

NORTHERN

NEW MEXICO COLLEGE

2005-2007 CATALOG

This catalog describes the curriculum, programs, and academic regulations of Northern. The provisions of this catalog are not to be regarded as an irrevocable contract between the student and the college. While every effort is made to insure the accuracy of the information available at the time this catalog is prepared, Northern reserves the right to make changes, at any time, without prior notice.

Northern is a state institution. All facilities, equipment, and materials are for official use only and may not be used for private business or benefit.

CAMPUS LOCATIONS

El Rito Campus
El Rito, NM 87530
(505) 581-4100
FAX (505) 581-4130

Espanola Campus
921 Paseo de Oñate
Espanola, NM 87532
(505) 747-2100
FAX (505) 747-2180

Northern is accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools. Their web site address is www.ncacihe.org; phone number (312) 263-0456.

Northern does not discriminate on the basis of age, race, color, sex, religion, handicap, national origin, ancestry, or medical condition in its educational programs, activities, employment, or admission policies.

Northern is authorized under federal law to admit and enroll non-immigrant students.

Note: The Student Handbook, although a separate publication, is considered an integral part of this catalog.

Fall 2005

Registration	Sat. 13 Aug
Faculty/Staff Convocation	Mon. 15 Aug
Registration	Wed. Thurs. 17-18 Aug
Drop/Withdraw Only Permitted	Fri. 19 Aug
Classes Begin	Mon., 22 Aug
Late Registration/Change Schedule	Mon.-Fri., 22-26 Aug
Deadline Switch Cr-Au/Au-Cr	Fri., 2 Sep
Last Day to Obtain a Refund	Fri., 2 Sep
Holiday (Labor Day)	Mon., 5 Sep
Last Day to Withdraw without a Grade	Fri., 9 Sep
Mid-term Exams	Sat.-Thurs., 8 -13 Oct
Mid-term Grades Due	Fri., 14 Oct
Fall Break	Mon.-Tues., 17-18 Oct
Last Day to Withdraw (full-term Course)	Thurs. 9 Nov
Holiday (Veterans Day)	Fri., 11 Nov
Begin pre-registration for spring	Mon., 14 Nov
Holiday (Thanksgiving)	Thurs.-Sat., 24-26 Nov
Final Exams	Sat.-Thurs., 10-15 Dec
Final Grades Due	Fri., 16 Dec
End of Term	Fri., 16 Dec

Spring 2006

Registration	Sat., 7 Jan
Faculty/Staff Convocation	Mon., 9 Jan
Registration	Wed.-Thurs. 11-12 Jan
Drop/Withdraw Only Permitted	Fri. 13 Jan
Holiday (Martin Luther King, Jr.)	Mon., 16 Jan
Classes Begin	Tues., 17 Jan
Late Registration/Change Schedule	Tues.-Fri., 17-20 Jan
Deadline Switch from Cr-Au/Au-Cr	Fri., 27 Jan
Last Day to Obtain a Refund	Fri., 27 Jan
Last Day to Withdraw without a Grade	Fri., 3 Feb
Mid-term Exams	Sat.-Thurs., 4-9 Mar
Mid-term Grades Due	Fri., 10 Mar
Spring Break	Sat.-Fri., 11-17 Mar
Full-term Course	Fri., 7 Apr
Begin pre-registration summer/fall	Mon., 10 Apr
Holiday (Good Friday)	Fri., 14 Apr
Final Exams	Sat.-Thurs., 6-11 May
Final Grades Due	Fri., 12 May
End of Term	Fri., 12 May
Graduation Ceremony	Sat. 13 May

Summer 2006

Registration	Wed.-Thurs., 31 May & 1 Jun
Drop/Withdraw Only Permitted	Fri., 2 Jun
Classes Begin	Mon., 5 Jun
Late registration	Mon.-Wed. 5-7 Jun
Deadline Switch from Cr-Au/Au-CR	Fri., 9 Jun
Last Day Obtain a Refund	Fri., 16 Jun
Holiday (Independence Day)	Tues., 4 Jul
Last Day to Withdraw (full-term Course)	Fri., 14 Jul
Final Exams	Sat.-Thurs., 22-27 Jul
End of Term	Fri., 28 Jul
Final Grades Due	Fri., 28 Jul

Fall 2006

Registration	Sat. 12 Aug
Faculty/Staff Convocation	Mon., 14 Aug
Registration	Wed. Thurs. 16-17 Aug
Drop/Withdraw Only Permitted	Fri. 18 Aug
Classes Begin	Mon., 21 Aug
Late Registration/Change Schedule	Mon.-Fri., 21-25 Aug
Deadline Switch Cr-Au/Au-C	Fri., 1 Sep
Last Day to Obtain a Refund	Fri., 1 Sep
Holiday (Labor Day)	Mon., 4 Sep
Last Day to Withdraw without a Grade	Fri., 8 Sep
Mid-term Exams	Sat.-Thurs., 7 -12 Oct
Mid-term Grades Due	Fri., 13 Oct
Fall Break	Mon.-Tues., 16-17 Oct
Holiday (Veterans Day)	Fri., 10 Nov
Last Day to Withdraw (full-term Course)	Thurs., 9 Nov
Begin pre-registration for spring	Mon., 13 Nov
Holiday (Thanksgiving)	Thurs.-Sat., 23-25 Nov
Final Exams	Sat.-Thurs., 9-14 Dec
Final Grades Due	Fri., 15 Dec
End of Term	Fri., 15 Dec

Spring 2007

Registration	Sat., 6 Jan
Faculty/Staff Convocation	Mon., 8 Jan
Registration	Wed.-Thurs. 10-11 Jan
Drop/Withdraw Only Permitted	Fri. 12 Jan
Holiday (Martin Luther King, Jr.)	Mon., 15 Jan
Classes Begin	Tues., 16 Jan
Late Registration/Change Schedule	Tues.-Fri., 16-19 Jan
Deadline Switch from Cr-Au/Au-Cr	Fri., 26 Jan
Last Day to Obtain a Refund	Fri., 26 Jan
Last Day to Withdraw without a Grade	Fri., 2 Feb
Mid-term Exams	Sat.-Thurs., 3-8 Mar
Mid-term Grades Due	Fri., 9 Mar
Spring Break	Sat.-Fri., 10-16 Mar
Last Day to Withdraw (full-term Course)	Thurs., 5 Apr
Holiday (Good Friday)	Fri., 6 Apr
Begin pre-registration summer/fall	Mon., 16 Apr
Final Exams	Sat.-Thurs., 5-10 May
Final Grades Due	Fri., 11 May
End of Term	Fri., 11 May
Graduation Ceremony	Sat. 12 May

Summer 2007

Registration	Wed.-Thurs., 30-31 May
Drop/Withdraw Only Permitted	Fri., 1 Jun
Classes Begin	Mon., 4 Jun
Late registration	Mon.-Wed. 4-6 Jun
Deadline Switch from Cr-Au/Au-CR	Fri., 8 Jun
Last Day Obtain a Refund	Fri., 15 Jun
Holiday (Independence Day)	Wed., 4 Jul
Last Day to Withdraw (full-term Course)	Fri., 13 Jul
Final Exams	Sat.-Thurs., 21-26 Jul
End of Term	Fri. 27 Jul
Final Grades Due	Fri., 27 Jul

HISTORY

Northern New Mexico College and its differing missions have always played an integral role in the State of New Mexico's goal to provide educational opportunities for its residents.

In the early 1900's the New Mexico Territorial Legislature determined that a facility was needed as a "normal school" with a primary function of training teachers for the State's Spanish-speaking population. The Spanish American Normal School at El Rito opened its doors in September 1909.

When the New Mexico territory applied for statehood in 1912, the State Constitution, Article 12, Section 11, identified the Spanish American Normal School as one of ten educational institutions which would be supported by the state. The Spanish American School provided both secondary and post secondary educational programs.

In 1953, the State Legislature changed the name of the institution to Northern New Mexico State School and mandated that the institution provide training not available in public schools and implemented a secondary school curriculum. Six years later, in 1959, the Board of Regents adopted the name of Northern New Mexico College. Under this designation the new institution continued to maintain secondary educational functions (grades 7-12) as well as a college curriculum.

By 1961 the College was offering two-year programs in business education, general studies, and selected vocational programs. Technical-vocational programs proved popular and enrollment increased due to a school-operated transportation system which allowed the population from the surrounding rural villages to attend the school.

In 1969 the high school curriculum was transferred to a newly created public school district and the curriculum at the College was limited to technical-vocational course offerings. One year later, in 1970, the Board of Regents again adopted a new name to indicate the change in course offerings. Thus, the New Mexico Technical-Vocational School became the common designation.

Operating under its new name, the Technical-Vocational School expanded its curriculum and faculty, and developed a campus in Espanola, approximately 30 miles from El Rito. The school assumed the Practical Nurse program from St. Vincent's Hospital in Santa Fe. Then, as educational needs in northern New Mexico evolved, educators and legislators began to feel a need for a more comprehensive delivery of educational services. In 1976 a task force was created to assess the feasibility of establishing a community college. The task force membership included representatives from the New Mexico Technical-Vocational School, the University of New Mexico, and local school boards and citizens. The recommendation of the task force was that the University of New

Mexico-Northern Branch (at Santa Cruz) be dissolved and the delivery of academic course offerings be combined with those of the New Mexico Technical-Vocational School. The Legislature accepted the recommendations of the task force and provided for the expansion of the institution's mission.

In July 1977, the Board of Regents accepted the new mission of the institution, adopted the current name of Northern New Mexico Community College, and began the enormous task of joining the existing programs, philosophies, and procedures to establish a comprehensive community college.

The new institution was headed by a president appointed by the Board of Regents. The programs to be offered by the new institution included associate degrees in various academic and occupational disciplines, certificate-granting programs in occupational studies, special interest courses granting continuing education units (CEU's), and other courses offered for no credit.

In 2004, legislative approval and accreditation was extended to Northern, permitting it to be the first community college in the state of New Mexico to offer a four-year degree, a BA in Elementary Education.

In 2005, legislation was enacted which changed the name to the Northern New Mexico College, permitting it to offer four-year degrees in any programs deemed necessary and appropriate.

ACCREDITATION

Simultaneously with the expansion of mission and services, Northern undertook candidacy for accreditation with the Commission on Higher Education of the North Central Association of Colleges and Schools (NCA). The Technical-Vocational School had already been granted candidacy for accreditation (1977-1982). Accreditation by the North Central Association for Northern as a community college was officially declared on 20 March 1982; reaffirmation of accreditation was granted for seven years in 1987 and, most recently, reaffirmation of accreditation was granted for ten years (1994-2004). Northern is presently in the process of demonstrating its quality as it again seeks continued accreditation.

In August 2004, our regional accrediting association (NCA) accredited Northern's Bachelor of Arts in Elementary Education, as well as pre-accrediting whatever other undergraduate teaching degrees Northern would develop. The 2005 change in name and return to the original mission of a teaching college will cause Northern to seek a more comprehensive change in its scope of accreditation to cover all other four-year degrees as they are developed to meet the needs of its communities.

In addition to regional accreditation, Northern's educational offerings are accredited or approved by other agencies. The College's occupational courses are approved by the New Mexico State Department of Public

Education; the barbering, cosmetology, massage therapy, and nursing programs are approved by their respective state licensing boards; the radiologic science technology program is accredited by the Joint Review Committee on Education and Radiologic Technology; and the business programs are accredited by the Association of Collegiate Business Schools and Programs. State approval for benefits under Title 38 USC for veterans and other eligible persons has been granted by the New Mexico Veterans Service Commission.

Those wishing to review or verify the above statements concerning accreditation should contact the Registrar at (505) 747-2193.

VISION

To achieve excellence in preparation of students to excel in the workplace of today and tomorrow.

MISSION

The mission of Northern is to provide open access, affordable, quality educational opportunities in a modern technological environment by providing baccalaureate, associate degree, and certificate programs in liberal arts, career, workforce development, and lifelong learning programs that empower students to excel.

SETTING

Northern has campuses in Espanola and El Rito. In addition, Northern also regularly offers classes upon request at other communities within its service area.

The **Espanola** campus is an attractive thirty-acre tract which runs from state highway 85 to the banks of the Rio Grande. From anywhere on campus one may appreciate the panorama of the Sangre de Cristo and Jemez Mountain ranges. The surrounding area offers a wide range of outdoor recreational activities such as boating, swimming, fishing, hunting, camping, and skiing. Espanola is the center of commerce for the area which has a growing population of approximately 35,000. The Espanola campus is located 25 miles north of Santa Fe and 40 miles south of Taos.

The **El Rito** campus is 32 miles north of Espanola on a sixty-acre tract on the southernmost slope of the San Juan Mountains at an elevation of 6,600 feet. Adjacent to the campus is the scenic and peaceful village of El Rito which is located at the entrance of the vast Carson National Forest. This forest is known for its excellent fishing, hunting, and camping sites. Fifteen miles to the east is the village of Ojo Caliente which is famous for its hot mineral springs and related resort facilities. Eighteen miles to the northwest is Abiquiu Reservoir which is a prime water recreational area.

ADMISSION TO NORTHERN

POLICY STATEMENT

Northern has an open admission policy for any person who can benefit from the instructional programs of the College. No applicant will be denied admission on the basis of race, color, creed, age, sex, religion, national origin, physical handicap, or marital status. In general, though, because Northern is a post-secondary institution, we have restrictions on admission for those who have not yet graduated from high school.

ADMISSION CATEGORIES

Northern admits students in various categories based on their intention for taking courses; i.e., whether working to earn a degree or certificate, or merely taking courses for personal interest. Students are accepted who have never attended college before, as well as those who have attended other colleges, whether or not they may have earned other degrees.

REGULAR

If you wish to obtain a degree or certificate from Northern, you may apply for regular admission status (matriculation) and must show that you:

1. have received a diploma from a public or private high school/home school (*Home school graduates must be at least 16), or
2. have received a General Education Development (GED) diploma; or
3. are a transfer student in good standing from another accredited college, university, or other post secondary institution; or
4. if you are at least 18, but have not earned a high school diploma or a GED, or attended any other college prior to Northern, you may achieve matriculation to Northern if you pass authorized tests showing completion of at least the 10th grade level in each of two areas, English and math. If you should fail to meet the required standard, you may choose to pursue the GED certificate through our HEP or ABE departments, or you may choose to enroll in non-degree status. Admission described in this paragraph is referred to as demonstrating your 'Ability to Benefit' and is permitted by federal regulations to enable those who fall into this category to obtain federal financial assistance.

Admission in regular status amounts to "matriculation," which is a formal acceptance by the college of your qualifications to pursue a formal degree or certificate. You may be matriculated at only one college at a time. Therefore, if you are already matriculated at, for example,

New Mexico Highlands University, regular status at Northern would not be appropriate; you would then seek admission with Northern in Non-Degree status.

NON-DEGREE

This status is for those who do not meet or who do not wish to meet the criteria for matriculation (regular status).

If you are accepted in this status, you may later apply for regular status.

Please note that no type of financial assistance is extended to students in non-degree status.

EARLY ADMISSION of Public High School Students: Concurrent Admission

Concurrent admission is a term used to define the relationship existing between public secondary schools and public colleges and universities in New Mexico. This is a privilege, not an absolute right. For that reason, Northern applies the following criteria for admission:

For Part-Time attendance

If you are a junior or senior in a public high school in New Mexico and if you have a cumulative GPA of 2.00, you are eligible to apply for **concurrent** status on a part-time basis. In any case, if you are under 18, you must have parental/guardian permission to be admitted and enroll, in addition to an authorization from your high school. In this status you will normally be restricted to carrying no more than 7 credit hours (about two courses) per term at Northern.

For Full-Time Attendance

If you are a high school senior with a 3.00 cumulative grade point average (grades 9 through 11) and wish to apply for admission as a full-time student in your senior year, you must have parental permission (if under 18) and a release from your school district. In other words, there must be general agreement among the school district, your parents/guardians, and yourself that trading high school for full-time college attendance is the most appropriate educational goal for you. This status will not preclude your high school from counting the college credits you earn against the requirements for earning a high school diploma.

To accomplish this move, you will have to have your high school send Northern an official transcript showing your course work from grades 9 through 11. If you are admitted under this special status, we encourage you to work on and finish your GED as soon as possible while you are enrolled in college credit courses. Although you do not have to do so, it is to your benefit in the long run to complete the GED while attending college classes.

OTHER CONCURRENT ADMISSION: Non-Public Schools and Home School Students

You also may seek "early" part-time or full-time admission while still classified as a high school junior or senior using the same criteria as applied to students in public high schools. If your high school issues an official transcript, the school must send one to Northern's Office of Admissions and Records. If your school does not or cannot provide an official transcript, you must provide adequate evidence that you are properly classified as either a high school junior or senior. Such evidence will be looked at on an individual basis. If the Director of Admissions does not feel that what is presented is adequate for the purpose, you will be asked to demonstrate equivalency by taking an approved test in English and math to demonstrate mastery of a grade level at /above 11th grade. If you fail to score adequately, you may retest to qualify at a later time.

APPLICABLE TO ALL "CONCURRENT" OR "EARLY ADMISSION" STUDENTS

Enrollment into any specific course is dependent on your establishing that you have met all prerequisites and/or co-requisites for the course.

At the discretion of your high school, the credits you earn at Northern may be applied against your high school diploma. And, dependent on the contract between your school district and Northern, your school district may or may not pay for your tuition; if it does not, your parents are responsible for the payment of tuition and fees. Regardless, if you qualify, you or your family will normally be responsible for books and supplies. Check with your school counselor for further details.

Usually, public school districts which pay for tuition require that you complete each credit course with a grade of C or better; failure to do so usually results in the school district reimbursement from your parents for its expenses or its refusal to pay the college, thus moving the burden of payment unto your parents.

Concurrent status is extended on a term-by-term basis as long as you maintain a 2.0 cumulative GPA in high school. Prior to enrolling for each new term, you will have to have your high school mail Northern an up-to-date transcript showing your cumulative grade point average. And, when you can provide a high school transcript (or, for home school students, a diploma) showing graduation, you will make an easy transition into regular status.

If you should withdraw from high school for any reason while enrolled at Northern, you must notify the Admissions Office immediately so that your status may be adjusted without problem.

ADMISSION FOR THOSE WHO DO NOT OTHERWISE QUALIFY

If you do not otherwise qualify for admission to Northern, you may provide a written appeal of Northern's admission policy to the Director of Admissions, providing such evidence of ability to benefit as may be required by that official. In any case, if the Director of Admissions does not grant your appeal, your appeal may be referred to Northern's Student Appeals Committee. This committee is composed of students, faculty, and professional staff. If the committee hears your appeal, although a parent may accompany you, **you** must be present at the hearing.. The Committee will make its recommendation to the Dean of Student Services who will decide the issue.

READMISSION

If you have previously been a student at Northern in other than concurrent status and if it has been at least one fall or spring semester since your last attendance, you will have to re-apply for admission. If your status has not changed since your last attendance, no paperwork other than a new application will be necessary; however, if you are re-applying for **regular** status and have been to another college in the meantime, you must have an official transcript sent from that college before your status will be granted. In the meantime, you will be classified in **non-degree** status.

If you interrupt your attendance by one or more regular semesters of non-attendance, you will be bound by the terms of the catalog in effect at the time of your latest re-admission to the College.

TRANSFER STUDENTS

If you are in good standing at the last college attended, you are eligible to attend Northern in either **regular** or **non-degree** status, dependent on your interests and needs.

We require that you list on your application for admission all colleges attended, with dates, and degrees earned, and we require that you have **each** college or other post-secondary school you have attended send us an official transcript.

If you are **not** in good standing (*), you are **not** automatically eligible to apply for admission to Northern. You may complete the application form and attach to it a letter of appeal (**with a copy of your transcript**) addressed to the Director of Admissions. In your letter, you must state what caused the lack of good standing and how you plan to maintain good standing while at Northern. Your appeal will be processed and you will be notified of acceptance or denial.

* **Good Standing** means that you are not on an academic or disciplinary suspension.

Until all transcripts have been received at the Office of Admissions, you will not be able to qualify for financial assistance, request a transcript be sent outside the college, or be able to graduate.

INTERNATIONAL STUDENTS

Northern is approved by the United States Customs and Immigration Service (USCIS), a division of the Department of Homeland Security, to issue an I-20 for those applicants who meet our requirements. Not all programs are available for study for those seeking a student (F-1) visa.

If you are a non-immigrant alien who wishes to apply to Northern, please contact the Enrollment Manager (mikec@nnmcc.edu) for the necessary forms or, download the special application form from our web site at www.nnmcc.edu.

Proof of English language competency is required before being accepted to the College; only those who have graduated from a U.S high school or college will be exempt from this requirement. Refer to the special application for details/choices of instruments.

SPECIAL PROGRAM CRITERIA

Admission to the college does not carry with it admission to all programs of study. You should check with the department chairpersons (listed at the back of this catalog) or program directors of specific programs for admission criteria if you are interested in: educational programs, such as our AA or BA in Elementary Education; vocational occupations such as Barbering or Cosmetology, or health occupations such as Massage Therapy Practical Nurse, Nurse (ADN), or Radiography.

HEALTH REQUIREMENTS

Certain minimum health standards or requirements must be met prior to acceptance into some programs. Check with the department chairpersons in Health Occupations and Vocational Studies for specific information.

All international students must have major medical insurance coverage when they arrive on campus and maintain such a policy throughout their stay at Northern.

SUBSTANCE ABUSE POLICY

OUR PHILOSOPHY

Northern is committed to a safe working and learning environment for its faculty, staff, students, and the general public. Because substance abuse affects people's performance, conduct, reliability, and general ability to learn and complete assigned tasks, Northern has adopted the following policy on substance abuse.

OUR POLICY

While you are on College property, you are denied the unauthorized use, manufacture, distribution, dispensation, sale, possession, or transfer of controlled substances, including the unauthorized use or possession of, or being under the influence of, alcohol or alcoholic beverages.

Penalty for Violation

Violation of this policy may result in such disciplinary action as dismissal and referral for investigation and/or prosecution by appropriate law enforcement agencies.

Drug Testing

Routine drug testing is not permitted; however, if there is reasonable suspicion that a specific individual is in violation of this policy, that person may be required to undergo testing as a condition of continued enrollment as a student. This does not, of course, preclude the College, at its discretion, from conducting random drug testing programs for students who might be participating in athletic activities conducted or sponsored by the College.

STUDENT RIGHT-TO-KNOW & CAMPUS SECURITY POLICIES

In compliance with the provisions of Public Laws 101-542 and 102-26, Northern has established policies governing the availability of information concerning graduation rates and campus security.

GRADUATION RATES

Northern will produce and make readily available, upon request, to current students and to each prospective student enrolling or entering into any financial obligation with Northern, the completion/graduation rate and transfer rate of certificate or degree-seeking, full-time undergraduate students.

CAMPUS SECURITY

All students, faculty, and staff are to report to the Executive Vice President any criminal activity occurring within the campus facilities or during any college-sponsored activity. No type of criminal activity within the campus or during college activities will be tolerated. Criminal activities include but are not limited to murder, rape, robbery, aggravated assault, burglary, motor vehicle theft, liquor law violation, drug abuse, and weapons possession. Under the terms of the law, in September of each year the College prepares, publishes, and distributes information which is available upon request to current students and employees, and to any applicant for enrollment or employment.

Specific questions concerning these two policies should be directed to the Dean of Student Services (505) 747-2193.

TRANSFER OF CREDIT and THE AWARDING OF CREDIT

Northern recognizes that there are many ways in which college credit may be amassed and, in an effort to maximize the opportunities available to its public, has adopted the following policies:

- A. Academic credit * may be granted upon:
1. the completion ** of any of Northern's credit-bearing classes with a grade of "C" or better.
 2. receipt at Northern of an official transcript from another regionally or nationally accredited college or university showing successful completion of an equivalent credit-bearing course. Evaluations for transfer of credit are done upon request. Grades from other institutions are not brought in, only grades of CR are posted. At the time your admission status has been finalized with the receipt of all required college transcripts, the Registrar will be sent copies of your transcripts for evaluation and posting to your official Northern record. See the end of this section for details concerning transfer of credit from accredited New Mexico public institutions of higher education.
 3. receipt at Northern of official AP/ACT/CLEP/DANTES scores which meet minimum cut-off scores as listed below.

AP scores: minimum score = 3.0

Exam Title

Art History = ART 107 (3) & ART 211 (3)

Biology = BIOL 201/L (4) & BIOL 202/L (4) *

Calculus AB or BC = MATH 162 (4)

Chemistry = CHEM 121/L (4) & CHEM 122/L (4)*

Computer Science A = CS 132 (3); Computer Science B = CS 142 (3); Computer Science C++ = CS 200 (3)
 Economics = ECON 200 (3)
 English = ENG 111 (3) & ENG 112 (3)
 Government & Politics = PSCI 200 (3)
 Music Theory = MUS 102 (3) & MUS 216 (3)
 Physics B = PHYS 121/L (4) & PHYS 122/L (4) *
 Physics C = PHYS 215/L (4) & PHYS 216/L (4) *
 * must include lab experiences
 Psychology = PSY 105 (3)
 Spanish = SPAN 201 (3) & SPAN 202 (3)
 Statistics = MATH 115 (3)
 Studio Art = ART 110 (3): additional 3 credits available upon portfolio evaluation
 US History = HIST 161 (3) & HIST 162 (3)

College Level Examination Program (CLEP):

Subject examinations are administered by the Student Success Center. At the time of publication of this catalog, the fee is \$55.00 per test (payable to CLEP), plus a \$15.00 administrative fee (payable to Northern). Call (505) 747-2199 for details. These examinations are computer-based.

