students with the knowledge and skills necessary to investigate the spatial patterns which result from social and physical processes operating on or near the Earth's surface. Essential theoretical concepts of quantitative geography are examined, including measures of geographical distribution (including point and areal pattern analysis) and spatial autocorrelation, interpolation and network connectivity. Students will also be introduced to ArcView (online GIS) and the open source programs such as QGIS and GRASS. May be repeated up to 4 credits.

Prerequisite(s): OEGR 181.

OEGR 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.

OEPS-PUBLIC SAFETY (OEPS)

OEPS 150. Correctional Officer Training I**4 Credits (2+4P)**

Introduction to corrections, departmental policies and procedures, report writing, officer safety, and physical conditioning. Restricted to majors.

Prerequisite: consent of instructor.

OEPS 180. Correctional Officer Training II**4 Credits (2+4P)**

Criminal justice system, communications, ethics, correctional law and responsibilities, search procedures, hostage situations, institutional gangs. Restricted to majors OEPS 195.

Prerequisite: consent of instructor.

OEPS 250. Correctional Officer Training III**4 Credits (2+4P)**

Use of force, firearms, baton, chemical agents, standard first aid, and CPR. Restricted to majors.

Prerequisite: consent of instructor.

OEPS 280. Correctional Officer Training IV**4 Credits (2+4P)**

Stress management, supervision of special needs offender, defensive driving, preparation for certifying exams. Restricted to majors.

Prerequisite: consent of instructor.

OEPT-PHOTOGRAPHIC TRADES (OEPT)

OEPT 100. Photographics I**3 Credits (2+2P)**

Covers basic black and white photographic techniques. Emphasizes black and white film and paper handling, film processing, proof printing, projection print, and print finishing. Adjustable camera required. Same as ART 270.

OEPT 120. Photo Finishing and 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): CMT 115.

OEPT 155. Portraiture**3 Credits (2+2P)**

Hands-on study of professional photography involving people. Studio and environmental portraits, fashion/glamour, and wedding photography. Studio and exterior lighting techniques, selecting lighting equipment, film and supplies. Restricted to: Community Colleges only.

Prerequisite(s): ART 270 or CMT 115.

OETS-TECHNICAL STUDIES (OETS)

OETS 100. Industrial/Construction Safety**2 Credits**

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**

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. May be repeated up to 3 credits. S/U Grading (S/U, Audit).

OETS 103. Technical Career Skills**4 Credits**

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**

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 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. Restricted to: Community Colleges only.

Prerequisite(s): OETS 101.

OETS 117. Writing for Technicians**3 Credits**

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. Restricted to: Community Colleges only.

Prerequisite(s): OETS 104 or CCDM 103N or appropriate placement test score.

OETS 120. Business Fundamentals**3 Credits**

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.

P E-PHYSICAL EDUCATION (P E)

P E 102. Beginning Weight Training**1 Credit**

Introduction to basic principles and techniques of weight training.

P E 103. Beginning Weight Training for Women**1 Credit**

Introduction to basic principles and techniques of weight training as related to women.

P E 104. Military Physical Fitness**1 Credit**

Directed physical fitness activities designed to develop and maintain muscular strength/endurance, cardiopulmonary efficiency, flexibility, and coordination required for leadership roles after graduation.

P E 109. Pilates**1 Credit**

Designed exercise program involves the entire body while focusing on strengthening the core muscles of the torso. Exercises promote coordination, balance, and strength.

P E 112. Beginning Volleyball for Men**1 Credit****P E 113. Beginning Volleyball for Women****1 Credit****P E 114. Basketball for Women****1 Credit****P E 115. Basketball for Men****1 Credit****P E 117. Beginning Soccer****1 Credit**

Introduction to the basic techniques and skills of soccer.

P E 127. Cardio-Kickboxing**1 Credit**

Activities that mimic punches, blocks, and kicks which have been modified to serve the purpose of providing a cardiovascular workout.

P E 128. Aerobic Dance**1 Credit**

Designed to increase knowledge of the human body's responses to exercise, enhance the level of muscular development, and cardiovascular endurance with the use of music.

P E 129. Step Aerobics**1 Credit**

Designed to increase knowledge of the human body's responses to exercise, enhance the level of muscular development, and cardiovascular endurance with the use of music and steps.

P E 130. Beginning Swimming**1 Credit****P E 131. Aqua Aerobics****1 Credit**

Designed to increase knowledge of the human body's responses to exercise, enhance the level of muscular development, and cardiovascular endurance through exercise in water.

P E 132. Intermediate Swimming**1 Credit**

Development of fitness through participation in aquatics activities.

Prerequisite(s): Ability to swim 200 yards.

P E 134. Lifeguard Training**2 Credits**

Skills training for a nonsurf lifeguard. Course will include Standard First Aid and CPR certification.

Prerequisites: swim 500 yards, dive to 9-foot depth and retrieve a 10-pound brick, surface dive to 5 feet then swim under water 15 yards, tread water one minute.

P E 147. Beginning Tennis**1 Credit****P E 148. Beginning Racquetball****1 Credit****P E 150. Beginning Golf****1 Credit****P E 154. Personal Defense****1 Credit**

Physical conditioning and defense skills for men and women.

P E 159. Introduction to Brazilian Jiu-Jitsu**1 Credit**

Brazilian Jiu-Jitsu is primarily a ground fighting art. This course will place heavy emphasis on positional strategy and focus on the sportive aspect of the sport. A Judo/Jiu-Jitsu Gi (uniform) is required.

P E 166. Futsal (Five-A-Side Soccer)**1 Credit**

Futsal, official form of indoor soccer, approved by FIFA.

P E 173. Running Fitness**1 Credit**

Basic fitness knowledge techniques and training methods of fitness running are practiced and refined.