Subject Exams

Principles of Management (46) BA 202 (3)
 Introduction to Marketing (50) BA 251 (3)
 Introduction to Business Law (50) BA 266 (3)
 Principles of Macroeconomics (44) ECON 200 (3)
 Principles of Microeconomics (41) ECON 201 (3)
 Freshman College Comp. (44) ENG 111 (3) *
 *Essay is required.
 Analysis & Interpretation of Lit. (50) ENG 112 (3)
 American History I (50) HIST 161 (3)
 American History II (50) HIST 162 (3)
 College Algebra (46) MATH 130 (3)
 College Algebra (50) # MATH 150 (3)
 # A score of 50 or better will earn credit for 130 & 150
 College Algebra/Trigonometry (61) MATH 155 (3)
 * A score of 61 will earn credit for 150 & 155.
 Calculus w. Elem. Functions (47) MATH 162 (3)
 American Government (50) PSCI 200 (3)
 General Psychology (50) PSY 105 (3)
 Human Growth & Development (50) PSY 290 (3)
 Introduction to Sociology (50) SOC 101 (3)
 College Spanish I & II (50) # SPAN 101/102 (6)
 College Spanish I and II (66) ^ SPAN 201/202 (6)
 #A score of 50-65 will earn 6 crs.
 ^A score of 66 or better will earn 12 crs.

DANTES Subject Exams

The following DANTES exams (paper-based) are made available for testing at the Student Success Center. Call (505) 747-2199 for details. The cost per test is \$40 (payable to The Chauncey Group).

Introduction to Business (46) BA 120 (3)
 Principles of Financial Accounting (50) BA 130 (3)
 Management Information Systems (46) BA 242 (3)
 Criminal Justice (49) CJ 111 or CJ 132 (3)
 Int. to Law Enforcement (45) CJ 211 or CJ 221 (3)
 Technical Writing (47) ENG 116 (3)
 Lifespan Develop. Psychology (46) PSY 290 (3)

ACT Scores

English score 21 and above credit for ENG 111
 Math score 23-25 credit for MATH 130
 Math score 26 and above credit for MATH 150

4. receipt of a veteran's DD-214 and/or DD-295 which provides sufficient information to allow an evaluation of prior training and experience against Northern's degree major requirements. American Council on Education (ACE) guidebooks are used for the evaluation of credit.

5. official transcripts and/or certificates of completion from entities recognized in *The National Guide to Educational Credit for Training Programs* (ACE) or in *College Credit Recommendations: The Directory of The National Program on Non-collegiate Sponsored Institutions* (New York Board of Regents).

6. documented completion of one/more of the following:

NM Law Enforcement Academy (34 crs)*
 BIA Law Enforcement Academy (27 crs)*
 New Mexico Corrections Academy (3 crs)

* Includes 2 crs HPER Electives + CJ courses.

You may find more information in the academic section of this catalog, under the AAS-Police Science degree.

7. successful completion of one of Northern's approved Locally Developed Subject Examinations [see the Enrollment Manager for further details]; or

If your examination score is acceptable, your permanent record (transcript) will reflect the notation that you completed Northern's equivalent course with a grade of "CR" (credit). The recommended credit value of the examination will be posted to your transcript. Although these credits may count toward graduation, your cumulative grade point average will not be affected as it will not reflect honor points for the examination. If your examination score is unacceptable, you will have to take the course or re-test.

8. receipt of an acceptable transcript showing courses taught at foreign colleges or universities for which an adequate determination can be made by the Enrollment Manager as to the equivalency of the course content and the student's satisfactory progress as based on Northern's standards.

9. receipt of a current card showing certification for CPR (issued by the American Heart Association) or CPR/

First Aid (issued by the American Red Cross). Credit will be given for our equivalent course. 11/2003

10. receipt of a current CRT card. Credit will apply in substitution for PHYS 121/L in the AAS in Radiation Protection only.

* Academic credit in this context refers to credit accepted against the courses required for graduation in any particular program. Credit for non-required courses or for community service/continuing education (CEU) courses is not granted.

B. Aside from the residency policy which requires that the last sixteen (16) credits counted toward graduation be earned in residence at Northern, no maximum limitation is imposed on the number of credits which may be accepted in transfer or by means of nationally standardized testing. Specific programs, however, may establish time cut-offs for the acceptance of credit which had been earned at such point in the past. This is to insure that the course competencies that you possess are not out of date. Such restrictions are clearly defined in Northern's College catalog or in the individual program's handbook.

C. Any student may at any time submit official scores based on such nationally standardized tests as AP/CLEP/DANTES without respect to the student's status of matriculation or the number of terms completed at Northern.

TRANSFER AMONG NEW MEXICO HIGHER EDUCATION INSTITUTIONS

To facilitate transfer of students and course credits among New Mexico's colleges and universities, the state's public institutions of higher education are required to accept in transfer the courses taken within approved modules of lower-division course work and apply them toward degree requirements. Several transfer guides have been developed through collaboration of New Mexico's public post-secondary institutions, consistent with requirements of state law (21-1B, NMSA 1978). Students enrolling for first-year or second-year study at a New Mexico institution who wish to prepare for possible transfer into a degree program at another institution are advised to take these courses during their freshman and sophomore years. [Refer to the New Mexico Commission on Higher Education website at www.nmche.org for complete lists of courses.

Student Responsibility

New Mexico's colleges and universities have collaborated to produce guides to assist students who plan to transfer before completing a program of study. Course

modules are designed to help students select courses carefully so that they may transfer with little or no loss of credit. However, planning for effective transfer with maximum efficiency is ultimately the **student's** responsibility. Responsible transfer planning includes early and regular consultation with the intended degree-seeking institution to assure that all pre-transfer coursework will meet the requirements of the desired degree.

TRANSFERABLE LOWER DIVISION GENERAL EDUCATION COMMON CORE

Students enrolling for first-year study who have not yet selected either an academic focus or the institution where they wish to graduate are advised during their freshman year to take courses outlined in the Lower Division General Education Common Core. For students enrolled at any public institution in New Mexico, the following courses are guaranteed to transfer to any other New Mexico public college or university, and apply toward associate and baccalaureate degree program requirements. Students should consult advisors at their current institutions regarding which specific courses fit these categories. Students preparing for careers in engineering, health sciences, or other profession-related fields are advised that some of this coursework may not transfer toward general education requirements but in most cases will apply toward elective requirements.

Area I: Communications **Select 9 sem hrs**

- | | |
|---|-------|
| (a) College-level English Composition | 3 crs |
| (b) College-level Writing (a second course building on the above) | 3 crs |
| (c) Oral Communication | 3 crs |

Area II: Mathematics **Select 3 sem hrs**

- | | |
|---------------------|-------|
| (a) College Algebra | 3 crs |
| (b) Calculus | 3 hrs |

Area III: Laboratory Science **Select 8 sem hrs**

- | | |
|--|---------|
| (a) General Biology, with laboratory | 4-8 crs |
| (b) General Chemistry, with laboratory | 4-8 crs |
| (c) General Physics, with laboratory | 4-8 crs |
| (d) Geology/Earth Science, with lab. | 4-8 crs |
| (e) Astronomy, with laboratory | 4-8 crs |

Area IV: Social/Behavioral Sciences **Select 6-9 hrs**

- | | |
|--|-------|
| (a) Economics (Macro- or Microeconomics) | 3 crs |
| (b) Introductory Political Science | 3 crs |
| (c) Introductory Psychology | 3 crs |
| (d) Introductory Sociology | 3 crs |
| (e) Introductory Anthropology | 3 crs |

Area V: Humanities and Fine Arts Select 6-9 hrs

- (a) Introductory History Survey 3 crs
 (b) Introductory Philosophy 3 crs
 (c) Introductory course in history, theory, or
 aesthetics of the arts or literature * 3 crs
- This may include HIST 260, History of New Mexico.
 - **Total to be selected 35 semester hours**

See the section dealing with *General Curriculum Requirements* for a list of those courses which Northern considers as meeting its General Education Common Core.

TRANSFERABLE LOWER DIVISION 64-HOUR TRANSFER MODULES

Students who have selected a field of study but have not yet selected the college or university where they wish to earn their baccalaureate degree are advised during their freshman and sophomore years to take courses outlined in one of the Lower-Division 64-hour Transfer Modules. For students enrolled at any public institution in New Mexico, these courses are guaranteed to transfer to any New Mexico university and apply toward bachelor's degree program requirements. Students should consult advisors at their current institutions regarding which specific classes fit these categories. Lower-division transfer modules presently exist for:

Business	Engineering
Biological Sciences	Teacher Education
Social/Behavioral Sciences	Physical Sciences
Early Childhood Education	

Modules for additional areas of study are being developed. Copies of these Transfer Modules may be obtained at Northern's Student Advisement Center or from the web site for the institution to which they intend to transfer.

Students who have selected a field of study and/or the institution from which they wish to graduate are advised to consult the transfer guide or catalog for that institution for more current and detailed advice to guide their course selection. Copies of formal transfer guides are available through the Student Advisement Center.

COMPLAINT PROCEDURE FOR TRANSFER STUDENTS

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 Northern New Mexico Community College's complaint policy may be obtained from the New Mexico Commission on Higher Education 1068 Cerrillos Road, Santa Fe, NM 87501-4295, (505) 827-7383 [www.nmche.org].

TUITION AND FEES

PAYMENT POLICY

All charges incurred in connection with college attendance are payable in advance of the services rendered. Tuition, fees, and other charges are subject to change at any time by the College Board of Regents.

You are responsible for payment of all financial obligations when due. If you fail to do so, there will be sufficient cause to: 1) prevent further registration; 2) withhold academic records, including transcripts and diplomas; and 3) take disciplinary action including suspension or dismissal.

Personal checks submitted for any fees will have your student ID number (SSN) written on them. If you prefer to not have your student ID on your check, you may submit payment by cashier's check, money order or, when appropriate, cash. The cashier will write your student ID number on checks if you have not already done so.

RESIDENCY REGULATIONS

Tuition charges for purposes of residency or non-residency in public institutions of higher education in New Mexico are defined and governed by Section 21-1-4E NMSA 1978 and are not controlled by any other public official's recognition of claimed residency for other purposes. Address any inquiries concerning residency for tuition purposes or legal procedures to Northern's Director of Admissions.

If, after your residency classification has been assigned, you feel that the classification officer (the Registrar) has made a wrongful determination, you should contact the Registrar for clarification. If you are still not satisfied, you may direct a written letter of appeal to the Chairperson of the Student Appeals Committee. According to state law and the New Mexico Commission on Higher Education, Northern's appellate process is your last recourse prior to the courts (citation: CHE Rule 910.10, effective 6/19/92).

SCHEDULE OF TUITION AND FEES 11

New Mexico residents	Fall/Spring terms
Lower division courses (1-2xx)	\$33.00/credit
Upper division courses (3-4xx)	\$83.00/credit

Non-New Mexico residents	Fall/Spring terms
Lower division courses (1-2xx)	\$85.00/credit
Upper division courses (3-4xx)	\$360.00/credit

During a regular fall or spring semester, if you are classified as a non-resident student and if your enrollment does not exceed 6 credits, you will be charged at the rate of \$33.00 per credit for lower-division credits, and \$83.00 per credit for upper-division credits. If you should exceed 6 credits, the cost for all credits will be re-assessed at the rate of \$85.00 per lower-division credit and \$360.00 per upper-division credit.

Summer sessions: Non-New Mexico residents pay tuition as if they were New Mexico residents.

***Student** fees are assessed at \$1.50 per credit to a maximum of \$18.00 per term (\$9.00 in a summer session). **Instructional Technology and Student Services** fees are assessed at \$5.00 per credit to a maximum of \$60.00 per term (\$45.00 in a summer session).

Lab fees are assessed at \$20-30 per course, as appropriate.

**Some exceptions

SENIOR CITIZENS

1. If you are age 65 and above and are classified as a resident of New Mexico, you will be charged \$5.00 per credit hour if you enroll for 6 credit hours or less in lower-division courses. If you enroll for more than 6 credit hours in lower-division courses, charges for credit hours in excess of 6 will be charged at the regular rate of \$33.00 per credit. New Mexico Senior Citizens are subject to all regular student fees.

Colorado Reciprocity

The states of New Mexico and Colorado have entered into an agreement which permits citizens of either state to attend the other state's colleges at in-state tuition rates. There are some restrictions. For example, Northern will permit any Colorado resident to be admitted and enroll under the terms of this agreement, limiting the privilege in only program (Nursing) for which no more than three Colorado residents may be enrolled at any one time; Colorado restricts this reciprocity to New Mexico residents attending only those colleges near the New Mexico/Colorado border.

To use this benefit, you must clearly state your intention to do so on your Application for Admission form [there is a box to check on the form].

If you are a resident of **Colorado** and maintain your Colorado residency while attending Northern, you may be eligible to enjoy in-state tuition rates if you enroll for *not less than* 15 credits per regular term. Check with the Admissions Office at the time you are admitted and/or each term when you register for classes.

If you are admitted and register under this basis, you will not be eligible to claim New Mexico residency until one full year has passed since you ceased enrollment under the reciprocity agreement.

Western Undergraduate Exchange (WUE)

New Mexico is one of several states which have entered into an agreement which allows students to attend college in another state at a rate of tuition which is between in-state and out-of-state tuition. This is designed primarily to allow a citizen to pursue a degree which is not offered in his own home state but which is offered in another state which is signatory to the agreement.

If you are a resident of one of the following states, you may be eligible to enjoy a tuition rate which is 150% of the in-state rate (\$43.50 per lower-division credit and \$118.50 per upper-division credit): Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, or Wyoming.

To use this benefit, you must clearly state your intention to do so on your Application for Admission form [there is a box to check on the form]. Check with the Admissions Office each time you register for classes. You must register for *at least* 15 credit hours to use this benefit.

If you are admitted and register under this basis, you will not be eligible to claim New Mexico residency until one full year has passed since you ceased enrollment under the reciprocity agreement.

OTHER FEES

Registration (non-refundable; each term)	\$5.00
Late Registration (non-refundable; added. fee) ..	\$5.00
Graduation (non-refundable) +	\$35.00
Additional diploma (ordered at the same time as first diploma) +	\$7.50
Replacement diploma, each	\$7.50
Lab/course fee **	\$20-30.00
Damage/key dep. (dorm residents)	\$55.00
In-house examinations (per course)	\$20.00
CLEP examinations (per course)	\$15.00
Transportation between campuses (varies - check each published schedule of classes)	

**The exact amount is designated in each schedule of classes.

+ The graduation fee of \$35 covers all costs of gradua-

tion, including the diploma, cover, cap & gown, etc. Additional diplomas in the same fiscal year (1 July - 30 June) are \$7.50 each.

ESTIMATED EXPENSES FOR ON-CAMPUS NEW MEXICO RESIDENTS - PER SEMESTER

Tuition: see pertinent section about resident vs non-resident and lower-division vs upper-division rates.

Books, Supplies, and Equipment (avg.)	\$300.00
Dormitory room	
Single occupancy	\$900.00
Double occupancy	\$650.00
Damage & key deposit	\$55.00
Board: 5-day meal plan	\$864.00
Personal	\$650.00
Transportation	\$600.00

*Does not include lab fees.

SPECIAL ASSESSMENTS

In the event of damage to College property, the College reserves the right to charge those responsible for replacement or repair costs.

REFUNDS

TUITION AND FEES

Tuition and fees are refundable only upon receipt by the Business Office of an official withdrawal or course drop form or, in lieu of such, a written declaration of intent. You are responsible for submitting this form or letter, through the Registrar's office, except when classes are canceled. Refunds are computed from the date of drop or withdrawal according to the following schedules

Length of Courses (in weeks)	Percentage of Refund		
	1st	2nd	3rd
16-longer	100%	100%	None
12-15	100%	100%	None
9-11	100%	75%	None
8	100%	50%	None
6-7	100%	25%	None
3-5	100%	None	None
1-2	None	None	None

Note:

1. No refund is made on regular or late registration fees, or in the case of disciplinary suspension or dismissal.
2. If you are dismissed for falsification of records, eligibility for refund will be entirely at the option of the College.

3. If you mail a notice of withdrawal, the rate of refund will be based upon the **date the notice is received** at the College.

WITHDRAWING FROM COURSES

Once you have registered, you may withdraw from any course without special permission. You must, however, do so by completing a *Change of Schedule* form or by submitting your intentions to the Registrar's Office in **some written** form (with your signature). You may not drop a course by telephone, nor may anyone other than your instructor drop you from a course.

Once it has been established that you have never attended or have missed at least three consecutive absences without prior knowledge of your instructor, that instructor has the right to drop you from the course — has the *right* to, but does not *have to* drop you. If you should stop attending a class, do not assume that you will be dropped — follow the instructions in the previous paragraph to avoid receiving an "F" for the course(s).

If you withdraw from a course within the refund period (the first three weeks of a regular fall or spring semester), nothing will appear on your transcript to show enrollment. If, however, you withdraw after the third week, a grade entry of "W" will be recorded for each withdrawn course.

Dropping courses: deadline for full-term courses and for courses of less than a full term:

Courses whose length is	deadline to drop is
2-7 days	before scheduled class
2 weeks	end 2 nd day of course
3 weeks	end 1 st week
4 weeks	end 2 nd week
5 weeks	end 3 rd week
6 weeks	end 4 th week
7 weeks	end 5 th week
8 weeks	end 6 th week
9 weeks	end 7 th week
10 weeks	end 8 th week
11 weeks	end 9 th week
12 weeks	end 10 th week
13 weeks	end 11 th week
14-16 weeks	end 12 th week

STUDENTS RECEIVING FINANCIAL ASSISTANCE UNDER TITLE IV FUNDS

If you are or will be receiving federal funds under Title IV during any period of enrollment and if during that time your enrollment is terminated (cancel your registration, withdraw, be expelled) or stop attending classes before completing more than 60 percent of the enrollment period, you will be subject to repayment of all or a

portion of that aid. The amount of aid which you might be subject to repay is determined by regulations as set in Section 484B of the Higher Education Act, which also specifies the order of return of the Title IV funds to the programs from which they were awarded.

Detailed information concerning the method of calculating such a refund may be obtained on Northern's web site (www.nnmcc.edu) or through Northern's Office of Financial Aid.

Note that, if you withdraw from partially or completely, you will have one week from the date of your withdrawal to rescind the action (in writing), thus reinstating yourself with a commitment to finish the term. For specific additional details, see the section in this catalog dealing with "withdrawals."

ROOM AND MEAL PLAN REFUNDS

Room and meal plan contracts are negotiated each semester. If you cancel a room contract (with the approval of the administration) before the middle of the installment period, you are eligible for a refund of one-half the installment rate for the room. If you withdraw after the middle of the installment period, you will receive no refund. Unless you provide sufficient notice of departure, you may also forfeit your room deposit. In any case, canceling a room contract requires clearance by the Student Life Coordinator.

If you have a meal plan, refunds will be based on a daily pro rata basis from the official date of the meal plan cancellation.

TRANSPORTATION FEE REFUNDS

Refunds of transportation fees will be based on a daily pro rata basis from the last day certified by the driver. However, if you withdraw after the middle of the enrollment period, you will receive no refund.

COURSE CANCELLATION REFUNDS

Normally prior to the first day of class, the Dean of Instruction will cancel those classes having insufficient enrollment. If it is advisable to wait until the first day of class to make the determination, the class will be met by a department representative, the students informed of the cancellation and given an opportunity to immediately change their schedules.

All refundable fees associated with course registration will be refunded. Those fees which are normally non-refundable will be refunded if the cancellation completely withdraws the student from all courses for the term.

BOOKSTORE REFUNDS

Textbook purchases will be fully refunded within 5 working days from the start of classes. If you return purchases between 6-10 working days after classes start,

you will be entitled to only 50% refund. For courses offered for a weekend and/or one week, you will have only until the first day of class to return for a full refund. Any purchases made after the 5 days will have only 48 hours to return for a full refund. New textbooks are fully refundable only when returned in the same condition as purchased. No book purchased during the week of midterms or finals will be refunded; however, you may sell them back at the end of the term during the book buy-back period. Shrink-wrapped books and books with disks are non-refundable if the seal has been opened.

Non-text merchandise is fully refundable within 30 days of receipt. Merchandise must be in original salable condition. No refund is given on magazines or newspapers.

Note: You must retain your receipt to process a return. If you have paid by check and wish a refund, you will have a 10-15-day waiting period before refunds are made.

GRADUATION FEE REFUNDS

The \$35 graduation fee (or \$7.50 charge per extra or replacement diploma) is refundable only if the Registrar has denied the Petition to Graduate before any service has been rendered. Once any service has been rendered, no refund will be granted. If, after submitting your Petition to Graduate, you should decide not to graduate as scheduled, or if you fail to meet the requirements for graduation, or if you withdraw from a course required for graduation, you will receive no refund.

FINANCIAL ASSISTANCE

Northern is committed to ensuring that the opportunity for a post secondary education not be denied to any student because of that student's limited finances. To fulfill this goal, Northern's office of Financial Aid administers a broad spectrum of grants, scholarships, student employment, and loans to meet the financial need of all its students.

The Office of Financial Aid, located at the Espanola Campus in the Montoya Administration Building, is open Monday, Thursday, and Friday from 8 a.m. to 5 pm, and on Tuesday and Wednesday from 8:00 a.m. to 6:00 p.m.. Staff stand ready to assist you in meeting your financial needs in person or by phone at (505) 747-2128. We also encourage you to visit our web site at www.nnmcc.edu.

GENERAL ELIGIBILITY REQUIREMENTS

You may apply for all federal, state or institutional programs available by completing the Free Application for Student Financial Assistance (FASFA).

To receive assistance under any program administered by Northern, you must:

1. meet United States citizenship requirements; and
2. establish financial aid eligibility; and
3. enroll in an eligible course of study on at least a half-time basis (six credit hours minimum); and
4. make satisfactory progress toward the completion of your program of study (refer to Satisfactory Program Requirement later in this section); and
5. not be in default on a Federal Perkins Loan or on a Federal Stafford Loan; and
6. not owe a refund on a Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, or a New Mexico Student Incentive Grant; and
7. have declared a specific degree or certificate major and have been admitted in **regular** status (See the section in this Catalog on "Admissions."); and
8. meet New Mexico residency requirements for tuition purposes (as determined by the Commission on Higher Education and as administered by the College Enrollment Manager) for New Mexico Student Incentive Grant, New Mexico College Work Study, and for Institutional Scholarships. (See the section in this Catalog on "Residency.")

TYPES OF AID

Northern participates in the following federal and state financial assistance programs:

Federal Pell Grant: Intended to be the "floor" of a your financial assistance package and is usually combined with other forms of student financial assistance to meet your financial need.

Federal Supplemental Educational Opportunity Grant (SEOG): Available if you have exceptional financial need. We give priority to students who receive Federal Pell Grants. an SEOG does not have to be repaid.

New Mexico Student Incentive Grant (NMSIG): Combines federal and state funds to permit needy New Mexico residents to pursue a higher education.

Federal College Work Study Program (FCWSP): Provides jobs for students who need financial assistance, allowing you to earn money to help pay your educational expenses. When awarded FCWS, you can work on-campus or at selected off-campus employment sites.

New Mexico Work Study Program (NMWSP): Helps provide employment opportunities to qualified students. Although the program parallels the Federal College Work Study Program, an eligible student may not necessarily have to show need to participate. To be eligible, you must be New Mexico resident, have at least a 2.0 grade point average, and be enrolled for at least 12 credit hours.

Federal Stafford Loan Program: These loans (subsidized and unsubsidized) are available to eligible students to help pay for educational expenses that are not covered by other financial aid. To qualify for such a loan, you must be enrolled in at least six credit hours. All funds received must be used for educational expenses. A FAFSA form is required.

Federal Perkins Loan. This is a low-interest loan that can be used to help pay for educational expenses that are not covered by other financial aid. To qualify, you must be enrolled in at least six credit hours. All funds received must be used for educational expenses. A FAFSA form is required.

New Mexico Health Professions: Student Loan-for-Service Programs: Provides New Mexico residents with loans to complete nursing or radiology education programs and allow them to be repaid through service in a designated area that is under-served by licensed registered nurses or certified radiologists. To be eligible, the recipient must be enrolled for six or more credit hours per semester.

SCHOLARSHIPS

There are numerous scholarships offered to students attending Northern. For a complete list of all scholarships, and their eligibility criteria, visit our web site at www.nnmcc.edu or visit the Financial Aid Office on the Espanola campus.

OTHER TYPES OF ASSISTANCE

Hope Tax Credit: Northern participates in the Hope Tax Credit, part of the Taxpayer Relief Act of 1997. The Hope Scholarship Credit may be claimed for the qualified tuition and related expenses for each student in the taxpayer's family (i.e., the taxpayer, the taxpayer's spouse, or an eligible dependent) who is enrolled at least half-time in one of the first two years of post-secondary education and who is enrolled in a program leading to a degree, certificate, or other recognized educational credential. The amount that can be claimed as a credit is generally equal to: (1) 100 percent of the first \$1,000 of the taxpayer's out-of-pocket for each student's qualified tuition and related expenses; plus, (2) 50 percent of the next \$1,000 of the taxpayer's out-of-pocket expenses for each student's qualified tuition and related expenses. The maximum credit a taxpayer may claim for a taxable year is \$1,500 multiplied by the number of students in the family who meet the enrollment criteria described above.

Lifetime Learning Credit: The Lifetime Learning Credit may be claimed for the qualified tuition and related ex-

penses of the students in the taxpayer's family (i.e., the taxpayer, the taxpayer's spouse, or an eligible dependent) who are enrolled in eligible educational institutions. The amount that may be claimed as a credit is equal to 20 percent of the taxpayer's first \$5,000 of out-of-pocket qualified tuition and related expenses for all of the students in the family. If a taxpayer is claiming a Hope Tax Credit for a particular student, none of that student's expenses for that year may be applied toward the Lifetime Learning Credit.

Espanola Hospital Auxiliary: Several \$250 per semester scholarships are awarded each semester. This scholarship is available if you are entering the nursing profession and are enrolled full-time at Northern. In order to maintain the scholarship, you must maintain full-time status and a 2.5 grade point average. Deadline for submission of a scholarship application: 1 May for the summer session; 1 August for the fall semester; and 1 November for the spring semester. Contact the Espanola Valley Hospital for details.

Tribal Scholarships: If you are a Native American tribal member with financial need, you may be eligible for a tribal scholarship. Contact your Tribal Scholarship Agency for specific requirements.

New Mexico Vietnam Veterans: Administered by the New Mexico Commission on Higher Education for Vietnam veterans who were residents of New Mexico at the time of original entry into the armed forces and who were awarded the Vietnam Campaign Medal. To apply for this scholarship, contact the New Mexico Veterans Service Commission in Santa Fe at 827-6300.

Veterans Educational Benefits (The GI Bills): Most programs at Northern are approved by the Veterans Service Commission (Veterans Approval Office) for the education of veterans, war orphans, and other eligible persons. If you are eligible under one of the many current laws, contact Pam Montrose (747-2151) who is responsible for certifying to the VA the enrollment of eligible persons.

SATISFACTORY ACADEMIC PROGRESS REQUIREMENTS

Recipients of financial assistance must fulfill various requirements, both quantitative and qualitative, for retention in the program at Northern.

Statements of specific, detailed requirements are given to each financial assistance recipient, and re-

quirements for all assistance programs are available in the Office of Financial Aid.

Qualitative Standards (Grade Point Average): If you are receiving financial assistance, you must maintain at least a 2.0 GPA each semester.

Quantitative Standards: If you are a full-time student, you must complete at least 12 credits each semester with passing grades.

Progress Standards (toward a degree or certificate): You are expected to make regular progress toward your degree or certificate. Classes taken must count toward your degree or certificate.

GENERAL POLICIES

* The ability of your family to meet your cost of education will be determined by your family's financial status in terms of income, family size, assets, and additional family members attending post secondary institutions.

* The principle and primary responsibility for financing a college education must remain with you and, if you are dependent upon them financially, with your parents. Financial assistance is considered as supplementary to other sources of funds or income. Parents with financially dependent children should be prepared to make some financial sacrifice to pay for the education of their children.

* Aid awarded to entering freshmen and transfer students is contingent upon completion of all admission requirements.

* The financial aid office is required to define and enforce a standard of academic progress for financial assistance recipients. If you are receiving financial aid, you must fulfill various requirements and you must obtain a degree or certificate within a reasonable time frame.

Our standards:

1. If you are a part-time student, you must pass all courses for which you enroll and achieve a 2.0 semester GPA in order to be considered for financial aid the following semester.

2. If you are a full-time student, you must pass a minimum of 12 credit hours with a 2.0 semester GPA in order to be considered for financial aid the following semester.

3. You may receive financial aid for a maximum number of credit hours attempted, dependent on your major, or until all program requirements have been met, whichever comes first. Transfer credit hours accepted toward a degree or certificate will be included in the maximum credit hours attempted.

4. If you fall short of the minimum requirements, you will be placed on financial aid “probation” (which involves a warning of possible loss of financial assistance) or you may be “suspended” from the financial aid program (which means that financial assistance will be disapproved for the next semester or beyond).

5. If your financial aid should be suspended and if you feel you have justifiable reasons for appealing, you may appeal in writing to the Director of Financial Aid. (See the appellate process under the section of the catalog entitled “Student Appeals.”)

6. You may use student financial assistance for educational expenses only. If you withdraw or cease to remain in full-time status (if required), you may have to repay some funds. The amount of the repayment will be contingent upon your costs and the amount of assistance received. All refunds in repayment must be made before any future financial assistance may be disbursed. Submit an application for financial aid, preferably by March 1, to the Department of Education, using the Free Application for Federal Student Aid (FASFA). If your application is received after the deadline, it will be considered as funding permits.

For detailed information on financial aid programs, visit our Web Site at www.nnmcc.edu.

ENROLLMENT SERVICES

ENROLLMENT IN CREDIT COURSES

Once you have been admitted to Northern, you may enroll in any credit course for which you meet the published pre- or co-requisites. Eligibility for enrollment is primarily determined by scores derived from standardized English and/or mathematics placement tests given by Northern. Other test instruments and transcripts from other colleges may also be used in determining eligibility for placement into courses. *Northern reserves the right to administratively drop students from courses into which they have registered, but for which they have not met the pre-requisites.*

PLACEMENT

In order to enroll in those courses identified as “program requirements” for any degree or certificate, you should have successfully completed or tested above ENG 106N. If you tested into ENG 106N, you are **strongly encouraged** to enroll in that course along with courses in Reading and Study Skills or other college skills courses.

ENGLISH REQUIREMENT

If you are seeking a degree or certificate which requires ENG 111 (English Composition I), you should enroll in ENG 111 during the first year of study at Northern

or consistently take English courses preparatory to ENG 111 until you have completed ENG 111 with a grade of “C” or better.

VERTICAL TRANSFER

Northern recognizes that no diagnostic test (such as its CPE or ASSET) is foolproof in making a decision about which level of English or math is appropriate for any given student. For that reason, if you or your instructor find that you are in the wrong level of English, math, Spanish, or typing during the first two weeks of a fall or spring semester, you may request movement to the next higher or lower level. *This movement must take place by the end of the second week of instruction, and the gaining instructor must be willing to accept you into the new class. Note also that this policy does not allow you to move, for example, from an English course to a history course, only vertically within the same academic discipline.* Vertical transfer during a summer session must take place by the end of the first week of the session. Contact the Registrar’s Office for assistance with vertical transfer.

STUDENT COURSE LOAD

In general, the maximum number of credits in which you may enroll in any semester is limited to 21 (9 in a summer session), subject to the following stipulations:

1. If you are on “academic probation,” you must have special permission from your advisor to enroll for more than 12 credits; and/or
2. If you wish to exceed the limit, you must have special permission from the Dean of Instruction.

The minimum full-time load is 12 credit hours. This is designed around the requirements for full-time financial aid (grants, loans, VA, etc.); however, in order to complete a degree or certificate program within two years, you will need to enroll for 16-18 credits per semester (not including summer sessions and not including any remediation courses which may be required).

REGISTRATION

Pre-registration, open registration, and late registration are enrollment options available to students at different times during the year.

1. **Pre-registration** is available to currently enrolled students for the approaching term (for spring students this means the chance to pre-register for both summer and fall classes). In addition, first-time college students who have completed the matriculation process are invited to special orientation/pre-registration sessions to

facilitate their entry into college. Pre-registration sessions usually end approximately a week to ten days before open registration begins for the next term.

2. **Open registration** during a regular fall or spring term takes place on the 2nd Saturday before the term starts and again on the Tuesday, Wednesday, and Thursday prior to the first day of class. In the summer, this activity takes place on the Wednesday and Thursday prior to the scheduled start of classes.

Open registration provides an opportunity to enroll for those who were not enrolled in the immediate past term. During open registration, course enrollments are available on a first-come, first-served basis; however.

3. **Late registration** is available (at an extra charge of \$5) to those students who did not participate in either pre- or open registrations. This activity extends for the first week of instruction during a fall or spring semester, or for the first two days of a summer session; however, you must register in a class before it meets for the second scheduled class session.

Note: Regardless of when you register, you pay an up-front fee of \$5.00 (not covered as part of financial aid). If you should be dis-enrolled for failure to pay or not be covered by an outside source, you will forfeit the \$5.00 fee and, should you re-register for classes in that term, you will be subject to an additional \$5.00 fee.

ADVISEMENT AND ASSESSMENT SERVICES

COURSE PLACEMENT

This service includes our Course Placement Evaluation (CPE) process, appraisal of ACT/TABE test scores, and evaluation of previous college courses to determine the proper level of English, math, or science courses in which you may enroll.

CPE is **mandatory** if you are a new student, **unless**:

1. you are a transfer student who has received grades of "C" or better in the equivalent of Northern's MATH 130 or ENG 111; or
2. you want to enroll in a course which does not have a math or English pre-or co-requisite; or
3. you can provide appropriate-level ACT/TABE evaluation scores which are no more than 2 years old.

You may schedule one or more of these placement evaluations by visiting the Student Success Center or by calling 747-2199.

STUDENT ADVISEMENT

In order to ensure that you have the best chance to meet your individual goals and to be successful at completing the requirements for a degree or certificate, Northern has established a Student Advisement program.

Our Student Advisement Center is staffed by trained professionals who provide a full range of academic and career advisement to any person seeking assistance. We make referrals to local agencies for personal counseling which might be indicated as necessary to your success.

All first-time-at-Northern students must process through the Advisement Center prior to being allowed to register for classes. Continuing students are encouraged to use the Center's services which include referrals for placement evaluations, course placement, and career guidance. In addition, if you wish to drop a course or withdraw completely from Northern, you will do this through the Student Advisement Center.

After your first semester, full-time faculty advisors in your major area will take over the primary responsibility of providing continuing advisement. If you are in non-degree status, your advisor will be one of the Student Advisement Center staff.

A related program, Success, Opportunity, and Learning (SOL), is located adjacent to the Student Advisement Center. Its purpose is to provide special support to those students who are first-time college students, low income, and/or disabled. They provide such varied services as tutorial assistance and providing tickets and transportation to cultural events.

OTHER SUPPORT SERVICES

In addition to the services provided by the Student Advisement Center, Northern's Student Success Center and Success, Opportunity, and Learning (SOL) departments offer a variety of services in support of your academic and personal goals. Classes, tutoring, support for special needs, career guidance, job placement assistance, student government, and student activities are among those services.

PERSONAL/CAREER DEVELOPMENT

You may find interesting and helpful courses among our offerings, such as Reading and Study Skills. These courses are offered to help you develop basic skills and to enhance your educational and career outlook. For more detailed information, contact our Student Advisement Center (747-2150) or the Student Success Center (747-2199).

WRITING CENTER

Do you want to improve your writing skills? If you feel challenged with your writing process, from brainstorming and organization to drafting and revising, the tutors at Northern's Writing Center are available for one-on-one sessions throughout the week. Appointments are generally for half-hour working periods, concentrating on a single aspect of your personal writing process.

The Writing Center is located in the Student Success Center. To make an appointment, for hours of operation, or further information, call the Writing Center (747-2294).

TUTORIAL PROGRAM

As a student at Northern, you are eligible for free tutoring in many academic and vocational subject areas (with a special emphasis on reading, writing, and math).

Both professional and peer tutors are used on either a one-to-one or small group basis to help you master course material or to overcome difficulties in writing essays and term papers, understanding texts, preparing for exams, or developing good study habits. To take advantage of this service, contact Brenda Martinez in the Student Success Center (747-2199).

CAREER GUIDANCE

If you have any doubts about the type of training that you want to take at Northern or about job suitability, etc., you may wish to avail yourself of our free computerized searches to help with career and educational decisions. We can provide job descriptions, suggested training, job potential, and other specific information on over 1,000 occupations. In addition, we maintain an Occupation Video Library so that you can view videos on 54 different occupations. For assistance in this area, contact the Student Advisement Center staff (747-2150).

SPECIAL NEEDS

If you have any type of physical or mental disability, or have any type of learning disability, you may wish to avail yourself of the educational and personal support provided in this area. If you have questions about the availability of facilities for people with disabilities, or for any type of assistance, contact Ms. Kim Dickman, the Coordinator of our Special Needs department (747-2152). For special assistance with registration activities, contact the Registrar' Officer (747-2114).

STUDENT ACTIVITIES

All students are encouraged to become aware of and involved in co-curricular activities. Because the student population at Northern is so diverse, activities are set up to serve as many students as possible.

All student activities are coordinated by Student Government and the Student Support Services department. Activities range from social to athletic and cultural events. Opportunities exist for becoming a member of the Student Senate or for joining such varied clubs as the literary club, engineering club, etc., or for joining our honor society, *Alpha Iota Sigma* (a chapter of *Phi Theta Kappa*, the international honor society for two-year colleges).

You may obtain more detailed information about the Student Senate and college clubs by contacting the Director of Placement/Student Support Services, Mr. Richard Tafoya (747-2160). For information about *Phi Theta Kappa*, contact Ms Lori Gonzales (747-2215).

STUDENT PHOTO ID

Each credit-student will be issued an unrestricted photo ID immediately upon payment of the term's full tuition and fees. The card will verify those cases for which inter-campus transportation and/or meal plans have been paid. Validation will take place at registration during each subsequent term.

Students who are officially enrolled in the Adult Basic Education or High School Equivalency Programs will be issued a photo ID, without charge, restricted only in terms of specific beginning and ending dates of their program (as established by the programs, but not to exceed the normal ending date of a term).

Photo ID's will be issued to those enrolled in CE/CS courses which have a minimum length of seven weeks. Beginning and ending dates of the courses will be put onto the cards.

Students may use gymnasium facilities only if their validated photo ID is in their possession at all times while in the gymnasium.

Students who withdraw from college prior to the end of the term must turn in their photo ID's to the Admissions Office prior to their withdrawal being accepted.

CHILDREN ON CAMPUS

You may not bring your children to your classroom or to the Eagle Memorial Sports Complex unless the child is attending a children's class offered by the College. Children are not to be left unattended on campus.

INSURANCE

Information about available insurance programs and claims is available through the Director of Placement/Student Support Services (747-2160).

If you will be living in the College residence halls (dorms) and attending under a student visa, you are required to obtain health and accident insurance. In addition, students in some programs and/or courses must obtain specific types of insurance before enrolling. For further information, check with the Department Chair-

person responsible for your particular major, such as Massage Therapy, Nursing, Radiographic Science, Cosmetology, etc.

RESIDENCE HALLS

Northern provides residence halls on its El Rito campus, and daily transportation is available, at a reasonable fee, to the Espanola campus. Living quarters in the residence hall are available to students enrolled for at least nine credit hours on a first-come, first-served basis determined by the date of the receipt of the security deposit.

Most rooms are designed for double-occupancy and are equipped with two beds, two chests of drawers, two wastebaskets, two desks, and limited closet space. If you apply for the residence hall, you will have to supply your own blankets, linen, and other personal items.

You may obtain a copy of the residence hall contract, which all resident students are required to sign, from the Student Life Coordinator (581-4120).

The College operates the residence halls on a self-supporting basis, with all charges paid in advance of service. Published rates are, therefore, subject to change if necessary to meet operating costs. The Administration reserves the right to reassign students within the dormitory if occupancy problems make such action necessary.

Information about current room costs and associated fees is shown in this catalog in the section devoted to Tuition and Fees.

TRANSPORTATION

Northern provides transportation on a daily basis between the El Rito and Espanola campuses. This service is provided on a self-supporting basis and costs may change as necessary. For any given semester, the costs are published in the schedule of classes. For additional information, call the Cashier's office at either campus.

Transportation from surrounding communities will be provided at nominal cost, depending on the availability of vehicles and demonstrated need.

FOOD SERVICES

Northern provides food services on both the El Rito and Espanola campuses. Students living in the residence halls at El Rito are required to purchase a meal plan contract (15 meals per week), and 30-day's notice is required to change a meal plan contract. Students may change a meal plan contract only once per semester.

BOOKSTORE SERVICES

The College Bookstore at the Espanola campus provides full service; however, only limited books/program supplies are available at the El Rito campus. Students should familiarize themselves with the Bookstore hours

and policies which are posted at each campus. If you will be enrolling in Auto Mechanics, Barbering, Cosmetology, Electricity, Plumbing, or Spanish Colonial Furniture Making, you will need to order a kit at the time you register for classes.

The Bookstore policy allows book-buy-backs during finals week in fall and spring terms. No receipt is necessary.

Textbook purchases are fully refundable within 21 days of the start of classes, or within 2 days of purchase thereafter—but you must present a receipt for this service.

LIBRARY SERVICES

The main library facility is at Northern's Espanola campus; materials appropriate to El Rito vocational programs are available in the library facility on the El Rito campus. All facilities are open to students, faculty, staff, and the community. A Northern library card is required to check out materials, and you may apply for a card at the Library. Those community members who are not enrolled as students must pay an annual library-use fee.

The Library has a variety of materials available. The collections consist mainly of books (approximately 22,000 volumes) specifically for the academic and vocational programs offered at each campus. In addition, the Library provides journals (both electronically and in print form), a limited audio-visual collection, a small amount of recreational material in the form of paperback fiction and magazines. It provides access to thousands of journal citations and full-text articles through First Search Databases off the Internet.

Some additional services that the Library provides: assistance in locating materials, instruction on how to use the library and its resources, study facilities, inter-library loan, reciprocal borrowing privileges from other academic libraries, VCR and monitor, computers for looking up information and for typing, and a copy machine for student use.

For more detailed information, look on Northern's Web Site under "Library Services" or call (505) 747-2243.

MEDIA SERVICES

The Media Center provides audio-visual equipment to support the curriculum. It also provides videos and slide and audio programs, and arranges for film rentals. As a student, you may wish to video-tape a speech you will be presenting. For this or any audio-visual need, contact the Media Center director at 747-2249.

PARKING

The only reserved parking is for those who are handicapped and whose automobile shows a valid handicapped placard. Unless you have a physical dis-

ability and possess the required placard, do not park in spaces reserved specifically for the physically disabled — your vehicle will be ticketed or towed.

SPEED LIMITS ON CAMPUS

On-campus driving is restricted to a maximum of 10 mph, or less, depending on the traffic flow. You are expected to obey all traffic signs and give the right of way to anyone not in an automobile who is traveling between buildings and/or parking lots.

OTHER SERVICES AVAILABLE

In addition to the services already listed, a number of others are provided by varied programs at Northern: Adult Basic Education (ABE); High School Equivalency Program (HEP); General Education Development (GED) testing; College Level Examination Program (CLEP) testing; DANTES testing; New Mexico Educational Opportunity Center (NM-EOC); and Community Services and Continuing Education.

ADULT BASIC EDUCATION

This program, operated by the Developmental Studies department, provides instruction throughout northern New Mexico in the area of GED test preparation; pre-GED; English and math basic skills brush-up; integrated Life Skills; literacy improvement; English for speakers of other languages (ESOL); and U.S. citizenship preparation. For information, call 747-2195 or 747-2198.

COLLEGE ASSISTANCE MIGRANT PROGRAM (CAMP)

The CAMP program is a federally-funded program for farm-worker students. CAMP provides tuition, books, tutoring, academic advisement, and monthly stipends to eligible full-time students for their first year of college at Northern. For information, contact the CAMP program office at the El Rito campus (581-4139 or 581-4434).

HIGH SCHOOL EQUIVALENCY PROGRAM (HEP)

The HEP program is a federally-funded program for farm-worker students. HEP provides GED instruction, books and supplies, career advisement, and weekly stipends to eligible students who are at least 16 years of age. For information, contact the HEP program office at the El Rito campus (581-4139 or 581-4434).

AMNESTY TRAINING

Operating under a contract with the Department of Justice, Northern's Developmental Studies department

provides its service area with the basic training necessary to qualify for the Amnesty Program. For information, call 747-2198.

GED TESTING

Northern is the designated testing center for Rio Arriba County, and tests are given at the El Rito and Espanola campuses. For further information, contact Ms. Pam Montrose at the Espanola campus (747-2151).

NEW MEXICO EDUCATIONAL OPPORTUNITY CENTER

This is a federally-funded project, authorized by Public Law 94-482, which provides services to eight north central New Mexico counties to people who are low income, first-generation, college-bound adults. Its primary function is to recruit for any and all New Mexico colleges and to assist applicants with the admission and financial aid processes.

The Educational Opportunity Center's main office is located on the Espanola campus with satellite offices in Bernalillo, Santa Fe, and Taos.. Its personnel interrelate with Northern's other departments in providing quality service to our students. For assistance, call 747-2200.

SUCCESS, OPPORTUNITY, AND LEARNING (SOL)

A federally-funded project, SOL assists full-time students with their academic and personal needs by providing an array of comprehensive support services. The potential benefits of these additional services include better grades, improved chances of graduation, increased potential to transfer to a baccalaureate program, more defined educational and career goals, and an enhanced academic experience. SOL is designed for those students who have the academic potential to succeed, but whose background and/or extenuating circumstances place them at additional risk of not fulfilling their educational goals.

- In order to participate in these benefits, you must
1. be a U.S. citizen or meet New Mexico residency requirements;
 2. have an academic need;
 3. be preparing to earn an associate degree and/or certificate, or transfer to a four-year college or university;
 4. meet **one** or more of the following criteria:
 - a. low income
 - b. first generation college student (neither parent having a four-year degree)
 - c. documented disability

For specific information, contact the SOL Office:
H. Guido Gellis, Director 747-5407 Fax: 747-2157

COMMUNITY SERVICES AND CONTINUING EDUCATION

This is the non-credit division of the College which operates to provide communities in our service area with special interest courses using conference, workshop, and seminar formats.

Business, professional, or community groups interested in meetings to discuss topics of special interest may contact the Office of Community Services and Continuing Education at 747-2118.

Emphasizing its community service component, the Office of Community Services and Continuing Education actively seeks to identify educational needs of the community and to serve those needs through using existing resources and by cooperative efforts with other educational institutions and service agencies.

STUDENT RECORDS

The Office of the Registrar is responsible for the maintenance of your educational records at Northern New Mexico Community College. Such records include but are not limited to student transcripts, academic folders, and faculty grade reports. Annual notice concerning our policy is made available in each semester's published *Schedule of Classes*, in the *Student Handbook*, and in each biannual catalog. The following information provides policies and procedures as they pertain to educational records.

ACCESS TO AND CONFIDENTIALITY OF EDUCATIONAL RECORDS

The confidentiality of educational records is governed by a federal law, the Family Educational Rights and Privacy Act, 34 CFR (hereafter referred to as FERPA). Under that law, you have certain rights with regard to the inspection, access, and correction of inaccuracies in your records. Under certain circumstances, parents or guardians of students may also enjoy such privilege. Under the provision of this Act, the following policies apply:

1. If you are currently enrolled or have previously attended Northern, you may inspect your educational records by obtaining an appointment to review your records with the Registrar. At the time of the review you will be asked to produce a photo ID to validate your identity.

"Educational" records consist of any record (regardless of the media in which it exists) which is maintained by the College and which is directly related to you, the student, *with the exception of* the following types of records:

a. Personal records kept by a faculty or staff mem-

ber which have never been revealed or made available to another person unless to the maker's temporary substitute.

b. Employment records of an individual whose employment is not contingent on the fact that he is a student, provided that the record is used only in relation to the individual's employment. Transcripts submitted for the purposes of employment are not part of your educational record.

c. Records maintained by a college security unit if the record is maintained solely for law enforcement purposes, is revealed only to law enforcement agencies of the same jurisdiction, and the unit does not have access to education records maintained by the college.

d. Alumni records which contain information about you after you are no longer in attendance at the College and the records do not relate to you as a student.

2. You may challenge (in writing) inaccuracies or misleading items; however, you may not challenge the fairness of a grade nor may you challenge the information in any transcript which did not originate at Northern under this provision. In support of a written challenge, you may request and obtain a photocopy (at nominal charge) of any item under dispute. Direct any challenges, in writing, to the attention of the Registrar.

3. Your records will not be released without your written consent, except to college officials with a legitimate educational interest.

a. A college official is one who is employed by Northern in an administrative, supervisory, or support staff position (academic or research), is a member of the Board of Regents; or is employed by or is under contract to the College to perform a special task, such as, perhaps, an attorney or auditor.

b. An educational interest is legitimate if the official is performing a task that is specified in his job description or by a contract agreement; performing a task related to a student's education; performing a task related to the discipline of a student; or providing a service or benefit relating to the college, the student, or the student's family, such as job placement or financial aid. Included under the area of legitimate interest would be the National Student Loan Clearinghouse.

4. Exceptions to the requirement that you provide written authorization include:

a. Access, upon request, to officials of another school in which you seek or intend to enroll. In this case, we will make a reasonable attempt to notify you of the transfer of information.

b. Access to certain officials of the U.S. Department of Education, the Office of Veterans Affairs, the Bureau of Homeland Security, and state and local edu-

cational authorities in connection with certain state or federally supported education programs.

c. Access to law enforcement agents pursuant to Section 507 of the USA Patriot Act; upon such access you will be notified as required by NM House Memorial 2, Laws of 2003.

d. Access in connection with your request for or receipt of financial aid, as necessary to determine eligibility, amount, or conditions of the financial aid, or to enforce the terms and conditions of the aid.

e. Access to organizations conducting certain studies for or on behalf of the College.

f. Access to accrediting organizations to carry out their functions.

g. Access to parents/guardians who show proof that you were claimed as a dependent for income tax purposes in the previous tax year.

h. Access to comply with a judicial order or a lawfully issued subpoena.

i. Access to appropriate parties in a health or safety emergency.

Restriction of Access

Directory information may be released without your written consent unless you have requested in writing that directory information be withheld. You may specify that individual portions of the directory information or the entire listing be restricted without your written consent. A form to implement such a restriction may be obtained from the Office of Admissions and Records. If no restriction is received by the Registrar, the information on you will be classified as directory information until the beginning of the next academic year (i.e., the next fall semester).

Directory information: *your name, mailing address, major field of study, classification, enrollment status (full- or part-time), dates of attendance, honors and degrees awarded, and the name of the education agency or college attended immediately prior to coming to Northern.*

k. In addition to the release of information permitted under FERPA guidelines, the National Defense Authorization Act of 1995, the National Defense Authorization Act for 1996, and the Omnibus Consolidated Appropriations Act for 1997 allow the Department of Defense (under special authority granted under what is called the **Solomon Amendment**) to request the following information about you under its own special definition of "directory information." This exception has been created in order to permit the Secretary of Defense access to particular information to use for recruitment purposes: *Your name, address, telephone listing, date of birth, level of education, academic major, degrees received, and the*

name of the educational institution in which you had been most recently enrolled (prior to enrollment at Northern).