P E 199. Yoga**1 Credit**

A holistic approach to exercise benefiting the body, mind, and spirit. Practices focus on alignment, strength, breath relaxation, and restoration.

P E 202. Intermediate Weight Training**1 Credit**

Intermediate training and skill techniques in weight lifting.

Prerequisites: P E 102 or consent of department head.

P E 203. Weight Training for Olympic and Powerlifting**1 Credit**

Designed to teach the Olympic form-the clean, jerk and snatch. Class format is a preprogrammed style of instruction with preset programs. Emphasis placed on developing sound lifting techniques.

Prerequisite(s): P E 103 or consent of department head.

P E 204. Cross Training**1 Credit**

Intensive training program that incorporates both aerobic and resistive overload approaches to training.

P E 205. Walking Fitness**1 Credit**

Basic fitness knowledge techniques and training methods of fitness walking are practiced and refined.

P E 206. Beginning Physical Fitness**1 Credit**

Progressive exposure to steady state exercise tailored to individual needs for the purpose of determining, improving, and maintaining physical fitness.

P E 209. Intermediate Pilates**1 Credit**

Intermediate training and skill techniques in Pilates.

Prerequisite(s): PE 109 or consent of instructor.

P E 212. Intermediate Volleyball-Men**1 Credit**

Prerequisite: P E 112 or consent of department head.

P E 213. Intermediate Volleyball-Women**1 Credit**

Prerequisite: P E 113 or consent of department head.

P E 215. Intermediate Walking**1 Credit**

A continuation of basic fitness knowledge techniques and training methods of fitness walking are practiced and refined.

Prerequisite: P E 205 or consent of department head.

P E 216. Advanced Walking**1 Credit**

Advanced walking fitness and training techniques are presented, practiced, and refined.

P E 228. Intermediate Aerobic Dance**1 Credit**

Aerobic dance at a high intensity level with a more in-depth study of the body's physiological response to exercise.

Prerequisite: P E 128 or consent of department head.

P E 229. Intermediate Step Aerobics**1 Credit**

Step aerobic dance at a high intensity level with a more in-depth study of the body's physiological response to exercise.

Prerequisite: PE 129 or consent of department head.

P E 230. Advanced Swimming**1 Credit**

Perfection of basic strokes, survival swimming, and physical fitness.

Prerequisite(s): P E 130 or ability to swim 100 yards.

P E 263. Outdoor Recreation Skills**1 Credit**

Selected outdoor activities. Appropriate subtitles, such as hiking and backpacking, camping and survival, hunting and gun safety, casting and angling skills. May be repeated for maximum of 4 credits.

P E 270. 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 4 credits.

P E 299. Intermediate Yoga**1 Credit**

Intermediate training and skill techniques in Yoga.

Prerequisite(s): PE 199 or consent of instructor.

PE-P-PHYSICAL EDUCATION (PE P)

PE P 185. Introduction and Foundations**3 Credits**

Historical and cultural foundations and vocational, scientific, and educational data on careers in health education, physical education, and recreation. Restricted to: Main campus only.

PE P 208. Fitness for Health and Sport**3 Credits**

A study of the fitness needs for health enhancement and sport participation. Restricted to: P E,SP M,KIN,S ED majors.

PE P 210. Theory and Technique of Aquatics**2 Credits**

Introduction to fundamental aquatics knowledge and skills.

Prerequisite(s): Ability to swim 100 yards.

PHIL-PHILOSOPHY (PHIL)

PHIL 100G. Philosophy, Law and Ethics**3 Credits**

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.

PHIL 101G. The Art of Wondering**3 Credits**

Introduction to some of the main problems of philosophy, with an emphasis on critical thinking. Philosophy conceived as an aid to living in this world with oneself and with others.

PHIL 124G. Philosophy of Music**3 Credits**

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 136G. The Quest for God**3 Credits**

An effort to understand the religious life; a consideration of some of the traditional approaches to God and what it means to be religious.

PHIL 201G. Introduction to Philosophy**3 Credits**

Selected problems within the main branches of philosophy: metaphysics, theory of knowledge, ethics. Practice given in critical thinking.

PHIL 211G. Informal Logic**3 Credits**

Logical analysis of ordinary language, construction of definitions, argumentation, analysis of fallacious modes of thought and basic rhetorical considerations.

PHIL 223G. Ethics**3 Credits**

The philosophical explication of morality. Significant ethical systems developed in the history of Western thought.

PHLS-PUBLIC HEALTH SCIENCES (PHLS)

PHLS 100. Introduction to Health Science**1 Credit**

An overview of professional career opportunities in the realm of health science as well as the functional roles of practice, education, administration, and research. Some field trips will be required.

PHLS 150G. Personal Health and Wellness**3 Credits**

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.

PHLS 275. Foundations of Health Education**3 Credits**

Role and responsibility of the health educator with emphasis on small group dynamics, oral and written communication skills, building community coalitions and an introduction to grant writing. Taught with PHLS 375. Cannot receive credit for both PHLS 275 and PHLS 375. May be repeated up to 3 credits.

Prerequisite(s): PHLS 150G, or consent of instructor.

PHLS 295. Essentials of Public Health**3 Credits**

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.

PHYS-PHYSICS (PHYS)

PHYS 110G. The Great Ideas of Physics**4 Credits (3+3P)**

Conceptual, quantitative, and laboratory treatments of the great ideas and discoveries that have influenced lives and changed perceptions of nature, from Johannes Kepler's laws of planetary motion and Isaac Newton's and Albert Einstein's laws of motion and gravity to the modern concepts of the quantal structure of nature and the big bang universe.

PHYS 120G. Introduction to Acoustics**4 Credits (3+2P)**

Lecture, demonstration, and laboratory treatment of the general properties of waves, the production, transmission, and reception of sound waves, including musical and vocal sounds, and characteristics of the human ear and several kinds of sources.