The only students excluded under this definition are those who are under the age of 17 and those 17 or older who have signed a written request denying access to their records by a third party. Also excluded are those above the age of thirty-five.

5. When a record is released, the recipient is notified by Northern that the record may not be released to any other person.

Details concerning your rights and privileges under the Family Educational Rights and Privacy Act are available in the Registrar's Office at the Espanola Campus. Complaints about failure of the College to comply with the Family Educational Rights and Privacy Act may be made, in writing, to the FERPA Office, Department of Education, Washington, D.C.

TRANSCRIPTS

Obtaining a Northern transcript or having a transcript sent on your behalf:

In order to obtain a transcript for yourself or to have one sent to someone else (to a person, agency, or school), you must submit a written request to the Registrar's Office. You may pick up a form at the Registrar's Office, write/fax a letter, or even request a transcript by e-mail. If you have questions, please call 747-2111.

Each transcript will be issued at no cost. However, no transcripts will be issued unless admission requirements have been satisfied and all institutional obligations are paid (including loans issued through the instrumentality of Northern). You are not charged for any transcript issued strictly for use within the college in support of advisement, eligibility to graduate, or admission to a specific program.

Transcripts from other institutions

Transcripts from other institutions that are sent to Northern for purposes of establishing admission eligibility do not belong to students and are not copied for or returned to students. Do not expect that these transcripts will forever remain a physical part of your official educational record. Once their purpose has been served, they may legally be destroyed in accordance with state policies dealing with records retention.

CHANGE OF NAME

If you wish to process a change of name for your academic record, you must bring appropriate documentation (at least two types of identification showing the new name) to the Office of Admissions and Records.

Examples of such documentation include a marriage certificate, birth certificate, or court order for legal name change. A name change will be processed only if you are a currently enrolled student.

Diplomas will be issued only for the official name under which your admission is granted or as officially amended.

ACADEMIC INFORMATION

GRADING SYSTEM

Letter grades are issued by instructors to indicate the quality of work done. The meaning of the letter grades and their grade/honor point equivalents which are used in computing your grade point average include:

A - Excellent: earns four grade points per credit hour.

B - Above Average: earns three grade points per credit hour.

C - Average: earns two grade points per credit hour.

D - Passed: earns one grade point per credit hour.

However, a "D" does not count for graduation requirements nor does it satisfy pre-requisite requirements for entry to higher level courses.

F - Failed: earns zero grade points per credit hour.

The following grade entries are not options which you may choose at the time of registration: they are attached to the course in which you enroll:

CR - Credit: a passing grade which gives credit for the course but is not used in computing your grade point average. Unless you indicate otherwise at the time you register for a course, we assume that a course is desired for "credit."

NC - No Credit: a failing grade, but one which is **not** used in computing your grade point average.

The following grade entries have no effect on your cumulative grade point average nor do they count towards credits earned:

AU - Audit: a grading option which you may choose for any course in which you enroll, but you must indicate this at the time of enrollment or make a change from credit to audit or audit to credit by the end of the second week of a regular semester or the end of the first week of a summer session.

Changing from Credit to Audit/audit to Credit may be accomplished only within the first two weeks of a regular term (fall or spring) or within the first week of a summer session.

W - Withdrawal: records the fact that you officially withdrew from a specific course at some time after the period established for getting a refund (usually the end of the third week of the term). "Officially" describes a process in which you submit an official form or other request in writing (within given deadlines) to the Registrar's office. Failure to "officially" withdraw from a course results in an automatic failing grade of "F" being assigned to the course. You may not attempt to withdraw from a course after the deadline or if a final examination has already been given for the course. Check each semester's Schedule of Classes for a detailed breakdown on withdrawal deadlines for those courses which run for less than 16 weeks. Refer any questions to the Registrar.

In certain circumstances, instructors can exercise the right to withdraw students from their courses for failure to attend/having stopped attending. Do not count on this happening—it is **your responsibility** to withdraw from a course to avoid getting a failing grade.

Special note:

Under recently promulgated financial aid regulations applicable *only* to students receiving federal assistance under Title IV funds, if you are receiving such funds and if you exercise your right to withdraw from one or more courses, you may change your mind and **seek reinstatement** by filing with the Registrar's Office a written statement that you want to rescind the withdrawal and continue to attend classes through the end of the payment period or the period of enrollment. The **deadline** for seeking to be reinstated is no more than five school days after your request to withdraw. If, after requesting reinstatement you subsequently withdraw or stop attending, the effective date of withdrawal for purposes of computing financial aid repayment will be the original date of withdrawal or (at the College's discretion) the last date of academic activity as determined by the College.

I - Incomplete: records a course for which, because of serious reasons beyond your control (e.g., you had an automobile accident on the way to the final exam, or you went into labor or had a baby in the last couple of weeks of the term), you were not able to complete that last little bit of the course requirements. By mutual, signed agreement between you and the instructor, countersigned by the department chairperson and by the Dean of Instruction, and subsequently accepted by the Registrar, you will have up to one year to complete that small portion of the course still lacking. Usually, though, the deadline for completion will be much shorter than a full twelve months—more like 1-3 months, in fact. These deadlines are carefully monitored and, if the grade of "I" has not been promptly removed, the Registrar adminis-

tratively changes the grade to a failing grade ("F").

The instructor of the course must submit a request to give an "I" grade at the time the instructor turns in the final grade sheet for the course. When the "I" has been converted into a regular grade, your transcript will reflect the grade, its grade points, and an adjusted cumulative grade point average.

NR - Not Recorded: used to designate that course for which the instructor failed to turn in the grade on a timely basis. Grades must be run as soon as possible after the deadline for submission, and an "NR" is used to clear those courses for which no grades have been received. This is the only way we can get grades out without undue delay, although it does not often happen that the "NR" is used. "NR" grade entries not changed within 30 days are administratively changed to failing grades.

GRADE CHANGES

A change in grade or a correction of an improperly reported grade may normally be made only by the originating instructor who must complete the proper form (which includes submitting justification for the change), obtaining the required signatures of approval, and delivering the completed form to the Registrar. If you wish to challenge a grade, refer to the section of this catalog dealing with appeals of grades, or contact the Registrar for details (747-2193). If the grade you question has been issued by a former instructor (full-time or part-time), you should first contact the chairperson responsible for that department.

No requests for a grade change or correction will be accepted after one year has passed from the initial giving of the grade by the instructor. You will be mailed grade reports at the end of each term. If there is **anything** incorrect about the grade, it is **your** responsibility to **promptly** alert the Office of Admissions and Records.

GRADE POINT AVERAGE (GPA)

You may calculate your GPA by dividing the number of grade points earned by the total number of credit hours attempted, excluding any course for which a grade of W, NC, CR, AU, or I has been recorded and any course which was accepted by Northern in transfer. Your GPA is based only on courses taken at Northern, not on course grades transferred to Northern from another college or university.

ISSUANCE OF GRADES

You will receive mid-term and final grade reports for each fall and spring semester, normally as soon as possible after the grades have been turned in by the instructors. Because of the shortness of the summer session, only final grade reports are issued.

REPEATING COURSES

You may re-register, without special permission, for any course which you have taken at Northern. Each course enrollment and its grade will appear on your transcript, but only the last grade earned will be used to calculate your cumulative GPA. Some courses, however, are already set up to permit a certain number of repeats (i.e., a HPER course, an ART-studio course, etc.) without affecting your cumulative GPA. For repeatable courses, each enrollment and its grade will be counted, not just the last.

If, because of curricular changes that take place, the repeat of a course has a different credit hour value, the value of the repeat course (the latest) will be used to calculate your cumulative GPA and to satisfy graduation requirements.

If you do not pass a course which is a prerequisite to enrolling in another, higher level course, you must repeat the prerequisite course before enrolling at the higher level. An example of this would be completing ENG 109N with a grade of "C" or better before being able to enroll in or ENG 111.

Please note: certain forms of financial aid will not provide assistance for repeats of courses which have previously been successfully completed. Compliance with such regulations is **your** responsibility if you receive such assistance.

CHANGES IN ENROLLMENT

Once you have registered for classes you may find it necessary or desirable to change your schedule. Northern permits such changes if they take place within the time frame specified in the published catalog and/or schedule of classes; i.e., the first week of a regular semester or the first two days of a summer session. This activity usually involves withdrawing from one class and enrolling in another; however, you may wish to just withdraw from one class or drop all classes. In any case, Change of Schedule forms are routed for clearance through the Student Advisement Center and the Financial Aid Office.

A special time limit for moving from one level of English, math, typing, or foreign language is described in the section entitled "Vertical Transfer."

Personnel in the Office of Admissions and Records will be happy to help you with any type of change necessary, but remember that the deadline for adding new classes/switching courses, changing from "credit" to "audit" (or vice versa), and dropping/withdrawing is strictly enforced.

ATTENDANCE

You are expected to attend all meetings of courses in which you have enrolled. The opportunity to make-

up class work or examinations missed through absences is at the discretion of the instructor.

Each instructor establishes attendance requirements for the course and informs students in writing at the beginning of the course.

If you know that you will miss several class meetings because of unforeseen circumstances, you should inform the instructor (of each course) as soon as possible.

If you are funded through any outside agency, you may be subject to additional attendance requirements or reporting.

ADMINISTRATIVE WITHDRAWALS

Although the College recognizes that students must exercise their responsibility to attend and satisfactorily complete courses, it also recognizes that sometimes circumstances come into play which operate to prevent the proper exercise of that responsibility. When this has happened, the College will exercise its authority to administratively withdraw the student from courses. Some circumstances which would warrant this action on the part of the College might include a death or sudden serious illness in the immediate family, incarceration, or military activation. In such circumstances the Director of Enrollment Management will exercise the responsibility for the student.

The College also recognizes other situations in which it must exercise its own authority to withdraw students from the College. Examples of such situations might include the failure by a student to complete the payment process, the falsification of admission documents or the failure to reveal previous attendance at other colleges/universities, or a serious violation of the Student Code of Conduct.

SCHOLASTIC STANDARDS

Scholastic standing will be determined at the close of each semester and an appropriate entry posted to your transcript. In the absence of any other notation, you may assume that you are in "good" standing.

Your end-of-term standing (good standing, dean's list, probation, or suspension) is based on the total number of semester hours attempted and the GPA achieved for those credit hours and is recorded on your permanent record, the transcript.

Regulations governing academic probation and suspension are based on the 2.00 minimum cumulative GPA which is required to graduate from any certificate or degree program offered by Northern. A semester of course work with less than a 2.00 GPA results in a deficiency which must be removed in succeeding semesters if you

are to graduate or successfully transfer to another college or university.

GOOD STANDING

You are considered to be in "good academic standing" if your cumulative GPA is at or above the 2.00 level.

THE DEAN'S LIST

At the end of each fall and spring semesters, the "Dean's List" is announced as the official recognition of outstanding academic accomplishments. Both full-time and part-time students are eligible for this honor.

To qualify as a **full-time** student, you must have earned a semester GPA of at least 3.50 over a minimum of 12 credit hours (excluding any courses labeled as remedial), with no grade less than a "C."

To qualify as a **part-time** student, you must have enrolled for the semester for less than full-time status (i.e., carrying 6-11 credits), have already completed 12 credit hours at Northern (over one or more terms), have earned a semester GPA of at least 3.50 (excluding any courses labeled as remedial), with no grade less than a "C." The entry "Dean's List" will be posted to your transcript and your name will be released to your hometown press.

PLAGIARISM

Dishonesty in connection with tests, quizzes, or course work assignments may be cause for dismissal from the College.

Plagiarism is the most common type of academic dishonesty. Plagiarism consists of any representation of another person's work as one's own without proper acknowledgment. Examples include but are not limited to 1) submitting as one's work a paper which includes a part copied from a book or article, without identifying the quoted selection and/or sources, 2) presenting an author's ideas as though they were one's own original ideas, or 3) using work by another student with your name as the author.

When an instructor suspects a student of academic dishonesty, the instructor will bring it to the student's attention. If the problem is not resolved to the instructor's satisfaction, the incident will be reported to the department or program chairperson for follow-up action.

ACADEMIC PROBATION

If, at the end of any term, your cumulative GPA (based on at least 16 credit hours of course work attempted at Northern) fails to equal at least a 2.00, you will be placed on *Academic Probation*.

Probation is **not** a penalty, but an emphatic warning that the quality of your work must improve if you are to attain the GPA necessary to graduate from Northern.

If you should find that you are on Probation, you may continue to enroll, but you must maintain a semester GPA of 2.00 or higher, and you will not be permitted to enroll in more than 12 credit hours of course work during a regular semester or more than 6 credit hours during a summer session without special permission from the Dean of Instruction. As you continue to raise your GPA, your status would be recorded as *Continued Academic Probation* until you have achieved a cumulative GPA of 2.00 or higher.

ACADEMIC SUSPENSION

If, at the end of any term, your cumulative GPA (based on at least 36 credit hours of course work attempted at Northern) fails to equal at least a 2.0, you will be placed on *Academic Suspension*, which may or may not have been preceded by a period of Academic Probation or Continued Academic Probation.

The duration of an initial suspension is one semester; for subsequent, repeat suspensions, one full year.

Northern prefers not to look on Suspension as a penalty for failure, but as an opportunity to deal with the pressures of life and school (which may have contributed to the low grades which brought on a period of Suspension) prior to re-applying for admission and a chance to continue your education.

STUDENT APPEALS

As a student, you may appeal any policy decision or administrative decision which you feel has been arbitrarily or improperly rendered. A special committee, the **Student Appeals Committee**, has been created to handle such appeals.

There are, however, specific procedures which must be followed in terms of appealing certain types of situations. These procedures exist solely to protect your rights and to afford you "due process." If, at the end of the appellate process, you are still not satisfied, you will have protected your right to due process through the courts. If you fail to follow the established process, you will probably have lost any right to due process through civil suit.

The College Registrar is responsible for providing you with any information you may need to help you with an appeal. In general, appeals should begin at the lowest level possible (i.e., a grade appeal starts with you, the student, meeting with the instructor who issued the grade in question).

Appeals to the chairperson and/or to the committee **must** be in writing in order to protect your rights.

ACADEMIC FORGIVENESS

Because Northern recognizes that sometimes stu-

dents are not academically prepared to start college, or are perhaps not emotionally or socially prepared, and sometimes receive failing grades in their first term(s) which follow them throughout their academic careers and even affect them to the point that they drop out of college, Northern has adopted a policy which allows those who fall into this category to request that such grades be deleted from their academic transcript.

The criteria for exercising this possibility:

1. The term(s) for which you seek forgiveness must have happened at least five years prior to your formal request for forgiveness, and your semester gpa at that time must have been below 2.00; and
2. The terms involved are limited to your first or first two consecutive terms at Northern; and
3. You must not yet have graduated from Northern; and
4. Since returning to Northern, you must have completed at least 12 credit hours (spread over one or more terms) and must have a minimum semester grade point average of 2.00) before applying for forgiveness.

The result of achieving Academic Forgiveness will be that the term(s) and all associated courses in that term(s) will no longer appear on your transcript, although a notation will appear on the transcript to the effect that "Academic Forgiveness was granted for (whichever term was appropriate)." A separate paper trail will be maintained to track the action taken.

GRADE APPEALS

Only you, the affected student, may challenge or appeal a grade which you feel is improper or incorrect, and you must do so within twelve months of the date the grade was assigned and recorded in your records. To initiate the appeal, you must complete the following steps:

1. Discuss the situation with the instructor who gave the grade. If the matter is not resolved to your satisfaction, you may appeal to the instructor's immediate supervisor (usually the department chairperson, although some departments will have an intermediary step, the department director).
2. Provide the responsible department chairperson with a written summary of the situation and a detailed, specific statement of what you want. If the matter is not resolved to your satisfaction by the department chairperson, you may appeal to the Student Appeals Committee.
3. Provide the Student Appeals Committee chairperson with a written summary of the situation and a detailed, specific statement of what you want. The Committee recommendation will be forwarded to the Dean

of Instruction for appropriate action. **Note:** because of the nature of this type of appeal, the Student Appeals Committee may decide not to hear the appeal, but instead refer it directly to the Dean of Instruction for resolution.

SUSPENSION

If you have been placed on *Academic Suspension*, you may appeal such status by:

1. Providing the Director of Enrollment Management (the Registrar) with a letter of appeal, stating what caused the low grades which resulted in suspension and what you plan to do to correct the situation. If the Director accepts the appeal, you will be re-admitted to the College on Academic Probation and may be restricted in terms of the number of hours for which you may enroll and/or in terms of specific courses which you must take or may not take. If the Director denies your appeal, you may appeal to the Student Appeals Committee.

2. Provide the Student Appeals Committee with a written summary of the situation and a detailed, specific statement of what you want. The Committee recommendation will be forwarded to the Dean of Student Services for appropriate action.

FINANCIAL AID

If you have been receiving financial aid and have been denied further assistance, you may appeal that decision by:

1. Providing the Director of Financial Aid with a letter of appeal, stating the unusual circumstances which caused you to not meet financial aid requirements for demonstrating progress. If the Director of Financial Aid denies your appeal, you may appeal to the Student Appeals Committee.

2. Provide the Committee with a written summary of the situation and a detailed, specific statement of what you want. The Committee recommendation will be forwarded to the Dean of Student Services for appropriate action.

ADMISSION / RE-ADMISSION or RESIDENCY CLASSIFICATION

If you have applied to the College for admission, re-admission, or for classification of residency and believe that the Office of Admissions and Records has not adequately fulfilled its responsibilities in any of these areas, you may appeal by:

1. Providing the Director of Admissions with a letter of appeal, stating in detail what you believe to be inappropriate or incorrect with the decision. If the Direc-

tor of Admissions upholds your appeal, you will be admitted or re-admitted, as appropriate, or your residency classification adjusted. If the Director of Admissions denies your appeal, you may appeal to the Student Appeals Committee.

2. In the case of residency classification, under state law and Commission on Higher Education regulations, Northern's appellate process is your last and highest appeal prior to exercising your right to take court action if you are unsatisfied.

REFUNDS

If you believe that the College's policy for the refunding of charges has not been properly implemented, you may appeal by:

1. Providing the Director of the Business Office with a letter of appeal, stating in detail what you believe to be inappropriate or incorrect with the decision. If the Director upholds your appeal, the refund will be adjusted appropriately. If the Director denies your appeal, you may appeal to the Student Appeals Committee.

2. Providing the Student Appeals Committee with a written summary of the situation and a detailed, specific statement of what you want. The Committee recommendation will be forwarded to the Dean of Finance for appropriate action.

STANDARD OF CONDUCT

Students at Northern are expected to act in a responsible manner and to abide by all College policies while on Northern's campuses.

An individual who enrolls at Northern can rightfully expect an environment which is conducive to teaching and learning. This assures each student that a safe and healthy environment exists at Northern. To assure the attainment of this goal, Northern has developed Standards of Conduct for all students. These standards identify behavior which impedes the teaching and learning process. We ask that each of you assist in assuring that Northern is a place where quality teaching and learning will occur in a friendly setting.

Northern's *Student Handbook* contains detailed information concerning specific standards which are expected from each student, information about disciplinary sanctions which could be invoked for infractions of the standards of conduct, and the appellate process applicable to appeals of disciplinary action imposed under the code. The *Student Handbook* is considered an official part of this catalog even though it is published in a separate document.

GENERAL REQUIREMENTS

In order to be eligible to receive a degree or certificate from Northern, you are responsible for meeting the following requirements as well as meeting specific admission and course requirements listed under the major you have chosen to pursue.

1. An overall cumulative GPA of 2.0 or higher **and** completion of all required course work with no grade below a "C." Certain programs with professional accreditation may require special or even additional standards for graduation.

2. You may not count toward associate degree requirements any course considered to be remedial in nature (i.e., normally bearing a suffix of "N," such as MATH 100N). Certain certificate programs, however, may allow you to count a limited amount of remedial work against graduation requirements in the area of General Education.

3. You must have earned at least the last 16 credit hours towards your degree or certificate here at Northern. Any exception to this must be cleared by the Registrar **before** your last term at Northern starts. Failure to comply may be grounds for denying acceptance of your courses in transfer.

4. You must complete a "Petition to Graduate" form, pay the required graduation fee, and submit the form through your faculty advisor and department chairperson to the Registrar. We ask that you finish this process no later than the end of the second week of the term in which you plan to graduate. The Registrar will conduct a further review of your records and, if necessary, involve the assistance of your department chairperson in the final clearance process. You will receive a letter from the Registrar which will confirm your candidacy for graduation.

Note: Graduation takes place at the end of the semester in which all program requirements **and** financial requirements have been met, even though there may not be a formal graduation ceremony scheduled for that semester. In other words, you may have completed all of the required courses in a prior term, but if you haven't paid the graduation fee and/or completed the processing during the same term in which you completed the course work, you won't graduate until the term in which the last requirements are met (payment, for example).

If you start a program and continue uninterrupted, you are entitled to graduate under the terms of the degree plan in the catalog in effect at the time of your initial written declaration of the major or under any later issued

catalog, whichever is more beneficial to you. ***If, however, you interrupt your attendance by one or more regular semesters of non-attendance, you will be bound by the terms of the catalog in effect at the time of your latest re-admission to the College.***

5. You cannot graduate if you owe a debt of any kind to the College.

6. Your diploma(s) will reflect the legal name under which you have been admitted to Northern. If you wish any other name to appear, you will have to document a legal change of name (as described in the section entitled CHANGE OF NAME).

7. Replacement diplomas will be provided for a fee of \$7.50 each, but only if the diploma was awarded since 1999. We have no way of producing a diploma for any period earlier than 1999.

GRADUATION WITH HONORS

You will meet the requirements for graduating with honors if you have completed at least 50 percent of your program requirements here at Northern. Your transcripts and diploma will reflect that honor within the following guidelines:

Cum Laude	3.50 - 3.74 cum. GPA
Magna Cum Laude	3.75 - 3.99 cum. GPA
Summa Cum Laude	4.00 cum. GPA

GRADUATION WITH MENTION OF HONOR SOCIETY MEMBERSHIP

If you are a member in good standing in Northern's *Alpha Iota Sigma* chapter of **PHI THETA KAPPA**, the international honor society for two-year colleges, your diploma will bear a gold seal with the imprint of the society, and your transcript will bear a notation which recognizes your membership. You will also be entitled to wear the Society's gold honor stole at graduation. See the chapter advisor for information on membership.

GENERAL CURRICULUM REQUIREMENTS

Every degree or certificate at Northern is structured to provide a certain minimum spread of knowledge and competency for our graduates. In general, if you receive a diploma in a certificate program from Northern, you will have been provided all the job skills and the minimal level of competency in English and mathematics that will be required to obtain entry level employment in the field. If you earn a degree, your background will be much broader, with exposure to several different types of academic disciplines.

1. **Certificate requirements** (minimum)
 - a. An English course which meets or exceeds the competencies of ENG 108N, Basic English I; and
 - b. A math course which meets or exceeds the competencies of MATH 100N Fundamentals of Mathematics; and
 - c. Program course requirements

2. **Degree requirements**
 The following minimum **General Education** spread are minimum requirements throughout all Associate of Applied Science degree majors shown in this catalog:

Communications	6 #
Humanities	3
Math/Computer Science/Lab Science	6**
Social/Behavioral	3
	18

*** Six credit hours in mathematics, computer science and/or laboratory sciences.
 # Must include ENG 111 (English Composition I)

3. **Health, Physical Education, or Recreation courses:** all degrees, require a minimum of 1 credit. Any HPER activity course and/or DANC activity course, plus HSCI courses in nutrition, CPR, or First Aid/CPR may be used to satisfy this requirement, unless the course has been used to satisfy some other requirement within the same degree..

In order to facilitate your choice of appropriate courses to fulfill these General Education requirements for the applied science degrees, we have defined certain course disciplines from which courses may be chosen to satisfy general education requirements.

The following are discipline areas acceptable for associate of **applied science** degrees. Only courses from these breakdowns may be used to satisfy the discipline requirement for General Education electives in an **applied science degree** (course numbers ending in an "N"

may never be counted). For example, neither Education nor Criminal Justice are shown below; therefore, neither may be used as elective credits where any specific discipline allows "elective credit." Also, note that although "Foreign Language" is listed under Communications, ENG 111 is the minimal acceptable course in this area for all degrees.

Communications

- English *
- Foreign Language
- Speech

Mathematics *

- MATH 130 or higher

*Excludes Literature courses and Creative Writing

Humanities

- Art (theory only)
- History
- Humanities
- Literature
- Music (theory only)
- Philosophy
- Theatre (theory only)

Laboratory Sciences **

- Astronomy
- Biology
- Chemistry
- Geology
- Physics

Social/Behavioral

- Anthropology
- Economics
- Geography
- Political Science
- Psychology
- Sociology

** In an AAS degree not requiring a laboratory experience, any approved math, science, computer, or engineering course will satisfy this requirement.

NORTHERN'S GENERAL EDUCATION COMMON CORE OFFERINGS

For purposes of selecting appropriate courses to meet Northern's Associate of Arts and/or Associate of Science degree requirements for the General Education Common Core, you will select courses from each area shown below. These courses have deliberately been designed around the Transfer Common Core to enhance transferability.

Area I: Communications (9 hrs)

- ENG 111 English Composition I (3)
 - SPCH 130 Public Speaking (3)
- Choose one of the following:
- ENG 112 English Composition II (3)
 - ENG 116 Technical Writing (3)

Area II: Mathematics (3 hrs)

- MATH 145 Intro to Probability & Statistics (3),
- or
- MATH 150 College Algebra (3)

Area III: Laboratory Science (8 hrs)

ASTR	110/L	Intro to Astronomy w/lab (4)
BIOL	110/L	Current Topics in Biology w/lab (4)
BIOL	112/L	Environmental Science w/lab (4)
CHEM	110/L	Introduction to Chemistry w/lab (4)
GEOL	101/L	Physical Geology w/lab (4)
GEOL	102/L	Historical Geology w/lab (4)
PHYS	110/L	Introduction to Physics w/lab (4)

Area IV: Social/Behavioral Sciences (6-9 hrs) *

You must select courses from *at least two different discipline areas* from the following:

ANTH	101/L	Physical Anthropology w/lab (4)
ANTH	102	Intro to Social/Cultural Anthropology (3)
ANTH	111	Language and Culture (3)
ANTH	207	Cultures of New Mexico (3)
ECON	20	Macroeconomics (3)
ECON	201	Microeconomics (3)
GEOG	111	World Geography (3)
PSCI	110	The Political World (3)
PSCI	200	American Politics (3)
PSY	105	General Psychology (3)
SOC	101	Introduction to Sociology (3)
SOC	220	Social Problems (3)
SOC	225	Marriage and the Family (3)

Area V: Humanities and Fine Arts (6-9 hrs) *

You must select courses from *at least two different discipline areas* from the following:

ART	105	Introduction to Art (3)
ART	10	History of Art (3)
ENG		Lit. courses numbered 260-298 (3)
HIST	101	Western Civilization I (3)
HIST	102	Western Civilization II (3)
HIST	161	History of the U.S. to 1877 (3)
HIST	162	History of the U.S. from 1877(3)
HIST	260	History of New Mexico (3)
HUM	101	Humanities I (3)
HUM	102	Humanities II (3)
MUS	105	Music Appreciation (3)
PHIL	110	Intro to Philosophical Problems (3)
PHIL	220	Ethics (3)
THE	120	Introduction to Theatre I (3)
THE	220	Introduction to Theatre II (3)
THE	130	History of Theatre (3)
THE	225	Creative Drama Techniques for the Classroom K-8 (3)
THE	238	Teatro Chicano (3)

Total to be selected 35 semester hours

* If your transfer major is in the area of the Humanities/ Fine Arts, you should select 9 hrs from Area V and 6 hrs from Area IV; if in the Social/Behavioral Sciences, you

should select 9 hrs from Area IV and 6 hrs from Area V. Consult your major advisor.

Programs and their courses listed in this catalog are subject to change through normal academic channels. New courses and changes in existing course work are initiated by the responsible department, approved by the faculty curriculum committee, by the faculty senate, and finally by the academic dean.

If you have any questions concerning the application of the General Education Common Core, please check with the Registrar (747-2193) before you sign up for an inappropriate course.

DISTANCE EDUCATION THROUGH INSTRUCTIONAL TECHNOLOGY

A number of Northern's courses are offered through various electronic media . Some courses are accessible over the Internet, such as through WebCT, streaming-video, and E-mail, or a combination of these media As each term's schedule of classes is published, those courses are identified by the type of instruction. When you register for one of these courses, you will be assessed a \$25.00 media fee (per course), payable at the time of registration.

In order to access these courses, you must have been admitted to the college and registered for the course. You will be given a user name and password from the technology center by calling the center at 747-2418.

You must be media-ready **before** classes begin. This means that you must have basic computer skills and you must have Internet access and an e-mail address. You must also be book-ready **before** classes begin.

In addition, you must have available certain minimum hardware and software to be successful in using this technology:

1. Modem 28.8 kbps or higher speed;
2. Processor of 350 MHz or higher; and
3. Appropriate software for the class in which you have enrolled.

DEPARTMENT OF ART

The mission of the Arts Department is to provide you with the opportunity to enrich your life through study of the traditional fine arts, which include art, dance, music, theatre, and southwestern folk arts, as well as to prepare you for entry into baccalaureate programs at four-year colleges and universities.

The Arts Department also offers other programs which are centered around the application of the fine arts as they are applied to a business setting (Arts Entrepreneurship).

Native American students attending the Pueblo of Pojoaque's POEH Center for the Arts are eligible to count many of their courses against program requirements in the concentration of ART, thus enabling them to earn credit and, if otherwise eligible, qualify for federal financial aid.

Associate of Arts FINE ARTS

This program is designed to maximize transfer of credit to a four-year college or university. In addition to a generous exposure to general education courses, you will concentrate your efforts in one of the following areas of specialization.

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two course (with labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)

BIOL 110/L Survey of Modern Biology w/lab (4)

BIOL 112/L Environmental Science w/Lab (4)

CHEM 110/L Introduction to Chemistry w/lab (4)

GEOL 101/L Physical Geology w/Lab (4)

GEOL 102 Historical Geology w/Lab (4)

PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 hrs) *

You must select courses from *at least two different discipline areas* from the following list:

ANTH 101/I Physical Anthropology w/Lab (4)

ANTH 102 Intro to Social & Cultural Anthropology(3)

ANTH 111 Language and Culture (3)

ANTH 207 Cultures of New Mexico (3)

ECON 200 Macroeconomics (3)

ECON 201 Microeconomics (3)

GEOG 111 World Geography (3)

PSCI 110 The Political World (3)

PSCI 200 American Politics (3)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

SOC 220 Social Problems (3)

SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select courses from *at least two different discipline areas* from the following list:

ART 105 Introduction to Art (3)

ART 107 History of Art (3)

ENG Lit. courses numbered 260-298

HIST 101 Western Civilization I (3)

HIST 102 Western Civilization II (3)

HIST 161 History of the U.S. to 1877 (3)

HIST 162 History of the U.S. from 1877 (3)

HIST 260 History of New Mexico (3)

HUM 101 Humanities I (3)

HUM 102 Humanities II (3)

MUS 105 Music Appreciation (3)

PHIL 110 Intro to Philosophical Problems (3)

PHIL 220 Ethics (3)

THE 120 Intro to Theatre I (3)

THE 130 History of Theatre (3)

THE 220 Intro to Theatre II (3)

THE 225 Creative Drama Techniques for the Classroom K-12 (3)

THE 238 Teatro Chicana/o (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS

You must choose **ONE** of the following areas of specialization:

Art (33 hrs) (50.0101)

ART 105 Intro to Art (3)

ART 107 History of Art I (3)

ART 110 Drawing I (3)

ART 120 Painting I (3)

ART 122 Basic Design (3)

ART 208 History of NM Art and Architecture (3)

ART 211 History of Art II (3)

ART 221 Drawing II (3)

ART 232 Painting II (3)

ART 233 Printmaking I (3)

Choose **one** course from the following:

ART 125 Intro to Graphic Design (3)

ART 150 Bookmaking (3)

ART 160 Pottery (3)

ART 170 Photography I (3)

ART 235 Watercolor (3)

ART 237 Sculpture (3)

ART 240 Portrait Painting (3)

DANC 126 Modern Dance (2)

FA 101 Weaving I (1)

and

FA 101L Weaving I Lab (6)

THE 120 Theatre I (3)

TOTAL CREDIT HOURS 69

Arts Entrepreneurship (27 hrs)(50.0704)

ART	170	Photography I (3)
ART	185	Southwest Crafts (3)
ART	208	History of NM Art & Architecture (3)
ART	210	Art Marketing Strategies (3)
ART	230	Art Business Planning (3)
ART	290	Studio Planning (3)
BA	120	Intro Business (3)
BA	251	Principles of Marketing (3)

Choose **one** course from the following:

ART	115	Traditional Woodcarving (3)
ART	130	Tinsmithing (3)
ART	152	Traditional Spanish Colonial Retablo Making (3)
ART	180	Micaceous Clay I (3)
ART	190	Silversmithing (3)

TOTAL CREDIT HOURS 66

Flamenco Dance (31-32 hrs) (50.0104)

DANC	126	Modern Dance (2)
DANC	149	Ballet I (2)
DANC	169	Flamenco Dance I (3)
DANC	211	Choreography (3)
DANC	212	Improvisation (2)
DANC	214	Kinesiology (3)
DANC	222	Rhythmic Fund (2)
DANC	269	Flamenco Dance II (3)
DANC	292	Dance Repertory (1)
MUS	102	Music Theory I (3)
THE	120	Intro to Theatre I (3)
THE	134	Intro to Costuming (2)

Choose **one** of the following (2-3 hrs)

ART	105	Intro to Art (3)
ART	170	Photography I (3)
DANC	240	Dance Appreciation (3)
MUS	111	Applied Music: Guitar I (2)
MUS	112	Applied Music: Voice (2)
THE	132	Stagecraft Sound (3)
THE	238	Chicana/o Theatre (3)

TOTAL CREDIT HOURS 67-68

Flamenco Music (34 hrs) (50.0105)

DANC	222	Rhythmic Fundamentals (2)
MUS	101	Music Theory I (3)
MUS	111	Applied Music: Guitar I (2)
MUS	112	Applied Music: Voice (2)
MUS	114	Applied Music: Flamenco Guitar I (2)
MUS	119	History of Flamenco (3)
MUS	121	Dance Accompaniment I (2)
MUS	216	Music Theory II (3)
MUS	222	Dance Accompaniment II (2)
MUS	223	Applied Music: Flamenco Guitar II (2)
MUS	227	Tradition in Flamenco (3)
MUS	231	Structural Study of Flamenco Music (2)

Choose **two** of the following:

ART	105	Intro to Art (3)
ART	170	Photography I (3)
DANC	240	Dance Appreciation (3)
THE	120	Intro to Theatre I (3)

THE	132	Stagecraft (3)
THE	238	Teatro Chicana/o (3)

TOTAL CREDIT HOURS 70

Music (31-32 hrs) (50.0102)

MUS	102	Music Theory I (3)
MUS	103	Music History and Literature I (3)
MUS	105	Music Appreciation (3)
MUS	107	Introduction to String, Percussion, Woodwind, and Brass (2)
MUS	110	Applied Music: Piano I (2)
MUS	111	Applied Music: Guitar I (2)
MUS	112	Applied Music: Voice (2)
MUS	113	Applied Music: Violin (2)
MUS	211	Applied Music: Guitar II (2)
MUS	216	Music Theory II (3)
MUS	218	Music History and Literature II (3)
MUS	221	Applied Music: Piano II (2)

Choose **one** course from the following:

ART	170	Photography I (3)
DANC	126	Modern Dance (2)
MUS	214	Chorus (3)
MUS	220	Applied Music: Folkloric Vocal/Instrument Ensemble (3)
MUS	225	Musica Folklorica: La Nueva Cancion (3)
MUS	226	Music Composition (3)
THE	120	Theatre I (3)
THE	238	Teatro Chicana/o (3)

TOTAL CREDIT HOURS 69

Southwest Folk Art (30 hrs) (50.0106)

ART	115	Traditional Woodcarving (3)
ART	130	Tinsmithing (3)
ART	150	Basic Jewelry and Metalworking (3)
ART	152	Traditional Spanish Colonial Retablo Mkg (3)
ART	156	Pueblo Sash Weaving (3)
ART	180	Micaceous Clay I (3)
ART	246	Bookmaking (3)

Choose **one** of the following:

ART	160	Pottery (3)
ART	170	Photography I (3)
ART	190	Silversmithing (3)
Electives		Approved by department chairperson (6)

TOTAL CREDIT HOURS 66

Theatre (34 hrs)

THE	120	Intro to Theatre I (3)
THE	122	Acting I (3)
THE	124	Acting for Film, TV, and Commercial (3)
THE	126	Speech and Movement for Theatre (2)

or

THE	228	Performance Poetry (2)
THE	130	History of Theatre (3)
THE	132	Stagecraft (3)
THE	150	Stage Production (2)
THE	218	Acting II (3)
THE	224	Playwriting (3)
THE	238	Teatro Chicana/o (3)

Choose **six (6) credit hours** from the following:

THE	134	Introduction to Costuming (2)
THE	196	Intro to Light and Sound (3)
THE	220	Intro to Theatre II (3)
THE	225	Creative Drama Techniques for the Classroom K-12 (3)
THE	226	Directing & Play Production (2)
THE	250	Stage Management (2)
THE	290	Design for the Theatre (3)
THE	296	Advanced Light & Sound (3)

TOTAL CREDIT HOURS 70

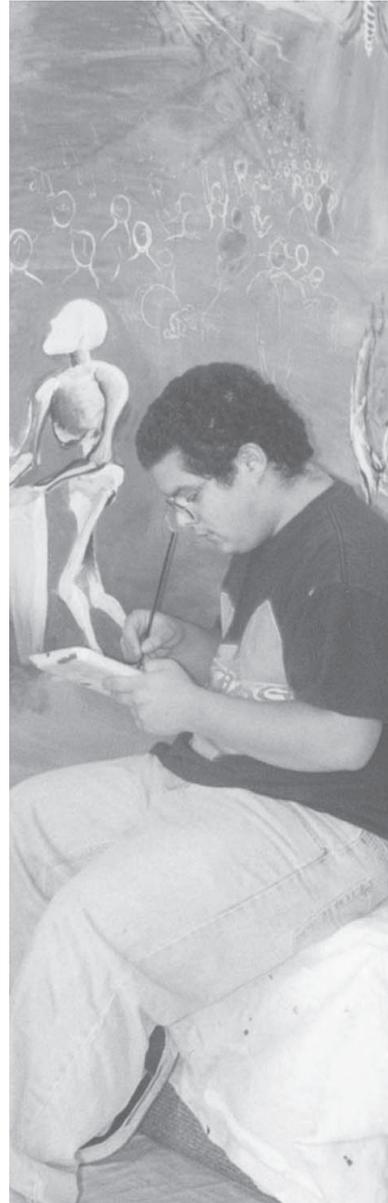
Technical Theatre (34 hrs)

THE	120	Intro to Theatre I (3)
THE	122	Acting I (3)
THE	124	Acting for Film, TV, and Commercial (3)
THE	130	History of Theatre (3)
THE	132	Stagecraft (3)
THE	134	Intro to Costuming (2)
THE	150	Stage Production (2)
THE	196	Intro to Light and Sound (3)
THE	290	Design for the Theatre (3)
THE	296	Advanced Light & Sound (3)

Choose **six (6) credit hours** from the following:

THE	126	Speech & Movement (2)
THE	218	Acting II (3)
THE	220	Intro to Theatre II (3)
THE	224	Playwriting (3)
THE	225	Creative Drama Techniques for the Classroom K-12 (3)
THE	226	Directing & Play Production (2)
THE	228	Performance Poetry (2)
THE	250	Stage Management (2)

TOTAL CREDIT HOURS 70



DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

The Department of Business and Office Administration houses a number of associate degree and certificate programs which are designed to provide solid employment skills as well as facilitate transfer to a four-year college or university in the general areas of business and accounting, and in the areas of information management and office administration. The programs in this department are accredited by the Association of Collegiate Business Schools and Programs.

In Fall 2005, the Barbering and Cosmetology programs, formerly housed at our El Rito Campus, have moved to facilities at the Espanola campus and are under the direction of the Chairperson for Business and Office Administration.

Associate of Applied Science ACCOUNTING

06.0201

If you wish to seek employment in the field of accounting, this program will provide a solid background in accounting at the same time it provides a basic core in general education.

GENERAL EDUCATION (18 hr)

Communications (6 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Math/Computers/Lab Sciences (6 hrs)

BA 111 Microcomputer Applications in Business(3)
BA 205 Business Statistics (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (45 hrs)

BA 117 Business Math (3)
BA 120 Introduction to Business (3)
BA 130 Accounting Principles I (4)
BA 131 Accounting Principles II (4)
BA 135 Computerized Accounting (3)
BA 202 Principles of Management (3)
BA 210 Principles of Finance (3)
BA 225 Excel (3)
BA 230 Intermediate Accounting I (3)
BA 231 Intermediate Accounting II (3)
BA 232 Income Tax Accounting (3)
BA 235 Governmental Accounting (3)
BA 245 Cost Accounting (3)
BA 266 Business Law (4)

TOTAL CREDIT HOURS 64

Certificate BOOKKEEPER

07.0103

This program will prepare you for entry-level positions as a Bookkeepers. Typical work settings might include working alone for a small business or, perhaps, working under the direction of a full-charge bookkeeper or an accountant in a larger business or organization.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 109N Basic English II (3) or a higher level course

Mathematics (3 crs)

BA 117 Business Math (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (17 hrs)

BA 111 Microcomputer Applications in Business (3)
BA 130 Accounting Principles I (4)
BA 131 Accounting Principles II (4)
BA 135 Computerized Accounting (3)
BA 225 Excel (3)

TOTAL CREDIT HOURS 24

Associate of Arts BUSINESS ADMINISTRATION

06.0401

This program is a transfer degree designed for students who want to major in the field of business or accounting at a four-year college or university. It will provide you a solid background in general education at the same time it provides the basic core of transfer business courses.

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two survey courses (with labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
BIOL 112/L Environmental Science w/Lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102 Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ANTH	101/L	Physical Anthropology w/Lab (4)
ANTH	102	Intro to Social & Cultural Anthropology (3)
ANTH	111	Language and Culture (3)
ANTH	207	Cultures of New Mexico (3)
ECON	200	Macroeconomics (3)
ECON	201	Microeconomics (3)
GEOG	111	World Geography (3)
PSCI	110	The Political World (3)
PSCI	200	American Politics (3)
PSY	105	General Psychology (3)
SOC	101	Introduction to Sociology (3)
SOC	220	Social Problems (3)
SOC	225	Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ART	105	Introduction to Art (3)
ART	107	History of Art (3)
ENG		Lit. courses numbered 260-298
HIST	101	Western Civilization I (3)
HIST	102	Western Civilization II (3)
HIST	161	History of the U.S. to 1877 (3)
HIST	162	History of the U.S. from 1877 (3)
HIST	260	History of New Mexico (3)
HUM	101	Humanities I (3)
HUM	102	Humanities II (3)
MUS	105	Music Appreciation (3)
PHIL	110	Intro to Philosophical Problems (3)
PHIL	220	Ethics (3)
THE	120	Introduction to Theatre I (3)
THE	130	History of Theatre (3)
THE	220	Introduction to Theatre II (3)
THE	225	Creative Drama Techniques for the K-8 classroom (3)
THE	238	Teatro Chicano (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (39 hrs)

BA	130	Accounting Principles I (4)
BA	131	Accounting Principles II (4)
BA	202	Principles of Management (3)
BA	205	Business Statistics (3)
BA	210	Principles of Finance (3)
BA	225	Excel (3)
BA	251	Principles of Marketing (3)
BA	266	Business Law (4)
ECON	200	Macroeconomics (3)
ECON	201	Microeconomics (3)
BA	242	Business Information Systems (3)
Electives		(3)

TOTAL CREDIT HOURS 75

Associate of Arts

BUSINESS ADMINISTRATION

Concentration: Public School Finance

06.0401

This program provides a solid background in general education as well as in the basic core of transfer business courses, enabling you to transfer to a four-year college or university with a major in the field of business or public school finance.

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two survey course (with labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)

BIOL 110/L Survey of Modern Biology w/lab (4)

BIOL 112/L Environmental Science w/Lab (4)

CHEM 110/L Introduction to Chemistry w/lab (4)

GEOG 101/L Physical Geology w/Lab (4)

GEOG 102 Historical Geology w/Lab (4)

PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ANTH 101/L Physical Anthropology w/Lab (4)

ANTH 102 Intro to Social & Cultural Anthropology (3)

ANTH 111 Language and Culture (3)

ANTH 207 Cultures of New Mexico (3)

ECON 200 Macroeconomics (3)

ECON 201 Microeconomics (3)

GEOG 111 World Geography (3)

PSCI 110 The Political World (3)

PSCI 200 American Politics (3)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

SOC 220 Social Problems (3)

SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ART 105 Introduction to Art (3)

ART 107 History of Art (3)

ENG Lit. courses numbered 260-298

HIST 101 Western Civilization I (3)

HIST 102 Western Civilization II (3)

HIST 161 History of the U.S. to 1877 (3)

HIST 162 History of the U.S. from 1877 (3)

HIST 260 History of New Mexico (3)

HUM 101 Humanities I (3)

HUM	102	Humanities II (3)
MUS	105	Music Appreciation (3)
PHIL	110	Intro to Philosophical Problems (3)
PHIL	220	Ethics (3)
THE	120	Introduction to Theatre I (3)
THE	130	History of Theatre (3)
THE	220	Introduction to Theatre II (3)
THE	225	Creative Drama Techniques for the K-8 classroom (3)

THE 238 Teatro Chicano (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (38 hrs)

BA	111	Microcomputer Applications in Business (3)
BA	130	Accounting Principles I (4)
BA	131	Accounting Principles II (4)
BA	202	Principles of Management (3)
BA	205	Business Statistics (3)
BA	210	Principles of Finance (3)
BA	235	Government Accounting (3)
BA	268	School Law (3)
BA	280	Finance Practicum (3)
BA	242	Business Information Systems (3)
ECON	200	Macroeconomics (3)
ECON	201	Microeconomics (3)

TOTAL CREDIT HOURS 74

Certificate

PUBLIC SCHOOL FINANCE

06.0402

This program is designed for students who already have a degree and wish to obtain a school finance certificate.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 109N Basic English II (3) or a higher level course

Mathematics (3 hrs)

BA 117 Business Math (3)

PROGRAM REQUIREMENTS (38 hrs)

BA	111	Microcomputer Applications in Business (3)
BA	130	Accounting Principles I (4)
BA	131	Accounting Principles II (4)
BA	202	Principles of Management (3)
BA	205	Business Statistics (3)
BA	210	Principles of Finance (3)
BA	212	School Finance (3)
BA	235	Government Accounting (3)
BA	268	School Law (3)
BA	280	Finance Practicum (3)
ECON	200	Macroeconomics (3)
ECON	201	Microeconomics (3)

TOTAL CREDIT HOURS 44

Associate of Applied Science

GENERAL BUSINESS

06.1801

This program provides the skills necessary for you to function in terms of successfully managing a small business operation.

GENERAL EDUCATION (18 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Math/Computers/Lab Sciences (6 hrs)

BA 111 Microcomputer Applications in Business (3)
BA 205 Business Statistics (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (45 hrs)

BA	117	Business Math (3)
BA	120	Introduction to Business (3)
BA	130	Accounting Principles I (4)
BA	131	Accounting Principles II (4)
BA	135	Computerized Accounting (3)
BA	202	Principles Management (3)
BA	210	Principles of Finance (3)
BA	225	Excel (3)
BA	251	Principles of Marketing (3)
BA	242	Business Information Systems (3)
BA	266	Business Law (4)
ECON	200	Macroeconomics (3)
ECON	201	Microeconomics (3)

Choose **one** of the following:

OA 260 Adobe PageMaker (3)
OA 261 Desktop Publishing: MS Publisher (3)

TOTAL CREDIT HOURS 64

Associate of Applied Science

MANAGEMENT INFORMATION SYSTEMS

07.0305

This program trains you for entry-level employment supervising the data processing needs of a small business or department.

GENERAL EDUCATION (18 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Math/Computers/Lab Sciences (6 hrs)

- BA 111 Microcomputer Applications in Business (3)
- BA 205 Business Statistics (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (45-hrs)

- BA 117 Business Math (3)
- BA 130 Accounting Principles I (4)
- BA 202 Principles of Management (3)
- BA 225 Excel (3)
- BA 226 PowerPoint (3)
- BA 242 Business Information Systems (3)
- BA 266 Business Law (4)
- OA 261 Desktop Publishing – MS Publisher (3)
- OA 265 Access (3)
- CS 132 Introduction to Programming I (3)
- CT 125 TCP/IP (3)
- CT/VC 175 Internet Publications I (4)
- CT 220 Networking with Microsoft (3)
- BA/CT 140 e-Commerce (3)

TOTAL CREDIT HOURS 64

**Associate of Applied Science
OFFICE ADMINISTRATION**

07.0606

This program will provide you with the course work necessary for employment above the entry level in the secretarial fields in the private and governmental sectors.