PHYS 150. Elementary Computational Physics**3 Credits (2+2P)**

Introduction to computational techniques for the solution of physics-related problems. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in MATH 121G or MATH 190G or MATH 191G.

PHYS 203. Supplemental Instruction to PHYS 213**0.5-1 Credits (.5-1)**

Optional workshop as a supplement to PHYS 213. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 213.

PHYS 204. Supplemental Instruction to PHYS 214**0.5-1 Credits (.5-1)**

Optional workshop as a supplement to PHYS 214. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 214.

PHYS 205. Supplemental Instruction to PHYS 215G**0.5-1 Credits (.5-1)**

Optional workshop as a supplement to PHYS 215G. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 215G.

PHYS 206. Supplemental Instruction to PHYS 216G**0.5-1 Credits (.5-1)**

Optional workshop as a supplement to PHYS 216G. The tutorial sessions focus on reasoning and hands-on problem solving. May be repeated up to 1 credits.

Corequisite(s): PHYS 216G.

PHYS 210. Introductory Physics for the Health Sciences**3 Credits**

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 120 or Equivalent.

PHYS 211G. General Physics I**3 Credits**

Non-calculus treatment of mechanics, waves, sound, and heat. Knowledge of simple algebra and trigonometry is required.

PHYS 211GL. General Physics I Laboratory**1 Credit**

Laboratory experiments in topics associated with material presented in PHYS 211G.

Prerequisite(s)/Corequisite(s): PHYS 211G.

PHYS 212G. General Physics II**3 Credits**

Non-calculus treatment of electricity, magnetism, and light. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in PHYS 211G or PHYS 221G.

PHYS 212GL. General Physics II Laboratory**1 Credit**

Laboratory experiments in topics associated with material presented in PHYS 212G.

Prerequisite(s)/Corequisite(s): PHYS 212G.

PHYS 213. Mechanics**3 Credits**

Newtonian mechanics. Pre/

Corequisite(s): MATH 191G.

PHYS 213 L. Experimental Mechanics**1 Credit**

Laboratory experiments associated with the material presented in PHYS 213. Science majors. Pre/

Corequisite(s): PHYS 213.

PHYS 214. Electricity and Magnetism**3 Credits**

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 192G. Prerequisite(s): a C- or better in PHYS 213 or PHYS 215G, and MATH 191G.

PHYS 214 L. Electricity and Magnetism Laboratory**1 Credit**

Laboratory experiments associated with the material presented in PHYS 214.

Prerequisite(s)/Corequisite(s): PHYS 214. Prerequisite(s): a C- or better in PHYS 213L or PHYS 215GL.

PHYS 215G. Engineering Physics I**3 Credits**

Calculus-level treatment of kinematics, work and energy, particle dynamics, conservation principles, simple harmonic motion. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in MATH 191G.

PHYS 215GL. Engineering Physics I Laboratory**1 Credit**

Laboratory experiments associated with the material presented in PHYS 215G. Students wishing to use the PHYS 215G-216G sequence to satisfy the basic natural science general education requirement must register for either PHYS 215GL or PHYS 216GL. Pre/

Corequisite(s): PHYS 215G.

PHYS 216G. Engineering Physics II**3 Credits**

A calculus-level treatment of topics in electricity, magnetism, and optics. May be repeated up to 3 credits.

Prerequisite(s): a C- or better in PHYS 213 or PHYS 215G and MATH 192G.

PHYS 216GL. Engineering Physics II Laboratory**1 Credit**

Laboratory experiments associated with the material presented in PHYS 216G.

Prerequisite(s)/Corequisite(s): PHYS 216G. Prerequisite(s): A C- or better in PHYS 213L or PHYS 215GL.

PHYS 217. Heat, Light, and Sound**3 Credits**

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 213 or PHYS 215G, and MATH 191G.

PHYS 217 L. Experimental Heat, Light and Sound**1 Credit**

Laboratory experiments associated with the material presented in PHYS 217. Science majors.

Prerequisite(s)/Corequisite(s): PHYS 217. Prerequisite(s): a C- or better in PHYS 213L or PHYS 215GL.

PHYS 218. Supplemental Instruction to PHYS 217**0.5-1 Credits (.5-1)**

This optional workshop supplements PHYS 217 "Heat, Light, and Sound". Students actively apply concepts and methods introduced in PHYS 217 to problem solving and quantitative analysis. May be repeated up to 1 credits.

Corequisite(s): PHYS 217.

PHYS 221G. General Physics for Life Sciences I**3 Credits**

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.

Prerequisites: a C or better in MATH 120 or higher.

PHYS 221GL. Laboratory to General Physics for Life Science I**1 Credit**

Laboratory experiments in topics associated with material presented in PHYS 221G.

Prerequisite(s)/Corequisite(s): PHYS 221G. Restricted to Las Cruces campus only.

PHYS 222G. General Physics for Life Sciences II**3 Credits**

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 211G or PHYS 221G, and MATH 121G.

PHYS 222GL. Laboratory to General Physics for Life Sciences II**1 Credit**

Laboratory experiments in topics associated with material presented in PHYS 222G.

Prerequisite(s)/Corequisite(s): PHYS 222G. Restricted to Las Cruces campus only.

PHYS 223. Supplemental Instruction to PHYS 221**1 Credit**

This optional workshop supplements Physics for Life Sciences I. The tutorial sessions focus on reasoning and hands-on problem solving.

Corequisite(s): PHYS 221G.

PHYS 224. Supplemental Instruction to PHYS 222**1 Credit**

This optional workshop is a supplement to Physics for Life Science II. The tutorial sessions focus on reasoning and hands-on problem solving.

Corequisite(s): PHYS 222G.

PHYS 280. 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.

PHYS 290. Special Topics**1-3 Credits**

Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

PL-S-PARALEGAL SERVICES (PL S)

PL S 160. Legal System for the Paralegal**3 Credits**

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**

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**

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**

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**

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**

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**

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**

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**

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**

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 111G.