GENERAL EDUCATION (18 hrs)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (6 hrs)

- BA 111 Microcomputer Applications in Business (3)
- BA 117 Business Math (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (49 hrs)

- OA 101 Business Editing Skills (3)
- OA 103 Introduction to Keyboarding (1)
- OA 113 Notehand (3)
- OA 115 Files Management (3)
- OA 117 Time Management (3)
- OA 118 Professional Development (3)
- OA 135 Introduction to Accounting (3)

- OA 215 Business Communications (3)
 - BA 242 Business Information Systems (3)
 - OA 249 Microsoft Word (3)
 - OA 251 Advanced Word (3)
 - BA 225 Excel (3)
 - BA 226 PowerPoint (3)
 - BA 227 Advanced Excel (3)
 - OA 265 Access (3)
 - OA 267 Advanced Access (3)
- Choose **one** of the following:
- OA 260 Adobe Pagemaker (3)
 - OA 261 Desktop Publishing: MSPublisher (3)

TOTAL CREDIT HOURS 68

Certificate

ADMINISTRATIVE ASSISTANT

07.0104

This program provides you with the basic to advanced skills required to work in the Windows environment. The practical, hands-on approach will enable you to use the skills learned with all the software used in an administrative position.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

- ENG 109N Basic English II (3) or a higher level course

Mathematics (3 hrs)

- BA 117 Business Math (3)

PROGRAM REQUIREMENTS (34 hrs)

- BA 111 Microcomputer Applns in Business (3)
- OA 101 Business Editing Skills (3)
- OA 103 Introduction to Keyboarding (1)
- OA 118 Professional Development (3)
- OA 249 Microsoft Word (3)
- OA 251 Advanced Word (3)
- BA 225 Excel (3)
- BA 227 Advanced Excel (3)
- OA 265 Access (3)
- OA 267 Advanced Access (3)
- OA 260 Adobe PageMaker (3)
- OA 261 Desktop Publisher: MS Publisher (3)

TOTAL CREDIT HOURS 40

Certificate
CLERK RECEPTIONIST

07.0102

This program will provide you with course work necessary to find employment as an administrative assistant in business and government offices.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 109N Basic English II (3) or a higher level course

Mathematics (3 hrs)

BA 117 Business Math (3)

PROGRAM REQUIREMENTS (22 hrs)

BA 111 Microcomputer Applications in Business (3)

OA 101 Business Editing Skills (3)

OA 103 Introduction to Keyboarding (1)

OA 117 Time Management (3)

OA 118 Professional Development (3)

OA 249 Microsoft Word (3)

Choose **one** of the following two courses:

BA 225 Excel (3)

OA 265 Access (3)

Choose **one** of the following two courses:

OA 260 Adobe PageMaker (3)

OA 261 Desktop Publishing: MS Publisher (3)

TOTAL CREDIT HOURS 28

Certificate
LEGAL OFFICE PROFESSIONAL

07.0604

This program will provide you with course work necessary to find employment as a secretary in legal offices.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 109N Basic English II (3) or a higher level course

Mathematics (3 hrs)

BA 117 Business Math (3)

PROGRAM REQUIREMENTS (32 hrs)

BA 111 Microcomputer Applications in Business (3)

BA 215 Business Communications (3)

BA 242 Business Information Systems (3)

OA 101 Business Editing Skills (3)

OA 102 Introduction to the Internet (3)

OA 103 Introduction to Keyboarding (1)

BA 115 Introduction to MS Excel (1)

BA 116 Introduction to MS PowerPoint (1)

OA 139 Introduction to MS Word (1)

OA 155 Introduction to MS Access (1)

OA 115 Files Management (3)

OA 117 Time Management (3)

OA 118 Professional Development (3)

OA 134 Legal Transcription (3)

TOTAL CREDIT HOURS 38

Certificate
MEDICAL OFFICE PROFESSIONAL

07.0605

This program will provide you with course work necessary to find employment as a secretary in medical offices.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 109N Basic English II (3) or a higher level course

Mathematics (3 hrs)

BA 117 Business Math (3)

PROGRAM REQUIREMENTS (33 hrs)

BA 111 Microcomputer Applications in Business (3)

BA 242 Business Information Systems (3)

OA 101 Business Editing Skills (3)

OA 103 Introduction to Keyboarding (1)

OA 113 Notehand (3)

OA 103 Introduction to Keyboarding (1)

BA 115 Introduction to MS Excel (1)

BA 116 Introduction to MS PowerPoint (1)

OA 139 Introduction to MS Word (1)

OA 155 Introduction to MS Access (1)

OA 115 Files Management (3)

OA 117 Time Management (3)

OA 118 Professional Development (3)

OA 132 Medical Transcription (3)

OA 215 Business Communications (3)

TOTAL CREDIT HOURS 39

**DEPARTMENT OF
CAREER & TECHNICAL EDUCATION
EL RITO & ESPANOLA CAMPUSES**

The Department of Career and Technical Education supervises the instruction over all of the vocational service and trade programs at the El Rito Campus, in addition to some fine art programs which are housed at the El Rito Campus.

These many programs which lead to associate of applied science degrees and certificates include programs within the fields of service trades: barbering, cosmetology, auto body repair, automotive technology, construction trades, electrical technology, and fiber arts (weaving).

**Certificate
ADOBE CONSTRUCTION**

46.0201

Provides the instruction necessary to design and build an adobe structure. The program emphasizes the traditional Northern New Mexico and Southwestern designs and dwelling accessories, such as kiva fireplaces, hornos, corbels, carved columns, and vigas with latillas. Modern and emerging technologies and material are also covered. As a graduate, you will be capable of being employed with construction firms, being self-employable in specialized subcontractor trades, or you can build your own traditional or modern Southwestern structures using adobe.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

MATH 100N (6) or a higher level math course (3)

PROGRAM REQUIREMENTS (27-28 hrs)

- ADOB 100 Traditional Dwelling Design (3)
- ADOB 102 Adobe Wall Construction (4)
- ADOB 103 Roof Design and Construction (4)
- ADOB 104 Floor Design and Construction (4)
- ADOB 105 Interior Finish Practices (4)
- ADOB 106 Exterior Finish Practices (4)
- ADOB 107 Heating (2)

Choose **one** elective from the following courses:

- ADOB 110 Remodel Theory & Practices (2)
- ADOB 111 Horno Design/Construction (2)
- ADOB 112 Arches, Domes, and Vaults (2)
- CONS 155 Construction Math & Blueprint Reading(2)
- CONS 158 Foundation Theory & Construction (2)

TOTAL CREDIT HOURS 33-37

**Associate of Applied Science
AUTOMOTIVE TECHNOLOGY**

47.0605

Completion of the Automotive Technology program is designed to provide you with entry level employment. You must attend on a full-time basis. By the time you complete this program, you should be able to achieve Automotive Service Excellence (ASE) certification in four or more competency areas.

GENERAL EDUCATION (18 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (6 hrs)

CS 102 Computer Literacy (3)

Elective (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (48 hrs)

Enrollment in ATEC courses is based upon completion of MATH 100N or a higher level math course, course placement evaluation scores, or instructor permission.

ATEC 101L Basic Service Fundamentals (4)

ATEC 104L Brake Systems (4)

ATEC 105L Suspension and Alignment (4)

Choose **36 hrs** from the following courses:

ATEC 102L Engine Repair (4)

ATEC 103L Automotive Electrical (4)

ATEC 106L Manual Transmission,(4)

ATEC 107L Automatic Transmission (4)

ATEC 108L Automotive Electronics (4)

ATEC 109L Air Conditioning and Heating (4)

ATEC 110L Engine Performance I (4)

ATEC 111L Engine Performance II (4)

ATEC 112L Engine Performance III (4)

ATEC 113 Special Topics (1-6)

ATEC 280L Practicum (1-4)

TOTAL CREDIT HOURS 67

**Certificate
AUTOMOTIVE SERVICE FUNDAMENTALS**

47.0604

The Automotive Service Fundamentals certificate is designed to prepare you for an entry-level position as an automobile service technician. The brake systems, suspension and alignment, and air conditioning courses are part of the core automotive certificate program as well as the AAS degree.

GENERAL EDUCATION (9-12 hrs)**Communications (3 hrs)**

ENG 108N Basic English I (3)

Mathematics (6-9 hrs)

MATH 100N (6) or a higher level math course (3)

CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (12 hrs.)

Enrollment in ATEC courses is based upon completion of MATH 100N or a higher level math course, course placement evaluation scores, or instructor permission.

ATEC 101L Basic Service Fundamentals (4)

ATEC 104L Brake Systems (4)

ATEC 105L Suspension and Alignment (4)

TOTAL CREDIT HOURS 21-24

Certificate**AUTOMOTIVE MECHANICAL REPAIR**

47.0606

The Automotive Repair certificate is designed to prepare you for an entry-level position as light truck and automobile technicians. This three-semester program emphasizes the appropriate testing and repair of automobiles as well as professionalism, work ethics, and personal safety.

GENERAL EDUCATION (9-12 hrs)**Communications (3 hrs)**

ENG 108N Basic English I (3)

Mathematics (6-9 hrs)

MATH 100N (6) or a higher level math course (3)

CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (44 hrs.)

Enrollment in ATEC courses is based upon completion of MATH 100N or a higher level math course, course placement evaluation scores, or instructor permission.

ATEC 101L Basic Service Fundamentals (4)

ATEC 104L Brake Systems (4)

ATEC 105L Suspension and Alignment (4)

Choose **32 hrs** from the following courses:

ATEC 102L Engine Repair (4)

ATEC 103L Automotive Electrical (4)

ATEC 106L Manual Transmission, Drive Train (4)

ATEC 107L Automatic Transmission (4)

ATEC 108L Automotive Electronics (4)

ATEC 109L Air Conditioning and Heating (4)

ATEC 110L Engine Performance I (4)

ATEC 111L Engine Performance II (4)

ATEC 112L Engine Performance III (4)

ATEC 113 Special Topics (1-6)

ATEC 280L Practicum (1-4)

TOTAL CREDIT HOURS 52-55

Certificate**BARBERING**

12.0402

This program provides courses required by the New Mexico Board of Barbers and Cosmetologists to be taken before you are eligible to take the New Mexico State Board exam for licensure as a Barber. Employment opportunities include working with an existing barber or opening your own shop. New students are accepted into this program only in the fall or spring semesters.

The Barbering program will operate on a two-semester system, providing sufficient clock hours to enable you to complete in two semesters if your attendance/participation has been at a high level. If you should need additional clock hours to meet Board requirements, you will register into BARB 280L on the basis of 1 credit for each 30 clock hours needed. Completion of the program and release of a transcript showing completion is predicated on your completing all hours and operations called for by Board regulations, as well as completion of the English and math requirements set by the College. If you should withdraw or fail the courses for which you enroll in a particular term, the clock hours represented by that term will not be reported to the State Board on your transcript.

In order to insure compliance with the State Board requirements for training, before attempting to register for barbering courses you must first have been admitted to the college and then have supplied the campus director with the following documents: 1) proof of being at least 16 years of age; 2) proof of having completed a high school diploma or GED, or proof of having completed at least the 10th grade if attending in non-degree status; 3) a \$15 money order payable to the New Mexico Board of Barbers and Cosmetologists; and 4) a completed, notarized Board-registration form. Proof of completion of at least the 10th grade can be satisfied only through test scores from Level A of the Test of Adult Basic Education (TABE).

GENERAL EDUCATION (6-9 hrs)**Communications (3 hrs)**

ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

MATH 100N (6) or a higher level math course (3)

PROGRAM REQUIREMENTS (29-37 hrs.)

BARB 110 Barbering I (5)

BARB 110L Barbering I Lab (9)

BARB 120 Barbering II (5)

BARB 120L Barbering II Lab (9)

BARB 280L Barbering Practice (1-9)

TOTAL CREDIT HOURS 35-46

Certificate**BARBERING INSTRUCTOR**

This program provides theoretical and practical training to prepare you to take the New Mexico State Board of Barbers and Cosmetologists licensure examination to become a

Barbering Instructor. Pre-requisite for enrollment: current license as a barber in New Mexico.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 111 English Composition I (3)

Math/Computers/Lab Science (3 hrs))

CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (28 hrs.)

BARB 290 Barbering Instructor Theory I (5)
 BARB 290L Barbering Instructor Internship I (9)
 BARB 291 Barbering Instructor Theory II (5)
 BARB 291L Barbering Instructor Internship II (9)

TOTAL CREDIT HOURS 34

Associate of Applied Science

CONSTRUCTION TRADES TECHNOLOGY

46.9999

This program provides you with the background needed for becoming a licensed contractor. It covers state laws, acts relative to the construction industries, uniform codes, and construction permits; minimal aspects of law, taxes, business licenses, and reporting requirements mandated by the State of New Mexico.

GENERAL EDUCATION (25 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)
 ENG 116 Technical Writing (3)
 SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Math/Computers/Lab Sciences (10 hrs)

CS 102 Computer Literacy (3)
 MATH 130 Intermediate Algebra (3)
 PHYS 110 Introduction to Physics I (3)
 PHYS 110L Introduction to Physics I Lab (1)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

Elective (2)

PROGRAM REQUIREMENTS (39 hrs)

ADOB 100 Traditional Dwelling Design (3)
 BA 202 Principles Management (3)
 BA 266 Business Law (4)
 CONS 150 Contractor Licensing Requirements (3)
 CONS 151 Inspection Processes (1)
 CONS 152 Labor Laws and Safety (2)
 CONS 153 Construction Contractor Taxation (3)
 CONS 155 Construction Math & Blueprint Reading(3)
 CONS 156 Uniform Bldg Code (2)

CONS 157 Site Development and Layout (2)
 DRFT 206 Building Construction (3)
 DRFT 207 Construction Materials & Estimating (3)
 ELEC 141 Introduction to Electrical Code (3)
 PLB 131 Plumbing Code I (2)
 PLB 141 Plumbing Code II (2)

TOTAL CREDIT HOURS 66

Associate of Applied Science

CONSTRUCTION TRADES MANAGEMENT

52.0702

This program provides you with the skills necessary to enter the construction industry at high than entry level. As a graduate, you will be capable of entering at supervisory or management internship levels. It combines the program requirements of the Southwestern Building Construction program or the Telecommunications Builder I program with classes to build business and management skills.

GENERAL EDUCATION (18 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)
 SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (6 hrs)

CS 102 Computer Literacy (3)
 Elective (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

Electives (2)

PROGRAM REQUIREMENTS (64-74 hrs)

BA 117 Business Math (3)
 BA 120 Introduction to Business (3)
 BA 202 Principles of Management (3)

Concentrations (choose one of the following)

Option 1: Adobe Construction Program (33-37 hrs)
 Electives (10 hrs) from ADOB, CARP, or CONS courses
 Option 2: Telecommunications Builder I (20 hrs)
 Electives (18 hrs) from CONS, ELEC, or ECET courses

TOTAL CREDIT HOURS 67-76 HRS

Associate of Applied Science

COSMETOLOGY

12.0404

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure and expands those skills with the addition of General Education courses. Upon completion of 1,600 clock hours of

cosmetology instruction, as mandated by the Board of Cosmetology, you will be eligible to go before the Board of Barbers and Cosmetology and take the exam for licensure as a cosmetologist. Employment opportunities include working with an existing shop or opening your own shop. New students are accepted into this program only in fall or spring semesters.

The Cosmetology program will operate on a semester system, providing sufficient clock hours to enable you to complete within three semesters if your attendance/participation has been at a sufficiently high level. If you should then need additional clock hours to meet Board requirements, you will register into BARB 280L on the basis of 1 credit for each 30 clock hours needed. Completion of the program and release of a transcript showing completion is predicated on your completing all hours and operations called for by Board regulations, as well as completion of the English and math requirements set by the College. If you should withdraw or fail the courses for which you enroll in a particular term, the clock hours represented by that term will not be reported to the State Board on your transcript.

In order to insure compliance with State Board requirements for training, before attempting to register for cosmetology courses you must have been admitted to the college and then have supplied the campus director with the following documents: 1) proof of being at least 16 years of age; 2) proof of having completed a high school diploma or GED, or proof of having completed at least 10th grade if attending in non-degree status; 3) a \$15 money order payable to the New Mexico Board of Barbers and Cosmetologists; and 4) a completed, notarized Board-registration form. Proof of completion of at least the 10th grade can be satisfied only through test scores from Level A of the Test of Adult Basic Education (TABE).

GENERAL EDUCATION (18-19hrs)

Communications (7 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Math/Computers/Lab Sciences (6-7 hrs)

CS 102 Computer Literacy (3)
Elective (3-4)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (3 hrs)

Electives (3)

PROGRAM REQUIREMENTS (43-51 hrs)

COSM 110 Cosmetology I (5)
COSM 110L Cosmetology I Lab (9)
COSM 120 Cosmetology II (5)
COSM 120L Cosmetology II Lab (9)
COSM 210 Cosmetology III (5)
COSM 210L Cosmetology III Lab (9)
COSM 280L Cosmetology Practice (1-9)

TOTAL CREDIT HOURS 64-73

Certificate COSMETOLOGY

12.0403

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure and expands those skills with the addition of General Education courses. Upon completion of 1,600 clock hours of cosmetology instruction, as mandated by the Board of Cosmetology, you will be eligible to go before the Board of Barbers and Cosmetology and take the exam for licensure as a cosmetologist. Employment opportunities include working with an existing shop or opening your own shop. New students are accepted into this program only in the fall or spring semesters.

The Cosmetology program will operate on a semester system, providing sufficient clock hours to enable you to complete within three semesters if your attendance/participation has been at a sufficiently high level. If you should then need additional clock hours to meet Board requirements, you will register into BARB 280L on the basis of 1 credit for each 30 clock hours needed. Completion of the program and release of a transcript showing completion is predicated on your completing all hours and operations called for by Board regulations, as well as completion of the English and math requirements set by the College. If you should withdraw or fail the courses for which you enroll in a particular term, the clock hours represented by that term will not be reported to the State Board on your transcript.

In order to insure compliance with the State Board requirements for training, before attempting to register for cosmetology courses you must have been admitted to the college and then have supplied the campus director with the following documents: 1) proof of being at least 16 years of age; 2) proof of having completed a high school diploma or GED, or proof of having completed at least the 10th grade; and 3) a \$15 money order payable to the New Mexico Board of Barbers and Cosmetologists; and 4) a completed, notarized Board-registration form. Proof of completion of at least the 10th grade can be satisfied only through test scores from Level A of the Test of Adult Basic Education (TABE).

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

MATH 100N (6) or a higher level math course (3)

PROGRAM REQUIREMENTS (43-51 hrs)

COSM 110 Cosmetology I (5)
COSM 110L Cosmetology I Lab (9)
COSM 120 Cosmetology II (5)
COSM 120L Cosmetology II Lab (9)
COSM 210 Cosmetology III (5)
COSM 210L Cosmetology III Lab (9)
COSM 280L Cosmetology Practice (1-9)

TOTAL CREDIT HOURS 49-57

**Certificate
COSMETOLOGY INSTRUCTOR**

This program provides theoretical and practical training to prepare you to take the New Mexico State Board of Barbers and Cosmetologists licensure examination to become a Cosmetology Instructor. Pre-requisite for enrollment: current license as a cosmetologist in New Mexico.

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 111 English Composition I (3)

Math/Computers/Lab Science (3 hrs)

CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (28 hrs.)

COSM 290 Cosmetology Instructor Theory I (5)
 COSM 290L Cosmetology Instructor Internship I (9)
 COSM 291 Cosmetology Instructor Theory II (5)
 COSM 291L Cosmetology Instructor Internship II (9)

TOTAL CREDIT HOURS 34

**Associate of Applied Science
ELECTRICAL TECHNOLOGY**

46.0303

This program prepares you for the more technical aspects of the electrician's trade with emphasis on jobs available in the government sector.

GENERAL EDUCATION (25 hrs)

Communications (9)

ENG 111 English Composition I (3)
 ENG 116 Technical Writing (3)
 SPCH 130 Public Speaking (3)

Humanities (3)

Elective (3)

Math/Computers/Lab Sciences (10)

CS 102 Computer Literacy (3)
 ENGR 110 Intro to Engineering Technology (4)
 MATH 130 Intermediate Algebra (3)

Social/Behavioral Sciences (3)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (39 hrs.)

BA 202 Principles of Management (3)
 DRFT 207 Construction Materials & Estimating (3)
 ELEC 140 Introduction to Electrical Theory (3)
 ELEC 141 Introduction to Electrical Code (3)
 ELEC 142L Residential Wiring Lab (6)
 ELEC 150 Electrical Theory (3)
 ELEC 151 Electrical Code (3)

ELEC 152L Commercial Wiring Code (6)
 ELEC 160 Motor Controls (3)
 ELEC 160L Motor Controls Lab (3)
 Elective (3)

TOTAL CREDIT HOURS 65

**Certificate
ELECTRICAL TECHNOLOGY**

46.0302

This program prepares you for entry-level employment as an electrician's helper or an apprentice electrician. In addition, it prepares you to take the state examination for licensure as a journeyman electrician. You must attend on a full-time basis.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

MATH 100N or a higher level math course

PROGRAM REQUIREMENTS (24 hrs)

ELEC 140 Introduction to Electrical Theory (3)
 ELEC 141 Introduction to Electrical Code (3)
 ELEC 142L Residential Wiring Lab (6)
 ELEC 150 Electrical Theory (3)
 ELEC 151 Electrical Code (3)
 ELEC 152L Commercial Wiring Code (6)

TOTAL CREDIT HOURS 33

**Associate of Applied Science
FIBER ARTS**

50.0712

This program trains you to work in galleries, with other weavers, or to start your own business at home.

GENERAL EDUCATION (25 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)
 Choose **one** of the following:
 ENG 112 English Composition II (3)
 ENG 116 Technical Writing (3)
 SPCH 130 Public Speaking (3)

Humanities (6 hrs)

Two courses from Humanities or Fine Arts (lecture only) (6)

Math/Computers/Lab Sciences (6-7 hrs)

Elective: (6-7))

Social/Behavioral Sciences (6 hrs)

Electives (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (44 hrs)

FA	101	Weaving I (1)
FA	101L	Weaving I Lab (6)
FA	103	Spinning I (3)
FA	105	Dyeing (3)
FA	107	Textile Color & Design (2)
FA	110	History of Textiles (2)
FA	208	Marketing of Woven Goods (2)
FA	210	Weaving II (1)
FA	210L	Weaving II Lab (6)
FA	213	Weaving III (1)
FA	213L	Weaving III Lab (1)
FA	225	Four Harness Weave (4)
FA	230	Weaving Practicum (4)

Choose **8 credit hours** from the following courses:

FA	109	Loom Building (1)
FA	112	Vegetable Dyes: Identification & Selection (5)
FA	116	Quilting (2)
FA	202	Spinning II (2)
FA	216	Rug Restoration (2)
FA	218	Rag Rug Weaving (2)

TOTAL CREDIT HOURS 69

Certificate
WEAVING

50.0713

This program prepares you for entry-level jobs in the weaving industry, working with others or on your own.

GENERAL EDUCATION (6-9 hrs)**Communications (3 hrs)**

ENG	108N	Basic English I (3)
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Mathematics (3-6 hrs)

MATH	100N (6) or a higher level math course (3)
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PROGRAM REQUIREMENTS (41 hrs.)

FA	101	Weaving I (1)
FA	101L	Weaving I Lab (6)
FA	103	Spinning I (3)
FA	105	Dyeing (3)
FA	107	Textile Color & Design (2)
FA	110	History of Textiles (2)
FA	208	Marketing of Woven Goods (2)
FA	210	Weaving II (1)
FA	210L	Weaving II Lab (6)
FA	213	Weaving III (1)
FA	213L	Weaving III Lab (6)
FA	225	Four Harness Weave (4)
FA	230	Weaving Practicum (4)

TOTAL CREDIT HOURS 47-50

Associate of Applied Science
PLUMBING TECHNOLOGY

46.0501

This program will train you for the more technical aspects of the plumber's trade, particularly toward job opportunities in the government sector or in operating your own business.

GENERAL EDUCATION (21 hrs)**Communications (9 hrs)**

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)
SPCH	130	Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (6 hrs)

CS	102	Computer Literacy (3)
Elective (3)		

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (45 hrs)

PLB	130	Plumbing Systems I (3)
PLB	130L	Plumbing Systems Lab I (5)
PLB	131	Plumbing Code I (2)
PLB	132	Blueprint Reading (2)
PLB	140	Plumbing Systems II (3)
PLB	140L	Plumbing Systems Lab II (5)
PLB	141	Plumbing Code II (2)
PLB	142	Blueprint Reading and Drawing (2)
BA	202	Principles of Management (3)
DRFT	100	Introduction to Drafting (3)

Choose **one** of the following two courses:

DRFT	206	Building Construction (3)
DRFT	208	Computer-Aided Drafting I (3)

Electives (9)

TOTAL CREDIT HOURS 64

Certificate
PLUMBING TECHNOLOGY

46.0502

This program prepares you for entry-level employment as a plumber's helper or as an apprentice plumber with an existing shop or company. In addition, it prepares you to take the state examination for licensure as a journeyman plumber.

GENERAL EDUCATION (6-9 hrs)**Communications (3 hrs)**

ENG	108N	Basic English I (3)
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Mathematics (3-6 hrs)

MATH	100N (6) or a higher level math course (3)
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PROGRAM REQUIREMENTS (24 hrs.)

PLB	130	Plumbing Systems I (3)
PLB	130L	Plumbing Systems Lab I (5)
PLB	131	Plumbing Code I (2)
PLB	132	Blueprint Reading (2)
PLB	140	Plumbing Systems II (3)
PLB	140L	Plumbing Systems Lab II (5)
PLB	141	Plumbing Code II (2)
PLB	142	Blueprint Reading and Drawing (2)

TOTAL CREDIT HOURS 30-33

**Associate of Applied Science
SERVICE MANAGEMENT**

52.0701

If you have completed vocational training in Barbering or Massage Therapy, this program will serve to enhance your abilities to successfully enter the field of small business ownership/management. This degree is jointly administered by the El Rito Campus Director and the Director of Health Occupations.

GENERAL EDUCATION (18 hrs)

Communications (6 hrs)

ENG	111	English Composition I (3)
SPCH	130	Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (6 hrs)

CS	102	Computer Literacy (3)
Elective (3)		

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

Electives (2)

PROGRAM REQUIREMENTS (45-48hrs)

BA	117	Business Math (3)
BA	120	Introduction to Business (3)
BA	130	Accounting Principles I (4)
BA	202	Principles of Management (3)
BA	225	Excel (3)
BA	266	Business Law (4)

Major Concentration (25-28)

Barbering (29-37 hrs)
Massage Therapy (34 hrs)

TOTAL CREDIT HOURS 69-77

**Associate of Applied Science
SPANISH COLONIAL FURNITURE MAKING**

48.0703

This program prepares you for entry-level woodworking positions specializing in the Spanish Colonial style.