PL S 275. Tort and Insurance for the Paralegal**3 Credits**

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**

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**

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**

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**

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**

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.

PORT-PORTUGUESE (PORT)

PORT 213. Portuguese for Romance Language Students I**3 Credits**

Introduction to the Portuguese language, Brazilian culture and civilization. Taught in Portuguese. Open to students with any previous Romance language study (French, Italian, Portuguese, Romanian, Spanish).

PORT 214. Portuguese for Romance Language Students II**3 Credits**

Continuation of PORT 213.

Prerequisite: C or better in PORT 213 or consent of instructor.

PSY-PSYCHOLOGY (PSY)

PSY 201G. Introduction to Psychology**3 Credits**

Methods and principles of behavior. Topics include human evolution and development, biopsychology, perception, learning, thinking, motivation, social interaction, and the diagnosis and treatment of abnormal behavior.

PSY 266. Applied Psychology**3 Credits**

Explanation of the psychological principles of everyday living.

Emphasizes motivation, learning of intelligent behavior, and applications of psychology to social issues. Community Colleges only.

PSY 274. A Study of Substance Abuse through Service Learning**3 Credits**

Physiological and psychological impact of drug use on human behavior. Emphasizes practical applications of intervention and prevention in the community. Community Colleges only.

PSY 290. Psychology of Adjustment**3 Credits**

Analyzes the responses people have to conflict, emotional stress, and frustration. It focuses on adapting to these problems and examines both normal and neurotic responses. Community College campus only.

RADT-RADIOLOGIC TECHNOLOGY (RADT)

RADT 100. Introduction to Radiologic Technology and Patient Care**2 Credits**

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 film quality. Includes lab experiments. Restricted to majors.

RADT 104. Special Radiologic Modalities**2 Credits**

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**

Fundamentals of rad physics. Includes electromagnetism, x-ray production and interactions, x-ray circuitry, tubes, grids, screens, AES, fluoroscopic and portable units, beam restricting devices, calibration and quality assurance/control. Overview of mammography, US, CT, MRI, and digital radiography. Restricted to: Community Colleges only. Restricted to Majors.

Prerequisite: RADT 103 or consent of instructor.

RADT 110. Radiographic Pathology**1 Credit**

Overview of pathology demonstrated by radiographic procedures. Restricted to majors.

Prerequisite: RADT 154.

RADT 154. Radiographic Anatomy and Physiology**3 Credits**

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 225 or BIOL 154, or consent of instructor.

RADT 156. Independent Study**1-6 Credits**

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**

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**

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**9 Credits**

Supervised practice in a radiology department under direct supervision of a registered technician. Includes film critiques. Community Colleges Only. Restricted to: RADT, OERT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): RADT 105.

RADT 202. Clinical Education II**12 Credits**

Continuation of RADT 201. Student will work under indirect supervision of registered personnel. Restricted to: RADT, OERT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): OERT 201.

RADT 203. Clinical Education III**11 Credits**

Continuation of RADT 202. May be repeated up to 11 credits. Restricted to: RADT, OERT majors. Restricted to Community Colleges campuses only.

Prerequisite(s): RADT 202.

RADT 205. Radiographic Image Critique**1 Credit**

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**

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**

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**

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

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

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

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

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. Restricted to Community Colleges campuses only.

Prerequisite(s): Admission to program and RESP 110.

Corequisite(s): RESP 120 L.

RESP 120 L. Respiratory Therapy II Lab

2 Credits

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. Corequisite(s): RESP 120. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): Admission to program, RESP 110, RESP 110L and RESP 112.

RESP 124. Respiratory Therapy II Clinical

3 Credits

Supervised practice and application in a hospital setting. Requires a C or better to remain in program. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): Admission to program, 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

Introduction to adult, mechanical, neonatal ventilator theory and concepts of critical care medicine. 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 120L, and RESP 124.

Corequisite(s): RESP 210L.

RESP 210 L. Respiratory Therapy III Lab

2 Credits

Advanced practice procedures using mechanical ventilation devices. 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.

Corequisite(s): RESP 210.

RESP 224. Respiratory Therapy IV Clinical

3 Credits

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

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

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

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

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

Advanced theory of hemodynamics, neonate, pediatric, and new specialties that apply to respiratory care. 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 230, RESP 230L, RESP 233 and RESP 234.

Corequisite(s): RESP 240L.

RESP 240 L. Respiratory Therapy VI Lab**2 Credits**

Advanced laboratory practice and procedures. 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 230, RESP 230L, RESP 233 and RESP 234.

Corequisite(s): RESP 240.

RESP 242. Pediatric Advanced Life Support (PALS)**1 Credit**

Etiology, diagnosis, clinical manifestations, and management of cardiopulmonary disorders related to respiratory care. Restricted to majors.

Corequisite: RESP 230.

RESP 243. Respiratory Therapy Neonatal Resuscitation**1 Credit**

Advanced practice of the neonatal resuscitation and certification. Restricted to: Community Colleges only. Restricted to RESP majors.

Prerequisite(s): Admission to program and RESP 230, RESP 230L, RESP 233, and RESP 234.

Corequisite(s): RESP 240 and RESP 244.

RESP 244. Respiratory Therapy VI Clinical**3 Credits**

Clinical experience on special modalities. 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 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 150. Rangeland Science Profession****1 Credit**

Introduction to scientific disciplines and career opportunities in rangeland science and management.

RGSC 250. 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.

RGSC 294. Rangeland Resource Management**3 Credits**

Overview of arid and semi-arid ecosystems in the US and abroad, rangeland plant physiology, ecology of rangeland plant communities and ecosystems, sustainable management for multiple uses including grazing livestock production, wildlife habitat, recreation and ecosystem services, and economics of rangeland-based enterprises. Restricted to: Main campus only.