GENERAL EDUCATION (18 hrs)

Communications (6 hrs)

ENG	111	English Composition I (3)
Choose one of the following:		
ENG	112	English Composition II (3)
ENG	116	Technical Writing (3)
COMM	111	Business/Professional Comm. Studies(3)
SPCH	130	Public Speaking (3)

Humanities (3 hrs)

HIST	260	History of NM (3)
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Math/Computers/Lab Sciences (6 hrs)

CS	102	Computer Literacy (3)
MATH	Elective at/above MATH 145 (3)	

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (45 hrs)

SCFM	150	Intro. to Spanish Colonial Furniture (3)
SCFM	150L	Intro to Spanish Colonial Furniture Lab(9)
SCFM	160L	Spanish Colonial Furniture Mkg Lab (12)
SCFM	170L	Adv.Spanish Colonial Furn. Mkg Lab (12)

Choose **two** of the following:

DRFT	100	Introduction to Drafting (3)
DRFT	208	Computer-Aided Drafting I (3)
ART	170	Photography I (3)
Elective (3)		

TOTAL CREDIT HOURS 64

Certificate

SPANISH-COLONIAL FURNITURE MAKING:

48.0702

This program will prepare you for entry-level employment in the furniture making field in existing shops or your own wood-working business, with emphasis on Spanish-Colonial style.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG	108N	Basic English I (3)
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Mathematics (3-6 hrs)

MATH	100N (6)	or a higher level math course (3)
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PROGRAM REQUIREMENTS (36 hrs.)

SCFM	150	Intro to Spanish Colonial Furniture (3)
SCFM	150L	Intro to Spanish Colonial Furniture Lab(9)
SCFM	160L	Spanish Colonial Furniture Mkg lab(12)
SCFM	170L	Adv.Spanish Colonial Furn.Mkg Lab (12)

TOTAL CREDIT HOURS 42-45

Certificate
TELECOMMUNICATIONS BUILDER I

46.0304

This program will prepare you to do basic installation and maintenance. You will learn how to install and troubleshoot telecommunications working circuits using a variety of meters. You will also learn network theory, use of installation tools, wiring and cabling, series circuits, Ohms Law, and working a service order. Upon completion of the program, you will be qualified to take on entry-level telecommunication technician assignments.

GENERAL EDUCATION (9 hrs)

Communications (3 hrs)

ENG 109N Basic English II (3)

Math/Computers/Lab Sciences (6 hrs)

MATH 102N (3) or a higher level math course (3)

CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (20 hrs.)

ELEC 140 Introduction to Electrical Theory (3)

ELEC 152L Commercial Wiring Code (3)

ECET 100 Introduction to Electronics (3)

ECET 100L Introduction to Electronics Lab (1)

ECET 130 Microcomputer Systems I (3)

ECET 130L Microcomputer Systems I Lab (1)

CARP 153 Framing Carpentry - Wood/Steel Studs(3)

CONS 155 Construction Math & Blueprint Reading(3)

TOTAL CREDIT HOURS 29

Associate of Applied Science
WILDLAND FIRE SCIENCE

43.0203

This program is designed to prepare you for a career as a Wildland Fire Fighter. The program provides entry- and advanced-level fire fighting skills in areas such as safety, firefighter preparedness, tools and equipment, firing devices, use of water, fire suppression, securing the control line and the use of maps, scouting, hazardous materials, and standards for survival. This program is also targeted for logistics and financial/ administration positions, helicopter manager, and single resource positions in the incident command system. All of the Wildland Fire Science courses meet the USDA Forest Service standards for trained fire fighters.

GENERAL EDUCATION (19 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Humanities (3 hrs)

HIST 162 History of the U.S. from 1877 (3)

Math/Computers/Lab Sciences (7 hrs)

BIOL 112 Environmental Science (3)

BIOL 112L Environmental Science Problems (1)

CS 102 Computer Literacy (3)

Social/Behavioral Sciences (3 hrs)

PSY105 General Psychology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (5 hrs)

HPER Electives (5)

PROGRAM REQUIREMENTS (40 hrs)

DRFT 110 GIS/GPS (3)

ES 134 OSHA Safety and Health (3)

FOR 101 Introduction to Forestry (3)

FOR 123 Forest Ecology (3)

HSCI 109 CPR/First Aid (1)

WFS 110 Wildland Fire Technician I (2)

WFS 112 Wildland Fire Fighter Training (3)

WFS 118 Interagency Incident Business (1)

WFS 125 Basic Air Operations (1)

WFS 127 Advanced Fire Fighting Training (2)

WFS 201 Wildland Fire Technician II (3)

WFS 215 Interagency (IA) Helicopter Training (3)

WFS 232 Fundamentals of Fire Behavior (3)

WFS 235 Ignition Operation (2)

WFS 237 Crew Boss (2)

WFS 281 Field Training (3)

WFS 282 Wildland Fire Chainsaws (3)

TOTAL CREDIT HOURS 64

Required Sequence of Courses

First Year

Fall Semester

FOR 101 (3)

FOR 123 (3)

WFS 110 (2)

WFS 112 (3)

CS 102 (3)

Sub-total (14)

Spring Semester

ES 134 (3)

PSY 105 (3)

WFS 118 (1)

WFS125 (1)

WFS 127 (2)

BIOL 112/L (4)

Sub-total (14)

Summer Session

WFS 281 (3)

WFS 281 (3)

Year Two

Fall Semester

WFS 201 (3)

WFS 215 (3)

SPCH 130 (3)

HPER Elective (1)

ENG 111 (3)

Sub-total (13)

Spring Semester

WFS 232 (3)

WFS 235 (2)

WFS 237 (2)

HPER Elective (1)

DRFT 110 (3)

HIST 162 (3)

Sub-total (14)

**DEPARTMENT OF
COMMUNICATIONS, HUMANITIES
AND SOCIAL SCIENCES**

The mission of the Communications, Humanities, and Social Sciences Department is to provide you with high quality academic course work leading to a certificate or associate degree, or in preparation for transfer into a baccalaureate degree program. Additionally, this department provides excellent scholastic support in the many general education courses required if you are pursuing any degree program at Northern. Our programs are relevant to your personal and professional needs; they develop critical thinking skills, enhance self-esteem, and assist in your development into an organized, focused, empowered, and independent lifelong learner.

Our programs are organized into Humanities and Social Science programs which include all of those associate of arts degree programs which are designed to be fully or almost fully transferable to four-year colleges and universities. In addition, this department also offers several associate of applied science degrees which are designed to prepare you for employment opportunities as well as for limited transfer of course work to four-year colleges and universities.

**Associate of Arts
CRIMINAL JUSTICE**

43.0104

This program is designed to prepare you for entry-level positions in law enforcement or related agencies and for transfer into a four-year program.

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)
- Choose **one** of the following two courses:
- ENG 112 English Composition II (3)
- ENG 116 Technical Writing (3)

Mathematics (3 hrs)

- MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two survey course ss (with labs)** from the following list:

- ASTR 110/L Introduction to Astronomy w/lab (4)
- BIOL 110/L Survey of Modern Biology w/lab (4)
- BIOL 112/L Environmental Science w/Lab (4)
- CHEM 110/L Introduction to Chemistry w/lab (4)
- GEOL 101/L Physical Geology w/Lab (4)
- GEOL 102 Historical Geology w/Lab (4)
- PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (9 hrs) *

- PSY 105 General Psychology (3)
- SOC 101 Introduction to Sociology (3)
- Choose **one** survey course from the following list:
- ANTH 101/I Physical Anthropology w/Lab (4)

- ANTH 102 Intro to Social & Cultural Anthropology (3)
- ANTH 111 Language and Culture (3)
- ANTH 207 Cultures of New Mexico (3)
- ECON 200 Macroeconomics (3)
- ECON 201 Microeconomics (3)
- GEOG 111 World Geography (3)
- PSCI 110 The Political World (3)
- PSCI 200 American Politics (3)
- SOC 220 Social Problems (3)
- SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

Choose **two** survey courses from the following list:

- ART 105 Introduction to Art (3)
- ART 107 History of Art (3)
- ENG Lit. courses numbered 260-298
- HIST 101 Western Civilization I (3)
- HIST 102 Western Civilization II (3)
- HIST 161 History of the U.S. to 1877 (3)
- HIST 162 History of the U.S. from 1877 (3)
- HIST 260 History of New Mexico (3)
- HUM 101 Humanities I (3)
- HUM 102 Humanities II (3)
- MUS 105 Music Appreciation (3)
- PHIL 110 Intro to Philosophical Problems (3)
- PHIL 220 Ethics (3)
- THE 120 Introduction to Theatre I (3)
- THE 130 History of Theatre (3)
- THE 220 Introduction to Theatre II (3)
- THE 225 Creative Drama Techniques for the Classroom K-12 (3)
- THE 238 Teatro Chicana/o (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (31 hrs)

- CJ 111 Intro to Criminal Justice System (4)
- CJ 132 Introduction to Criminology (3)
- CJ 201 Criminal Law (3)
- CJ 202 Courts and Criminal Justice (3)
- CJ 221 Criminal Justice & Comm. Relations (3)
- CJ 233 Juvenile Justice Procedures (3)
- CJ 235 Introduction to Corrections (3)
- Choose **one** of the following two courses:
- CJ 231 Criminal Investigation (3)
- CJ 228 Forensic Investigation (3)
- Elective (3)

TOTAL CREDIT HOURS 64

**Associate of Arts
GENERAL STUDIES**

24.0102

This program, which allows you to take courses for personal growth or for transfer to a four-year college or university, allows a great deal of flexibility in choosing courses. In this way, you can work with an advisor to put together a degree major which may not be offered by Northern, thus establishing a solid foundation of courses for transfer to a four-year institution.

48 COMMUNICATIONS, HUMANITIES & SOCIAL SCIENCES

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two survey courses (w/labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
BIOL 112 Environmental Science w/Lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102/L Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ANTH 101/I Physical Anthropology w/Lab (4)
ANTH 102 Intro to Social & Cultural Anthropology (3)
ANTH 111 Language and Culture (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 200 American Politics (3)
PSY 105 General Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ART 105 Introduction to Art (3)
ART 107 History of Art (3)
ENG Lit. courses numbered 260-298
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of the U.S. to 1877 (3)
HIST 162 History of the U.S. from 1877 (3)
HIST 260 History of New Mexico (3)
HUM 101 Humanities I (3)
HUM 102 Humanities II (3)
MUS 105 Music Appreciation (3)
PHIL 110 Intro to Philosophical Problems (3)
PHIL 220 Ethics (3)
THE 120 Introduction to Theatre I (3)
THE 130 History of Theatre (3)
THE 220 Introduction to Theatre II (3)
THE 225 Creative Drama Techniques for the Classroom K-12 (3)
THE 238 Teatro Chicano (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

Elective (2)

PROGRAM REQUIREMENTS (27 hrs.)

General Education Electives (24)*

*Must be taken from the following discipline areas and must include at least 3 crs Fine Arts (*lecture only*):

Communications
Mathematics
Fine Arts (lecture only)
Laboratory Sciences
Humanities
Social/Behavioral Sciences
Free Electives (3)

TOTAL CREDIT HOURS 64

Associate of Arts HUMAN SERVICES IN THE SOCIAL SCIENCES

44.0702

This program is designed for students wishing to transfer to a four-year institution in the social sciences, including psychology, sociology, or social work. The program specifically meets criteria to transfer to New Mexico Highlands University's program in Social Work..

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)
ENG 112 English Composition II (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two survey courses (with labs)** from the following list: **

ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
BIOL 112/L Environmental Science w/Lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102 Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

** Of the 8 credits required in the category of laboratory sciences, one course must be selected from: BIOL 110/L or BIOL 201/L.

Social/Behavioral Sciences (9 hrs) *

ANTH 102 Intro to Social & Cultural Anthropology (3)
PSY 105 General Psychology (3)
SOC 101 Introduction to Sociology (3)

Humanities and Fine Arts (6 hrs) *

You must select **two** survey courses from the following list:

- ART 105 Introduction to Art (3)
- ART 107 History of Art (3)
- ENG Lit. courses numbered 260-298
- HIST 101 Western Civilization I (3)
- HIST 102 Western Civilization II (3)
- HIST 161 History of the U.S. to 1877 (3)
- HIST 162 History of the U.S. from 1877 (3)
- HIST 260 History of New Mexico (3)
- HUM 101 Humanities I (3)
- HUM 102 Humanities II (3)
- MUS 105 Music Appreciation (3)
- PHIL 110 Intro to Philosophical Problems (3)
- PHIL 220 Ethics (3)
- THE 120 Introduction to Theatre I (3)
- THE 130 History of Theatre (3)
- THE 220 Introduction to Theatre II (3)
- THE 225 Creative Drama Techniques for the Classroom K-12 (3)
- THE 238 Teatro Chicano (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)
Elective (1)

PROGRAM REQUIREMENTS (33 hrs)

- PSY 210 Theories of Personality & Counseling (3)
- PSY 217 Interviewing and Assessment (3)
- PSY 232 Abnormal Psychology (3)
- PSY 260 Family Systems Theory and Counseling Applications (3)
- PSY 275 Group Process (3)
- PSY 280 Practicum for Human Services (3)
- PSY 290 Developmental Psychology (3)
- SOC 105 Introduction to Human Services (3)
- SOC 140 Sociology of Substance Abuse (3)
- SOC 216 Ethnic and Intercultural Relations (3)
- SOC 225 Marriage & Family (3)

TOTAL CREDITS HOURS 69

**Associate of Applied Science
HUMAN SERVICES**

44.0701

This program provides competencies at the paraprofessional level in various fields of human services in public or private social welfare agencies, working with a diverse group of people.

GENERAL EDUCATION (28 hrs)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- Choose **one** of the following
- ENG 112 English Composition II (3)
- SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computer/Lab Sciences (7 hrs)

Choose **one** of the following two BIOL courses:

- BIOL 110 Survey of Modern Biology (3)
- BIOL 110L Survey-Modern Biology Lab (1)
- or
- BIOL 201 Principles of Molecular and Cell Biology(3)
- BIOL 201L Principles of Molecular & Cell Biology Lab(1)

Choose **one** of the following:

- CS 102 Computer Literacy (3)
- MATH 130 or higher level math (3)

Social/Behavioral Sciences (12 hrs)

- ANTH 102 Intro to Social & Cultural Anthropology (3)
- PSCI 200 American Politics (3)
- PSY 105 General Psychology (3)
- SOC 101 Introduction to Sociology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hrs)
Elective (1)

PROGRAM REQUIREMENTS (36 hrs)

- PSY 210 Theories of Personality & Counseling(3)
- PSY 217 Interviewing and Assessment (3)
- PSY 232 Abnormal Psychology (3)
- PSY 260 Family Systems Theory and Counseling Applications (3)
- PSY 275 Group Process (3)
- PSY 280 Practicum for Human Services (3)
- PSY 290 Developmental Psychology (3)
- SOC 105 Introduction to Human Services (3)
- SOC 140 Sociology of Substance Abuse (3)
- SOC 216 Ethnic and Intercultural Relations (3)
- SOC 225 Marriage & Family (3)
- Elective in Social/Behavioral Sciences (3)

TOTAL CREDIT HOURS 65

**Associate of Applied Science
LIBRARY TECHNOLOGY**

25.0301

Northern's Library Technology program will prepare you for rewarding entry-level career opportunities in public, school, academic, or special libraries.

GENERAL EDUCATION (25 hrs)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)

Humanities (6 hrs)

- HUM 101 Humanities I (3)
- Humanities Elective (3)

Math/Computer/Lab Sciences (10 hrs)

- Laboratory Science Elective with lab (4)
- CS 102 Computer Literacy (3)
- Choose **one** of the following two courses:
- MATH 130 Intermediate Algebra (3)
- MATH 145 Introduction to Probability and Statistics(3)

50 COMMUNICATIONS, HUMANITIES & SOCIAL SCIENCES

Social/Behavioral Sciences (3 hrs)

PSY 105 General Psychology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

Elective (2)

PROGRAM REQUIREMENTS (37-40 hrs)

BA 202 Principles of Management (3)
ENG 270 Children's Literature (3)
LT 201 Technical Services - Cataloging (3)
LT 202 Technical Services - Acquisition (3)
LT 205 Library Public Services (3)
LT 207 Basic Reference Mats (3)
LT 209 Media Services (3)

Choose **one** of the following two courses:

OA 103 Introduction to Keyboarding (1)
OA 104 Principles of Keyboarding (3)

LT Electives: Choose **two** of the following four courses:

LT 213 Special Libraries (3)
LT 215 Public Libraries (3)
LT 217 School Libraries (3)
LT 219 Academic Libraries (3)

Electives: Choose **three** of the following seven courses:

ART 105 Introduction to Art (3)
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
HIST 260 History of New Mexico (3)
LT 220 Adv. Reference Materials (3)
LT 221 Media Production (3)

SPAN Elective: any course (3)

TOTAL CREDIT HOURS 64-66

Certificate LIBRARY TECHNOLOGY

25.0302

This program is designed to prepare you to pursue a degree for rewarding career opportunities in public, school, academic, or special libraries.

GENERAL EDUCATION (7 hrs)

Communications (4 hrs)

ENG 110 Writing the Research Paper (1)
ENG 111 English Composition I (3)

Mathematics (3 hrs)

Choose **one** of the following two courses:

MATH 115 Introduction to Probability and Statistics (3)
MATH 130 Intermediate Algebra (3)

PROGRAM REQUIREMENTS (28-30 hrs)

CS 102 Computer Literacy (3)
ENG 270 Children's Literature (3)
LT 201 Technical Services - Cataloging (3)
LT 202 Technical Services - Acquisitions (3)
LT 205 Library Pub Services (3)
LT 207 Basic Reference Materials (3)
LT 209 Media Services (3)

Choose **one** of the following two courses:

OA 103 Introduction to Keyboarding (1)
OA 104 Principles of Keyboarding (3)

LT Electives: Choose **two** of the following four courses:

LT 213 Special Libraries (3)
LT 215 Public Libraries (3)
LT 217 School Libraries (3)
LT 219 Academic Libraries (3)

TOTAL CREDIT HOURS 35-37

Associate of Applied Science POLICE SCIENCE

43.0107

This program is designed specifically to allow police officers who have completed the New Mexico Law Enforcement Academy to complete an associate degree within the field of law enforcement. When you apply to Northern for this major, you must supply the Registrar a copy of your Law Enforcement Academy certificate of completion in order to obtain credit for the training.

GENERAL EDUCATION (21 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

PHIL 220 Ethics (3)

Math/Computer/Lab Sciences (6 hrs)

CS 102 Computer Literacy (3)
MATH 145 Intro to Probability & Statistics (3)

Social/Behavioral Sciences (6 hrs)

PSCI 210 State and Local Government (3)
SOC 101 Introduction to Sociology (3)

PROGRAM REQUIREMENTS (43) hrs)

CJ 228 Forensic Investigation (3)
SOC 140 Sociology of Alcohol/Substance Abuse(3)
SPAN 100, 101/102 or 111/112 (3)

NM law Enforcement Academy Certification which includes credit for the following courses (34 hrs):

CJ 111 Introduction to Criminal Justice (4)
CJ 201 Criminal Law (3)
ENG 116 Technical Writing (3)
HPER Electives (2) [meets graduation requirement]
SOC 213 Deviant Behavior (3)

Law Enforcement Electives (19):

Patrol, Communications, and Investigations (6)
Traffic Enforcement and Accident Investigation (3)
Police Proficiency I (3)
Police Proficiency II (3)
Police Proficiency III (3)
First Responder for Law Enforcement (1)

TOTAL CREDIT HOURS 64

COMMUNICATIONS, HUMANITIES & SOCIAL SCIENCES 51

Associate of Arts SOUTHWEST STUDIES

05.0271

Combining broad based general education courses with area studies, you will be exposed to much of the lower division foundation courses required by four-year colleges as well as to a solid foundation in intercultural and international relations.

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two survey courses (with labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)

BIOL 110/L Survey of Modern Biology w/lab (4)

BIOL 112/L Environmental Science w/Lab (4)

CHEM 110/L Introduction to Chemistry w/lab (4)

GEOL 101/L Physical Geology w/Lab (4)

GEOL 102 Historical Geology w/Lab (4)

PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ANTH 101/L Physical Anthropology w/Lab (4)

ANTH 102 Intro to Social & Cultural Anthropology (3)

ANTH 111 Language and Culture (3)

ANTH 207 Cultures of New Mexico (3)

ECON 200 Macroeconomics (3)

ECON 201 Microeconomics (3)

GEOG 111 World Geography (3)

PSCI 110 The Political World (3)

PSCI 200 American Politics (3)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

SOC 220 Social Problems (3)

SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ART 105 Introduction to Art (3)

ART 107 History of Art (3)

ENG Lit. courses numbered 260-298

HIST 101 Western Civilization I (3)

HIST 102 Western Civilization II (3)

HIST 161 History of the U.S. to 1877 (3)

HIST 162 History of the U.S. from 1877 (3)

HIST 260 History of New Mexico (3)

HUM 101 Humanities I (3)

HUM	102	Humanities II (3)
MUS	105	Music Appreciation (3)
PHIL	110	Intro to Philosophical Problems (3)
PHIL	220	Ethics (3)
THE	120	Introduction to Theatre I (3)
THE	130	History of Theatre (3)
THE	220	Introduction to Theatre II (3)
THE	225	Creative Drama Techniques for the Classroom K-12 (3)
THE	238	Teatro Chicana/o (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr Elective (1))

PROGRAM REQUIREMENTS (36 hrs)

Choose **a two semester sequence** from the following:

SPAN 101 Beginning Spanish I (3)

SPAN 102 Beginning Spanish II (3)

or

SPAN 111 Spanish for Native Speakers I (3)

SPAN 112 Spanish - Native Speakers II(3)

Choose **30 credit hours** from the following courses:

ANTH 110 Indian Cultures of the Southwest (3)

ANTH 111 Language and Culture (3)

ANTH 207 Cultures of NM (3)

ANTH 210 Southwestern Folklore (3)

ENG 221 Creative Writing (3)

ENG 250 Native American Lit. (3)

HIST 220 SW Women's History (3)

HIST 230 Chicano Experience in U.S. (3)

HIST 250 American Indian History (3)

HIST 260 History of New Mexico (3)

HUM 105 Humanities and SW (3)

MUS 225 Musica Folklorica: La Nueva Cancion (3)

PSCI 211 American Indian Government (3)

PSCI Elective (3)

SPAN Literature Elective (3)

SPAN 221 Creative Writing in Spanish (3)

TOTAL CREDIT HOURS 72

Associate of Arts SUBSTANCE ABUSE COUNSELOR

17.0402

This program is designed for students wishing to transfer to a four-year institution in the social sciences, including psychology, sociology, or social work, with an emphasis in substance abuse counseling. Students who complete this program are eligible to enter NMHU's Social Work program.

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

ENG 112 English Composition II (3)

52 COMMUNICATIONS, HUMANITIES & SOCIAL SCIENCES

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two survey courses (w/labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)

BIOL 110/L Survey of Modern Biology w/lab (4)

CHEM 110/L Introduction to Chemistry w/lab (4)

GEOL 101/L Physical Geology w/Lab (4)

PHYS 110/L Introduction to Physics w/Lab (4)

** Of the 8 credits required in the category of laboratory sciences, one course must be selected from: BIOL 110/L or BIOL 201/L.

Social/Behavioral Sciences (9 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ANTH 102 Intro to Social & Cultural Anthropology (3)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

Humanities and Fine Arts (6 hrs) *

You must select survey courses from *at least two different discipline areas* from the following list:

ART 105 Introduction to Art (3)

ART 107 History of Art (3)

ENG Lit. courses numbered 260-298

HIST 101 Western Civilization I (3)

HIST 102 Western Civilization II (3)

HIST 161 History of the U.S. to 1877 (3)

HIST 162 History of the U.S. from 1877 (3)

HIST 260 History of New Mexico (3)

HUM 101 Humanities I (3)

HUM 102 Humanities II (3)

MUS 105 Music Appreciation (3)

PHIL 110 Intro to Philosophical Problems (3)

PHIL 220 Ethics (3)

THE 120 Introduction to Theatre I (3)

THE 130 History of Theatre (3)

THE 220 Introduction to Theatre II (3)

THE 225 Creative Drama Techniques for the Classroom K-12 (3)

THE 238 Teatro Chicano (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (33 hrs)

PSY 210 Theories of personality/counseling Apps (3)

PSY 217 Interviewing and Assessment (3)

PSY 232 Abnormal Psychology (3)

PSY 240 Alcohol & Drug Abuse Evaluation (3)

PSY 241 Alcohol & Drug Abuse Treatment & Referral (3)

PSY 260 Family Sys.Theory & Counseling Apps (3)

PSY 275 Group Process (3)

PSY 281 Practicum -Subst Abuse Counselors (3)

SOC 140 Sociology of Alcohol & Drug Abuse (3)

SOC 141 Effects of Alcohol and Drug Abuse (3)

SOC 213 Deviant Behavior (3)

TOTAL CREDIT HOURS 69

Associate of Applied Science SUBSTANCE ABUSE COUNSELOR

17.0401

This program is designed to prepare you to become a Substance Abuse Counselor.

GENERAL EDUCATION (25 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)

Choose **one** of the following

ENG 112 English Composition II (3)

SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computer/Lab Sciences (7 hrs)

Choose **one** of the following two BIOL courses:

BIOL 110 Survey of Modern Biology (3)

BIOL 110L Survey-Modern Biology Lab (1)

or

BIOL 201 Principles of Molecular & Cell Biology (3)

BIOL 201L Prin. of Molecular & Cell Biology Lab (1)

Choose **one** of the following:

CS 102 Computer Literacy (3)

MATH 130 or higher level math (3)

Social/Behavioral Sciences (9 hrs)

ANTH 102 Intro to Social & Cultural Anthropology (3)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (39 hrs)

PSY 210 Theories of personality/counseling Apps (3)

PSY 217 Interviewing and Assessment (3)

PSY 232 Abnormal Psychology (3)

PSY 240 Alcohol & Drug Abuse Evaluation & Assessment (3)

PSY 241 Alcohol & Drug Abuse Treatment & Referral (3)

PSY 260 Family Systems Theory and Counseling Applications (3)

PSY 275 Group Process (3)

PSY 281 Practicum :Subst. Abuse Counselors (3)

PSY 290 Developmental Psychology (3)

SOC 140 Sociology of Alcohol and Drug Abuse (3)

SOC 141 Effects of Alcohol and Drug Abuse (3)

SOC 213 Deviant Behavior (3)

Elective in Social/Behavioral Sciences (3)

TOTAL CREDIT HOURS 65

**DEPARTMENT OF
COMPUTER SCIENCE AND
ENGINEERING TECHNOLOGY**

The Department of Computer Science and Engineering Technology provides degree and certificate programs in Computer Science and Technology, Drafting and Machine Technology, Electronics and Computer Engineering Technology, Auto Body Repair, and Welding Technology.