S WK-SOCIAL WORK (S WK)**S WK 221G. Introduction to Social Welfare****3 Credits**

A broad overview of current social problems and the role of social agencies and community members in addressing these problems.

S WK 251. Women s Issues in Social Work**3 Credits**

Examines gender-specific social problems and their identification and resolution through the use of social agencies and community resources. Community Colleges only.

S WK 253. Case Management**3 Credits**

Introduction to case management for social- and human-services workers. Overview of typical duties and responsibilities of a case manager, including setting goals, performing assessments, writing progress notes, and linking clients with other resources in the community. Recommended for students considering a career in social work or human services. Community Colleges only.

Prerequisites: PSY 201G and S WK 221G.

SMET-SCIENCE/MATH/ENG/TECH (SMET)**SMET 102. Introduction to Engineering Design.****1 Credit**

Fundamental concepts of engineering design developed through analysis of case studies and hands-on design projects. Consent of instructor required.

SMET 201. Research for Visiting Community College Students**1 Credit**

Research experience for visiting community college students. Consent of instructor required. Restricted to: Main campus only.

SOC-SOCIOLOGY (SOC)**SOC 101G. Introductory Sociology****3 Credits**

Introduction to social theory, research, methods of analysis, contemporary issues in historical and cross-cultural contexts. Covers groups, deviance, inequality, family, gender, social change, and collective behavior.

SOC 201G. Contemporary Social Problems**3 Credits**

Introduction to the fundamentals of social analysis through the analysis of contemporary American social problems. Emphasis on methods of analysis and cross-national comparisons showing that the social problems studied are common to all societies. Covers racism, violence, poverty, crime, health care, and substance abuse.

SOC 258. Current Issues in Marriage and Family**3 Credits**

Examination of contemporary American family life, including courtship, marriage, divorce, and child rearing. Community Colleges only.

SOC 262. Issues in Death and Dying**3 Credits**

Major personal and social issues related to the process of dying in our culture. Community Colleges only.

SOC 263. Human Sexuality**3 Credits**

Introduction to cultural and personal aspects of human intimacy, sexuality and the life cycle, sexual variation, and sexually transmitted diseases. Community Colleges only.

SOC 269. Sexualities and Society**3 Credits**

Examines various sexualities from a sociological perspective. Topics include sexual identity, intimate relationships, sexual desire, sexual behavior, the sex industry, and the politics of sexuality. Discussion of selected topics is grounded in both macro and micro sociological viewpoints. Restricted to: Main campus only.

SOC 273. Sex and Gender**3 Credits**

Analysis of changes, behaviors, and stereotypes of women and men in contemporary Western societies. Same as W S 273.

SOIL-SOIL (SOIL)

SOIL 200. 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.

SOIL 252. Soils**3 Credits**

Origin, classification, morphology, and physical, chemical, and biological properties of soils.

Prerequisite: CHEM 111G and CHEM 112G.

SOIL 252 L. Soils Laboratory**1 Credit**

Morphological, chemical, physical and biological properties of soil in the laboratory and field.

Corequisite: SOIL 252.

SP M-SPORTS MEDICINE (SP M)

SP M 190. Introduction to Athletic Training**3 Credits**

Introduction to the principles of athletic training.

SP M 191. Medical Terminology**3 Credits**

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.

SP M 200. Career Preparation**1 Credit**

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 May be repeated up to 3 credits. Consent of Instructor required. Restricted to Las Cruces campus only.

SP M 223. Exploring Extreme Human Performance**3 Credits**

A reading, writing and documentary based course studying human's quest and the related sacrifices associated with participating in extreme performance activities such as the Olympics, wakeboarding, snowboarding, military special forces, ultra-run events, marathons, etc. Consent of Instructor required. Restricted to Las Cruces campus only.

SP M 250. Emergency Response in Sports Medicine**2 Credits**

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 2 credits. Restricted to Las Cruces campus only.

Prerequisite(s): Consent of Instructor.

SP M 271. Anatomy & Physiology I**3 Credits**

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. Restricted to Las Cruces campus only.

SP M 271 L. Anatomy and Physiology Laboratory**1 Credit**

Compliment to SP M 271. Students will engage in activities designed to enhance appreciation of the anatomical structures related to the content areas for SP M 271. Restricted to Las Cruces campus only.

SP M 272. Clinical Practicum I**2 Credits**

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: SP M majors. Restricted to Las Cruces campus only.

SP M 273. Clinical Practicum II**3 Credits**

Athletic training psycho-motor skills are enhanced and assessed by a preceptor during clinical rotations. Emphasis is on competencies and proficiencies previously instructed in didactic courses. Must maintain a 3.0 GPA. Consent of Instructor required. Restricted to: SP M majors. Restricted to Las Cruces campus only.

SP M 275 L. A & P Lab PE/Dance**1 Credit**

Practical laboratory involving the kinematic and kinesthetic aspects of Human Anatomy and Physiology as it applied to Physical Education and Dance Restricted to: Physical Education and Dance. Not acceptable for Kinesiology Majors majors. Restricted to Las Cruces campus only.

Prerequisite(s): SP M 271.

SP M 290. General Medical Conditions**3 Credits**

Study of the recognition, evaluation, management, and treatment of non-orthopedic medical conditions that affect the physically active population. Consent of Instructor required. Restricted to: SP M and Kines Majors majors. Restricted to Las Cruces campus only.

Prerequisite(s): SP M 190, 191 and 271/271L.

SPAN-SPANISH (SPAN)

SPAN 111. Elementary Spanish I

4 Credits (4)

Spanish for beginners. Speaking and writing common interactions in predictable settings using basic vocabulary and verb tenses. Communicate in Spanish both orally and in writing sufficiently well so as to be able to make yourself understood by native speakers accustomed to dealing with non-native speakers. In spontaneous conversation and in writing, students will be able to produce a few sentences. Prerequisite(s): Not open to Spanish-speaking students except by consent of instructor.

Prerequisite: language placement and/or assessment by departmental examination.

SPAN 112. Elementary Spanish II

4 Credits (4)

Spanish for beginners. Speaking and writing common interactions in predictable settings using basic vocabulary and verb tenses, including talking about events in the past and possible recommendations for the future. Communicate in Spanish both orally and in writing sufficiently well so as to be able to make yourself understood by native speakers accustomed to dealing with non-native speakers. In spontaneous conversation and in writing, students will be able to produce a variety of sentences and form context appropriate to open-ended questions. Prerequisite(s): Not open to Spanish-speaking students except by consent of instructor.

Prerequisite: language placement and/or assessment by departmental examination or a C- or better in SPAN 111.

SPAN 113. Spanish for Heritage Learners I

3 Credits

Emphasis on development of heritage Spanish language skills learned at home and/or in the community. Covers listening comprehension, development of vocabulary and cultural activities to help strengthen heritage language and culture. Students who have previously earned a C or better in SPAN 111 or SPAN 112 may not receive credit for this course.

SPAN 115. Elementary Spanish I for Hotel, Restaurant and Tourism Managers

4 Credits

Beginning Spanish for HRTM majors only. Will count towards HRTM degree language requirement. Does not count towards language requirement for other majors. Restricted to: Main campus only. Restricted to HRTM majors.

SPAN 211. Intermediate Spanish I

3 Credits (3)

Speaking, reading and writing. Not open to Spanish-speaking students except by consent of instructor.

Prerequisite: language placement and assessment by departmental examination or C or better in SPAN 112.

SPAN 212. Intermediate Spanish II

3 Credits (3)

Speaking, reading and writing. Not open to Spanish-speaking students except by consent of instructor.

Prerequisite: language placement and assessment by departmental examination or C or better in SPAN 211.

SPAN 213. Spanish for Heritage Learners II

3 Credits

Emphasis on development of heritage language skills learned at home and/or in the community. Covers spoken Spanish, reading activities and grammar skills to build on existing knowledge of the language.

SPAN 214. Spanish for Heritage Learners III

3 Credits

Continued development of heritage Spanish language skills learned at home and/or in the community. Emphasis on reading, writing and critical thinking skills. Review of grammar points will also be stressed in preparation for upper level courses.

SPCD-ENGLISH AS A SECOND LNG (SPCD)

SPCD 108. Intermediate ESL Listening and Speaking

3 Credits

Development of listening and speaking skills with attention to pronunciation. Emphasis on conversation and oral practice appropriate to an academic setting. Graded S/U.

Prerequisites: placement based on English language screening test, and either a minimum TOEFL score of 500 or consent of instructor.

SPCD 110. Intermediate ESL Composition and Grammar Review

3 Credits

Development of fluent academic writing skills, with an emphasis on grammar review for editing purposes.

Prerequisite(s): Placement based on English language screening test, and either a minimum TOEFL score of 500 or consent of instructor.

SPCD 111G. Advanced ESL Composition

4 Credits

Academic writing, including library research papers and the issue of plagiarism, for students with nonnative English. (SPCD 111G is substituted for ENGL 111G for international students whose native language is not English.). Restricted to: Main campus only.

Prerequisite(s): Placement based on English language screening test, and either a minimum TOEFL score of 500 or consent of instructor; or successful completion of SPCD 110.

SPED-SPECIAL EDUCATION (SPED)

SPED 201. Topics

3 Credits

Offered under various subtitles that indicate the subject matter to be covered. May be repeated 3 times for a maximum of 9 credits.

SPED 202. Culture, Learning and Academic Achievement in a Diverse Society

3 Credits

Development of culturally responsive learning strategies, skills and utilization of support services, to enhance academic achievement. Restricted to: Main campus only.

SPED 210. Introduction to Special Education

3 Credits

For paraprofessional students who will be working with a teacher in a Special Education classroom. This class will provide an overview of characteristics of children with special needs, legal issues, framework of effective instruction and a variety of practical teaching and learning strategies that are relevant to the tasks and academic demands required in inclusive classrooms.

STAT-STATISTICS (STAT)

STAT 251G. Statistics for Business and the Behavioral Sciences 3 Credits

Techniques for describing and analyzing data; estimation, hypothesis testing, regression and correlation; basic concepts of statistical inference. Crosslisted with: A ST 251G.

Prerequisite(s): C- or better in MATH 120.

STAT 271G. Statistics for Psychological Sciences 3 Credits

Techniques for describing and analyzing data; basic concepts of statistical inference; estimation, hypothesis testing, correlation, and analysis of variance.

Prerequisite(s): C- or better in MATH 120.

SUR-SURVEYING (SUR)

SUR 101. Introduction to Surveying Engineering 1 Credit

Review and discussion of career paths open to surveying engineers. Restricted to: Main campus only.

SUR 201. GPS and Spatial Data Applications 3 Credits

Overview of spatial data applications based on GPS observations. Emphasis on positioning and navigation using code-phase techniques with handheld receivers. Use of coordinate systems. Students encouraged to have their own GPS handheld unit.

SUR 222. Plane Surveying 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. May be repeated up to 3 credits. Crosslisted with: DRFT 222.

Prerequisite(s): MATH 190G.

SUR 264. Introduction to LIS 3 Credits (2+3P)

Introduction to land information systems. Land tenure systems, coordinate systems, computer methods. Pre/

Corequisite(s): DRFT 109.

SUR 285. Precise Digital Mapping 3 Credits

Perform basic photogrammetric mapping, and create digital terrain models. May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): SUR 222 or DRFT 222.

SUR 292. Public Land Survey System Boundaries 3 Credits (2+3P)

Detailed study of the U.S. Public Land Survey System Instructions with special emphasis on New Mexico. Sectionalized land subdivision, corner restoration, and field surveys. Field trips required.

Prerequisite: SUR 222.

SURG-SURGICAL TECHNOLOGY (SURG)

SURG 120. Surgical Technology Clinical I 2-4 Credits

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.

Prerequisite(s): Admission to Surgical Technology Program, BIOL 221, BIOL 225, BIOL 226, NURS 150.

Corequisite(s): SURG 140, SURG 145.

SURG 140. Introduction to Surgical Technology 4 Credits

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 221, BIOL 226, & 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 221, BIOL 225, BIOL 226, & 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**3 Credits**

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**4 Credits**

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. Restricted to Community Colleges campuses only.

Prerequisite(s): SURG 150, SURG 260.

SURG 230. Professional Readiness**2-3 Credits (2-3)**

This course transitions the student into professional readiness for employment, professional readiness for attaining certification and professional readiness for maintaining certification status. May be repeated up to 3 credits. 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**

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**3-7 Credits**

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. May be repeated up to 7 credits. 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 120. 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 120. 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. Pre/ May be repeated up to 3 credits.

Prerequisite(s)/Corequisite(s): TCEN 111 and (OETS 104 or MATH 120). 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 120). 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 120). Restricted to Community Colleges campuses only.

TCEN 130. Introduction to Biomass/Biogas**3 Credits (2+2P)**

Introduction to utilization of renewable biological wastes including crops for production of fuels. Anaerobic digester, gasification, pyrolysis, combustion and fermentation will be covered.

Prerequisite(s)/Corequisite(s): TCEN 101 or OETS 101. Restricted to: Community Colleges only.

TCEN 140. Biofuel Science**3 Credits (2+2P)**

Fundamentals of basic organic chemistry and biochemistry applied to biofuel synthesis. Students will also be introduced to concept of conservation of matter and chemical reactions. Restricted to: Community Colleges 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 180. Bio-diesel and Bio-ethanol Production**4 Credits (2+4P)**

Overview of the production of biofuels. Students will be introduced to current biofuel production processes, trans-esterification, hydrolysis and fermentation reactions, distillation, and laboratory synthesis of biofuels and engine performance tests. Restricted to: Community Colleges only.

Prerequisite(s): TCEN 140.

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 210. Solar Thermal**4 Credits (2+4P)**

The purpose of this course is for students to learn to install solar thermal collectors for several applications, including domestic hot water, pool heating, and space heating. Students will be able to identify types of systems and components, adapt a system design, conduct a site assessment, install solar collectors, install components, install control systems, perform a system checkout, and maintain and troubleshoot a solar thermal system. Restricted to: Community Colleges only.

Prerequisite(s): TCEN 101 or OETS 101.

TCEN 215. Fluid Thermal Systems**4 Credits (2+4P)**

Fluid properties and measurement, piping and tubing standards, pumps and operation. Restricted to: Community Colleges only.

Prerequisite(s): PHYS 110G or PHYS 211G.

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. 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. Photo Voltaic National Electrical Code Principles**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. Pre/

Prerequisite(s): TCEN 112.

Corequisite(s): TCEN 222.

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 240. Renewables and Sustainability**3 Credits**

Various renewable energy technologies and sustainable design practices will be introduced. Restricted to: Community Colleges only.

Prerequisite(s): TCEN 101 or OETS 101.

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 120.

TCEN 246. Building Weatherization & Auditor Fundamentals**3 Credits**

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 250. Photo Voltaic System Integrator Fundamentals**3 Credits**

Teaches the student project management fundamentals for working with homeowners, businesses, government, contractors, and manufacturers to design, build, and install complete alternative energy systems. Covers photovoltaic, small wind, and micro-hydro system designing, permitting, budgeting, and cost estimating requirements. Pre/

Prerequisite(s): E T 125.

Corequisite(s): TCEN 222.

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**1 Credit**

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. May be repeated up to 1 credits. Consent of Instructor required.

Prerequisite(s)/Corequisite(s): TCEN 253. **Prerequisite(s):** TCEN 222. Restricted to Community Colleges campuses only.

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**

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.

THTR-THEATRE (THTR)

THTR 101G. The World of Theatre**3 Credits**

An appreciation class introducing the non-major to all aspects of theatre, including its history, literature and professionals. Students attend and report on stage productions.

THTR 105. Acting for Non-Majors**3 Credits**

An introduction to basic performance techniques for non-majors.

THTR 110. Beginning Acting**3 Credits**

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.

THTR 120. Stage Movement**3 Credits**

Physical techniques for the actor to develop kinesthetic awareness and skills in characterization, archetypes, and stage combat. Restricted to: THTR majors.

THTR 130. The Art of Theatre**3 Credits**

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.

THTR 141. Introduction to Stagecraft**3 Credits**

Basic techniques used in the construction of scenery, props, and sound. Lab required. Pre/

Corequisite(s): THTR 141L.

THTR 141 L. Stagecraft Laboratory**1 Credit**

Class members will assist with construction for productions in a studio environment. Pre/

Corequisite(s): THTR 141.

THTR 142. Introduction to Costume Crafts**3 Credits**

Common costume production techniques, including basic stitching, use of equipment, knowledge of available materials, dyeing, and 3-D.

Prerequisite(s)/Corequisite(s): THTR 142L. Restricted to: THTR majors.

THTR 142 L. Costume Craft Lab**1 Credit**

Class members will assist in construction for productions in a studio environment. Pre/

Corequisite(s): THTR 142.

THTR 149. 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 production in a rehearsal and performance environment.

THTR 200. Theatre Workshop I**0.5 Credits**

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.

THTR 210. Intermediate Acting: Scene Study and Monologues**3 Credits**

Monologues and scene work, using character and script analysis.

Prerequisite(s)/Corequisite(s): THTR 205. Prerequisite(s): THTR 110 with C- or above.

THTR 220. Vocal Production for the Actor**3 Credits**

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.

THTR 222. 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.

THTR 249. Running Crew II**1 Credit**

Students work on a technical aspect of a production in a rehearsal and performance environment.

THTR 250. Introduction to Design**3 Credits**

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 majors.

UNIV-UNIVERSITY STUDIES (UNIV)

UNIV 101. 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. May be repeated for a maximum of 3 credits. Graded S/U.

UNIV 110. 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.

UNIV 112. Academic and Personal Effectiveness**2 Credits**

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.

UNIV 113. Speed Reading**1 Credit**

Introduction to strategies and techniques for increasing reading rate and comprehension related to academic areas.

UNIV 114. Financial Literacy Money Matters**2 Credits**

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.

UNIV 115. Transition from Military to University**2 Credits**

Making a positive transition from military to civilian life is key to success. This course will cover a variety of topics ranging from time management to critical thinking. This course is designed to assist military and veteran students in becoming more effective learners through self-awareness, effectiveness study & learning strategies, and interpersonal skills. Skills and techniques for managing military to civilian readjustment transition issues are discussed and examined. Restricted to Las Cruces campus only.

UNIV 116. Preparing for Cooperative Education & Internship **1 Credit**

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. S/U Grading (S/U, Audit). Restricted to Las Cruces campus only.

UNIV 117. Diversity at the University **1 Credit**

In this course students will engage in discussions about diversity at the university, what it means in today's society and local community, and build on its complexity at NMSU. S/U Grading (S/U, Audit). Restricted to Las Cruces campus only.

UNIV 118. Career Explorations and Planning **1 Credit**

This course is designed to increase the likelihood that individuals will successfully navigate the challenges they face when making college major and related career choices. Restricted to Las Cruces campus only.

UNIV 150. The Freshman Year Experience **3 Credits**

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.

UNIV 161. NMSU Gospel Choir **1 Credit**

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.

W S-WOMEN'S STUDIES (W S)

W S 201G. Introduction to Women s Studies **3 Credits**

Analysis of the status of women in society today and history and consequences of gender stratification and inequality from the perspectives of sociology, anthropology, psychology, political science, and other sciences.

W S 202G. Representing Women Across Cultures **3 Credits**

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. Crosslisted with: HON 218

WATR-WATER UTILITIES (WATR)

WATR 120. Introduction to Water Systems **3 Credits**

Introduction to and theory of groundwater sources, production, treatment, and distribution.

WATR 130. Wastewater Collection and Basic Treatment Systems **3 Credits**

Introduction to wastewater characteristics, collection, and basic treatment operations.

WATR 140. Applied Water and Wastewater Math I **3 Credits**

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 troubleshooting, and chlorine safety. Hands-on training with valves, pumps, meters and chlorination equipment.

WATR 175. Programmable Logic Controllers **2 Credits**

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**

Basic chemistry with applications to water and wastewater analysis.

Prerequisite: CCDM 114 N or consent of instructor.

WATR 182. Water Chemistry Analysis **1 Credit**

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**

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**

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. S/U Grading (S/U, Audit). Restricted to Community Colleges campuses only.

WATR 220. Water Treatment Systems **3 Credits**

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**

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**

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**

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**

Management of water utility systems including laws, finance, records, and safety.

Prerequisites: WATR 120, WATR 130.

WATR 255. Special Individualized Problems in Water Technology**1-4 Credits**

Individual studies in areas directly related to water technology.

Prerequisite: consent of instructor.

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**

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**

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**

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): Consent of instructor or WATR 285.

Restricted to Community Colleges campuses only.

WATR 290. Advanced Wastewater Microbiology and Chemistry**3 Credits**

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**

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 101. Fundamentals of Welding**3 Credits**

Set-up and adjustment of ARC and oxyacetylene equipment. Welding safety procedures and terminology. Skill development in laying weld beads with various patterns, positions, and processes.

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**

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**

Interpretation of prints related to welding. Emphasis on AWS standard symbols for welding, brazing, and nondestructive examination.

WELD 112. Professional Development and Leadership**1 Credit**

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: WELD majors. S/U Grading (S/U, Audit). Restricted to: Community Colleges only.

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**

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**

Enhancement of WELD 125. Development of more advanced pipe welding skills.

Prerequisites: WELD 110, WELD 130 and WELD 140.

Corequisite: 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**

Enhancement of WELD 150. Development of more advanced pipe welding skills. Emphasis on industry driven test.

Prerequisites: WELD 125 and WELD 126.

Corequisite: 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 205. Welding Equipment Maintenance**3 Credits (2+2P)**

Hands-on experience in the maintenance and repair of welding equipment, including welding machines and associate shop equipment, as well as the development of preventative maintenance programs. Basic safety, including MSDS and Right-to-Know will be introduced. Restricted to: Community Colleges only.

Prerequisite(s): WELD 100, WELD 130, WELD 140, WELD 160.

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 230. Weld Testing**3 Credits (2+2P)**

Covers destructive and nondestructive examination methods used to test welds. Tensile, compression, bend, hardness, impact, visual, dye-penetrant, magnetic particle, ultrasound, and radiographic methods of testing/examination. Restricted to: Community Colleges only.

Prerequisite(s): WELD 100, WELD 130, WELD 140, WELD 211, and OETS 104, or 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

Gratton, Dr. John – Campus President, Ed.D., East Texas State University

Garcia, Juanita, CC Chief Student Affairs,
M.Ed., Eastern New Mexico University

Nwanne, Dr. Andrew – CAO/Provost; Ph.D., University of North Texas

Volpi, Karla, VP for Business and Finance, M.B.A., University of Mary

Professional Staff

- Campos, Diana – CC Director, Financial Aid; M.A., New Mexico State University
- Carnathan, Janice – Administration Assistant, Special/Executive, President's Office, A.A., New Mexico State University
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