Because the mission of this department is to provide job-ready programs as well as enable its students to transfer courses to four-year colleges and universities, we can say that almost all General Education courses required to satisfy degree requirements should transfer to four-year institutions, but we cannot say that all of the program-specific courses will transfer.

**Associate of Applied Science
AUTO BODY REPAIR**

47.0603

This program prepares you with the job skills needed for employment in the auto body repair field. Your training will include practice in metal work, body panel replacement, refinishing, computer-based estimation, and safety practices associated with handling materials, hand tools, and power equipment.

Certificates may be obtained in any of the other areas of concentration **after** you have completed the associate degree in one area of concentration.

GENERAL EDUCATION (22 hrs)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- Choose **one** of the following three courses:
- ENG 112 English Composition II (3)
- ENG 116 Technical Writing (3)
- SPCH 130 Public Speaking (3)

Humanities (3 hrs)

- PHIL 220 Ethics (3)

Math/Computer/Lab Sciences (10 hrs)

- CS 102 Computer Literacy (3)
- BA 117 Business Math (3)
- CHEM 110 Introduction to Chemistry (3)
- CHEM 110L Introduction to Chemistry Lab (1)

Social/Behavioral Sciences (3 hrs)

- PSY or SOC Elective - approved by advisor (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

- Electives (2)

PROGRAM REQUIREMENTS (40 hrs)

Choose one of the following concentrations:

Refinishing (40 hrs)

- ABR 110 Introduction to Auto Body Repair (4)
- ABR 111 Metal Work I (4)

- ABR 112 Refinishing I (5)
- ABR 212 Refinishing II (5)
- ABR 214 Refinishing III (5)
- WELD 110 Introduction to Welding (3)
- Approved Electives - 14 cr hours of other ABR course work.

Non-structural Analysis and Damage Repair (40 hrs)

- ABR 110 Introduction to Auto Body Repair (4)
- ABR 111 Metal Work I (4)
- ABR 112 Refinishing I (5)
- ABR 114 Unitized Body Repair (5)
- ABR 211 Metal Work II (4)
- ABR 213 Metal Work III (4)
- WELD 110 Introduction to Welding (3)
- Approved Electives - 11 cr hours of other ABR course wk.

Estimation of Body Repair (40 hrs)

- ABR 110 Introduction to Auto Body Repair (4)
- ABR 111 Metal Work I (4)
- ABR 112 Refinishing I (5)
- ABR 115 Estimation of Auto Body Repair (4)
- ABR 215 Software Applications (3)
- WELD 110 Introduction to Welding (3)
- Approved Electives - 17 cr hours of other ABR course work.

TOTAL CREDIT HOURS 64

**Certificate
AUTO BODY REPAIR - REFINISHING**

47.0608

This program will prepare you with the skills needed to specialize in the area of Refinishing work.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

- ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

- MATH 100N (6) or higher level math course (3)
- or BA 117 (3)

PROGRAM REQUIREMENTS (23 hrs)

- ABR 110 Introduction to Auto Body Repair (4)
- ABR 111 Metal Work I (4)
- ABR 112 Refinishing I (5)
- ABR 212 Refinishing II (5)
- ABR 214 Refinishing III (5)

TOTAL CREDIT HOURS 29-32

54 COMPUTER SCIENCE & ENGINEERING TECHNOLOGY

Certificate

AUTO BODY REPAIR - NON-STRUCTURAL ANALYSIS AND DAMAGE

47.0607

This program will prepare you with the skills needed to specialize in the area of non-structural analysis and damage repair.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

MATH 100N (6) or higher level math course (3) or BA 117 (3)

PROGRAM REQUIREMENTS (29 hrs)

ABR 110 Introduction to Auto Body Repair (4)
ABR 111 Metal Work I (4)
ABR 112 Refinishing I (5)
ABR 114 Unitized Body Repair (5)
ABR 211 Metal Work II (4)
ABR 213 Metal Work III (4)
WELD 110 Introduction to Welding (3)

TOTAL CREDITS HOURS 35-38

Certificate

ESTIMATION OF AUTO BODY REPAIR

47.0606

This program will prepare you with the skills needed to specialize in the area of estimating auto body repair.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

MATH 100N (6) or higher level math course (3) or BA 117 (3)

PROGRAM REQUIREMENTS (20 hrs.)

ABR 110 Introduction to Auto Body Repair (4)
ABR 111 Metal Work I (4)
ABR 112 Refinishing I (5)
ABR 115 Estimation of Auto Body Repair (4)
ABR 215 Software Applications (3)

TOTAL CREDITS HOURS 26-29

Associate of Applied Science COMPUTER AIDED DRAFTING

When you successfully complete this program you will be prepared for entry level CAD positions in engineering, architectural, construction, or surveying firms.

GENERAL EDUCATION (21-22 hrs.)

Communications (6 hrs)

ENG 111 English Composition I (3)

Choose **one** of the following three courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computer/Lab Sciences (9-10 hrs)

CS 102 Computer Literacy (3)

MATH 130 Intermediate Algebra (3)

Elective: ENGR 110 or PHYS 110 and PHYS 110L, or PHYS 121 and PHYS 121L, or other approved math, science, or engineering courses (3-4)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS: Choose **one** of the following concentrations.

General Drafting (42 crs) (48.0101)

DRFT 100 Introduction to Drafting (3)

DRFT 101 Residential CAD I (4)

DRFT 102 Mechanical Engineering CAD I (4)

DRFT 103 Surveying and CAD Mapping I (4)

DRFT 111 Commercial Building CAD (4)

DRFT 112 Mechanical Engineering CAD II (4)

DRFT 113 Surveying and CAD Mapping II (4)

DRFT 199 How to Get a Job (1)

DRFT 208 Computer-Aided Drafting I (3)

DRFT 209 Computer Aided Drafting II (3)

Choose **two** of the following three courses:

DRFT 201 Residential CAD II (4)

DRFT 202 Mechanical Engineering CAD III (4)

DRFT 203 Civil Engineering CAD (4)

Mechanical/Electronics (42 crs) (48.0105)

DRFT 100 Introduction to Drafting (3)

DRFT 102 Mechanical Engineering CAD I (4)

DRFT 112 Mechanical Engineering CAD II (4)

DRFT 199 How to Get a Job (1)

DRFT 202 Mechanical Engineering CAD III (4)

DRFT 208 Computer Aided Drafting I (3)

DRFT 209 Computer Aided Drafting II (3)

DRFT 122 Geometric Dimensioning & Tolerancing(3)

DRFT 215 Computer Aided Machining I (3)

DRFT 238 3-D Mechanical Modelling (2)

EPDT 100 Electronics Packaging Design (4)
 ECET 100 Introduction to Electronics (3)
 ECET 100L Introduction to Electronics Lab (1)
 Electives (4 hrs) Choose from DRFT, VC, EPDT, ENGR, ECET, SMT, PHYS, or WELD

Architectural/Civil (42 crs) (48.0106)
 DRFT 100 Introduction to Drafting (3)
 DRFT 101 Residential CAD I (4)
 DRFT 103 Surveying and CAD Mapping I (4)
 DRFT 110 GIS/GPS (3)
 DRFT 111 Commercial Building CAD (4)
 DRFT 113 Surveying and CAD Mapping II (4)
 DRFT 199 How to Get a Job (1)
 DRFT 201 Residential CAD II (4)
 DRFT 203 Civil Engineering CAD (4)
 DRFT 206 Building Construction (3)
 DRFT 208 Computer Aided Drafting I (3)
 DRFT 209 Computer Aided Drafting II (3)
 Drafting elective: At least 2 crs of any DRFT, VC, or construction trades course.
TOTAL CREDIT HOURS 64-65

**Certificate
 ARCHITECTURAL DRAFTING
 48.0108**

This program prepares you for entry-level positions in architectural drafting. You will be skilled in both manual and computer-aided drafting.

GENERAL EDUCATION (9 hrs)
Communications (3 hrs)
 ENG 109N Basic English II (3) or a higher level course

Math/Computer/Lab Sciences (6 hrs)
 MATH 102 Basic Algebra (3)
 CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (29 hrs.)
 DRFT 100 Introduction to Drafting (3)
 DRFT 101 Residential CAD I (4)
 DRFT 103 Surveying and CAD Mapping I (4)
 DRFT 111 Commercial Building CAD (4)
 DRFT 199 How to Get a Job (1)
 DRFT 201 Residential CAD II (4)
 DRFT 208 Computer Aided Drafting I (3)
 DRFT 209 Computer-Aided Drafting II (3)
 Choose **one** of the following:
 DRFT 206 Building Construction (3)
 DRFT 207 Building Materials and Estimating (3)

TOTAL CREDIT HOURS 38

**Certificate
 CIVIL ENGINEERING CAD
 48.0110**

This program prepares you for entry-level positions in civil engineering firms.

GENERAL EDUCATION (9 hrs)
Communications (3 hrs)
 ENG 109N Basic English II (3) or a higher level course

Math/Computer/Lab Sciences (6 hrs)
 MATH 102 Basic Algebra (3)
 CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (29 hrs.)
 DRFT 100 Introduction to Drafting (3)
 DRFT 101 Residential CAD I (4)
 DRFT 103 Surveying and CAD Mapping I (4)
 DRFT 113 Surveying and CAD Mapping II (4)
 DRFT 199 How to Get a Job (1)
 DRFT 203 Civil Engineering Drafting (4)
 DRFT 208 Computer Aided Drafting I (3)
 DRFT 209 Computer Aided Drafting II (3)
 Choose **one** of the following:
 DRFT 206 Building Construction (3)
 DRFT 207 Construction Materials and Estimating (3)

TOTAL CREDIT HOUR 38

**Certificate
 ENGINEERING CAD
 48.0111**

This program prepares you for entry-level CAD positions in machine drafting.

GENERAL EDUCATION (9 hrs)
Communications (3 hrs)
 ENG 109N Basic English II (3) or a higher level course

Math/Computer/Lab Sciences (6 hrs)
 MATH 102 Basic Algebra (3)
 CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (28 hrs.)
 DRFT 100 Introduction to Drafting (3)
 DRFT 102 Mechanical Engineering CAD I (4)
 DRFT 112 Mechanical Engineering CAD II (4)
 DRFT 122 Geometric Dimensioning & Tolerancing (3)
 DRFT 199 How to Get a Job (1)
 DRFT 202 Engineering Graphics III using CAD (4)
 DRFT 208 Computer Aided Drafting I (3)
 DRFT 209 Computer Aided Drafting II (3)
 DRFT 215 Computer Aided Machining I (3)

TOTAL CREDIT HOURS 37

COMPUTER SCIENCE

Associate of Applied Science COMPUTER SCIENCE

11.0101

This degree program is designed to prepare you for entry-level positions as a programmer, applications specialist or transfer to a four-year college or university. The curriculum emphasizes the fundamental principles needed for success as a computer programmer.

Your advisor for this program is
Tom Click, 747-2255, or tclick@nnmcc.edu

GENERAL EDUCATION (25 hrs)

Communications (9 hrs)

ENG 111	English Composition I (3)
ENG 116	Technical Writing (3)
SPCH 130	Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Mathematics (10 hrs)

MATH 150	College Algebra (3)
MATH 155	Trigonometry (3)
MATH 162	Calculus I (4)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives, including DANC (1)

PROGRAM REQUIREMENTS (41-43 hrs)

Pre-requisites for entry to this program include CS 102, and ENG 109N and MATH 102N, or adequate scores on the Course Placement Evaluation.

CS 132	Introduction to Programming (3)
CS 142	Computer Science I (3)
CS 170	Mathematics for Computer Science (3)
CS 242	Computer Science II (3)
CS 295	Computer Science Project (3)
CS 210	Database Design & Programming (3)

or

CT 205	Databases and the Internet (3)
ECET 130	Microcomputer Systems I (3)
ECET 130L	Microcomputer Systems I Lab (1)

Elective: Choose 19-21 hrs from the following courses, but no more than 9 crs from ECET:

CS 105	Intro to Databases (3)
CS 150	UNIX (3)
CS 164	Scripting Languages (3)
CS 167	C Programming (3)
CS 200	C++ Programming (3)

or

CS 220	Advanced Java (3)
CS 280	GUI/Windows Programming (3)

CT 120	Networking Essentials (3)
or	
CT 125	TCP/IP (3)
CT 200	Advanced Web Page Techniques (3)
ECET 100	Intro. to Electronics (3)
ECET 100L	Intro. to Electronics Lab (1)
ECET 115	Digital Fundamentals (3)
ECET 115L	Digital Fundamentals Lab (2)
ECET 230	Microcomputer Systems II (3)
ECET 230L	Microcomputer Sys. II Lab (1)

TOTAL CREDIT HOURS 67-69

Recommended Course Sequence

First Semester (Fall)	Second Semester (Spring)
ENG 111 (3)	ENG 116 (3)
Hum/SS Elective (3)	MATH 150 (3)
HPER Elective (1)	CS 142 (3)
ECET 130/130L (4)	CS 170 (3)
CS 132 (3)	Program Elective (5-7)
Third Semester (Fall)	Fourth Semester (Spring)
SPCH 130 (3)	MATH 162 (4)
Hum/SS Elective (3)	CS 295 (3)
MATH 155 (3)	Program Electives (9-10)
CS 242 (3)	
CS 210 or CT 205 (3)	
Program Elective (3)	

COMPUTER TECHNOLOGY

Associate of Applied Science NETWORK ADMINISTRATION

11.0102

This degree program is designed to create or enhance the skill set required to configure and maintain Microsoft or Linux networking systems. The program prepares you for entry-level positions in desktop or network support. The curriculum offers a comprehensive program if you want to be involved in the support and maintenance of interconnected computers and want to learn in a hands-on workshop environment with real-time activities.

Your advisors for this program are
Tom Click, 747-2255, or tclick@nnmcc.edu
Michael Maddex, 747-2264, or michaelm@nnmcc.edu

GENERAL EDUCATION (18 hrs)

Communications (9 hrs)

ENG 111	English Composition I (3)
ENG 116	Technical Writing (3)
SPCH 130	Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Social/Behavioral Sciences (3 hrs)

Electives (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives, including DANC (1)

PROGRAM REQUIREMENTS (48 -50 hrs)

Pre-requisites for entry to this program include CS 102, and ENG 109N and MATH 102N, or adequate scores on the Course Placement Evaluation.

- CS 132 Introduction to Programming (3)
- CS 142 Computer Science I (3)
- CS 150 UNIX (3)
- CS 164 Scripting Languages (3)
- CT 120 Networking Essentials (3)
- CT 125 TCP/IP (3)
- CT 215 Server Software (3)
- CT 220 Networking with Microsoft (3)
- CT 230 Network Security (3)
- CT 295 Computer Technology Project (3)
- ECET 130 Microcomputer Systems I (3)
- ECET 130L Microcomputer Systems I Lab (1)
- ECET 230 Microcomputer Systems II (3)
- ECET 230L Microcomputer Systems II Lab (1)

Electives : Choose 10-12 hrs from the following courses:

- CS 167 C Programming
- CS 170 Math for Computer Science (3)
- CS 200 C++ Programming (3)
- CS 242 Computer Science II (3)
- CS 280 GUI/Windows Programming. (3)
- CT 115 Introduction to Web Technology (3)
- CT 225 Novell Systems (3)
- ECET 100 Intro to Electronics (3)
- ECET 100L Intro to Electronics Lab (1)
- ECET 115 Digital Fundamentals (3)
- ECET 115L Digital Fundamentals Lab (2)

TOTAL CREDIT HOURS 67-69

Recommended Course Sequence

First Semester (Fall)	Second Semester (Spring)
ENG 111 (3)	ENG 116 (3)
Hum/SS Elective (3)	MATH 150 (3)
CT 120 (3)	CS 142 (3)
ECET 130/130L (4)	CS 150 (3)
CS 132 (3)	CT 125 (3)
	HPER Elective (1)

Third Semester (Fall)	Fourth Semester (Spring)
SPCH 130 (3)	CT 230 (3)
Hum/SS Elective (3)	CT 295 (3)
ECET 230/230L (4)	Program Electives (11-12)
CS 164 (3)	
CT 220 (3)	
Program Elective (1-3)	

**Associate of Applied Science
Computer Technology
WEB ADMINISTRATION**

11.0104

This program is designed to provide training for entry level positions as web administrators or programmers with a Web Site Hosting business or a local Internet Service Provider. Web administrators manage web databases and services, collect and maintain end-user information, evaluate website effectiveness, and ensure web security. Web programmers write CGI scripts and other programs for incorporation into the web site.

Your advisors for this program are

Tom Click, 747-2255, or tclick@nmcc.edu
Jonathan Cartland, 747-2267, or jcartland@nmcc.edu

GENERAL EDUCATION (18 hrs)

Communications (9 hrs)

- ENG 111 English Composition I (3)
- ENG 116 Technical Writing (3)
- SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives, including DANC (1)

PROGRAM REQUIREMENTS (49-50 hrs)

Pre-requisites for entry to this program include CS 102, and ENG 109N and MATH 102N, or adequate scores on the Course Placement Evaluation.

- CS 132 Introduction to Programming (3)
- CS 142 Computer Science I (3)
- CS 150 UNIX (3)
- CS 164 Scripting Languages (3)
- CT 115 Introduction to Web Technology (2)
- CT 120 Networking Essentials (3)
- CT 125 TCP/IP (3)
- CT 205 Databases and the Internet (3)
- CT 215 Server Software (3)
- CT 290 Web Team Project (3)
- ECET 130 Microcomputer Systems I (3)
- ECET 130L Microcomputer Systems I Lab (1)

Electives: Choose 16-17 hrs from the following 9 courses:

- CS 167 C Programming (3)
 - CS 170 Math for Comp. Science (3)
 - CS 200 C++ Programming (3)
- or**
- CS 280 GUI/Windows Programming. (3)
 - CS 242 Computer Science II (3)
 - CT/VC 175 Internet Publications I (4)
 - CT 200 Advanced Web Page Techniques (3)

58 COMPUTER SCIENCE & ENGINEERING TECHNOLOGY

CT	220	Networking with Microsoft (3)
CT	230	Network Security (3)
ECET	230	Microcomputer Systems II (3)
ECET	230L	Microcomputer Sys II Lab (3)

TOTAL CREDIT HOURS 68-69

Recommended Course Sequence

First Semester (Fall)	Second Semester (Spring)
ENG 111 (3)	ENG 116 (3)
ECET 130/130L (4)	MATH 150 (3)
CT 175 (4)	CS 132 (3)
CT 115 (3)	CT 125 (3)
CT 120 (3)	CS 150 (3)
	HPER Elective (1)

Third Semester (Fall)	Fourth Semester (Spring)
SPCH 130 (3)	Program Electives (6-8)
Hum/SS Elective (3)	Hum/SS Elective (3)
CS 142 (3)	CT 215 (3)
CS 164 (3)	CT 290 (3)
CT 205 (3)	
Program Elective (3-4)	

Associate of Applied Science Computer Technology WEB DESIGN

11.0103

This degree program is designed to provide training for entry-level positions as a web designer or content provider with a Web Site Design or Web Management business. Web designers create the images and define the "look" of the site. Content providers work on the data itself: creating or editing HTML documents, incorporating images and forms, and maintaining the integrity of the links. Web designers are proficient in design principles, scripting languages, animation software, computer technology, and business essentials.

Your advisors for this program are
Tom Click, 747-2255, or tclick@nsmcc.edu
Jonathan Cartland, 747-2267, or jcartland@nsmcc.edu

GENERAL EDUCATION (18 hrs)

Communications (9 hrs)

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)
SPCH	130	Public Speaking (3)

Humanities (3 hrs)

Electives (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives, including DANC (1)

PROGRAM REQUIREMENTS (47-49 hrs)

Pre-requisites for entry to this program include CS 102, and ENG 109N and MATH 102N, or adequate scores on the Course Placement Evaluation.

CS	132	Introduction to Programming (3)
CT/VC	175	Internet Publications I (4)
CT	200	Advanced. Web Page Techniques (3)
CT	205	Databases and the Internet (3)
CT	290	Web Team Project (3)

or

CT	295	Computer Tech. Project (3)
ECET	130	Microcomputer Systems I (3)
ECET	130L	Microcomputer Systems I Lab (1)

Choose at least 17-19 hours from the following courses:

CS	142	Computer Science I (3)
CS	164	Scripting Languages (3)
CT	115	Introduction to Web Technology (2)
CT	120	Networking Essentials (3)

or

CT	125	TCP/IP
CT	135	Web Page Animation (3)
CT/BA	140	e-Commerce (3)
CT	215	Server Software (3)
VC	110	Found. of Visualization (3)
VC	111	2-D Computer Visualization (4)

Choose 10-12 hours from the following courses:

CS	105	Introduction to Databases (3)
		or
OA	265	Access (3)
CS	150	UNIX (3)
CS	170	Mathematics for Computer Science (3)
CS	242	Computer Science II (3)
CS	280	GUI/Windows Programming. (3)
CT	220	Networking with Microsoft (3)
CT	230	Network Security (3)
VC	140	Digital Photography I (4)
VC	275	Internet Publication II (4)
VC	280	Visual Communications History (3)

TOTAL CREDIT HOURS 66-68

Recommended Course Sequence

First Semester (Fall)	Second Semester (Spring)
ENG 111 (3)	ENG 116 (3)
Hum/SS Elective (3)	CT 175 (4)
ECET 130/130L (4)	Program Electives (9-12)
CS 132 (3)	
HPER Elective (1)	

Third Semester (Fall)	Fourth Semester (Spring)
SPCH 130 (3)	Program Electives (10-12)
Hum/SS Elective (3)	CT 290 or 295 (3)
CT 205 (3)	CT 200 (3)
Program Elective (7-8)	

**Associate of Applied Science
ELECTRONICS/COMPUTER
ENGINEERING TECHNOLOGY**

This program offers three areas of concentration: electronics, computer electronics, and semiconductor manufacturing technology. The program core requirements provide a general education background in basic electronics. Both the electronics and computer electronics curricula prepare you to be an electronic equipment technician. The computer electronics concentration prepares you to work on microprocessor-based electronic equipment as well as personal computers. Both degree concentrations articulate with NMSU's Engineering Technology in Electronics bachelor program. The semiconductor manufacturing technology (SMT) curriculum prepares you to work in the semiconductor manufacturing industry. Northern is a partner college in SMT with the Intel Corporation.

Certificates may be obtained in any of the areas of concentration **after** you have completed the associate degree in one area of concentration.

Placement scores which allow you to enroll in ENG 111 and MATH 130 are required for entrance into the degree program (ECET courses above ECET 100). You must also demonstrate computer literacy or have completed CS 102

GENERAL EDUCATION (26 hrs)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- ENG 116 Technical Writing (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (14 hrs)

- MATH 150 College Algebra (3)
- MATH 155 Trigonometry (3)
- PHYS 121 Applied Physics I (3)
- PHYS 121L Applied Physics I Lab (1)
- PHYS 122 Applied Physics II (3)
- PHYS 122L Applied Physics II Lab (1)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM CORE REQUIREMENTS (23 hrs)

- ECET 100 Introduction to Electronics (3)
- ECET 100L Introduction to Electronics Lab (1)
- ECET 110 Electronic I (3)
- ECET 110L Electronics I Lab (2)
- ECET 111 AC Circuits Analysis (3)
- ECET 111L AC Circuits Analysis Lab (1)
- ECET 115 Digital Fundamentals (3)
- ECET 115L Digital Fundamentals Lab (2)
- ECET 150 Electromechanical Devices (3)
- ECET 150L Electromechanical Devices Lab (2)

PROGRAM CONCENTRATION (18-21 hrs)

Choose one of the following areas of concentration:

Electronics (20 hrs) (15.0308)

- ECET 130 Microcomputer Systems (3)
- ECET 130L Microcomputer Systems Lab (1)
- ECET 213 Digital Systems I (3)
- ECET 213L Digital Systems I Lab (2)

Electives Choose 11-12 hours from the following:

- EPDT 110 Printed Circuit Board Design (4)
- ECET 210 Electronics Systems (3)
- ECET 210L Electronics Systems Lab (2)
- ECET 250 Electromechanical Systems (2)
- ECET 250L Electromechanical Sys Lab (2)
- ECET 295 Electronics Project (3)

Any program advisor-approved ECET, EPDT, SMT, or ENGR course.

Computer Electronics (20 hrs) (15.0303)

- ECET 130 Microcomputer Systems (3)
- ECET 130L Microcomputer Systems Lab (1)
- ECET 213 Digital Systems I (3)
- ECET 213L Digital Systems I Lab (2)
- ECET 215 Digital Systems II (3)
- ECET 215L Digital Systems II Lab (2)
- ECET 230 Microcomputer Systems II (3)
- ECET 230L Microcomputer Systems II Lab (1)

Any program advisor-approved ECET, EPDT, SMT, or ENGR course.

Semiconductor Manufacturing (21 hrs) (15.0310)

- CHEM 121 General Chemistry I (3)
- CHEM 121L General Chemistry I Lab (1)
- ECET 165 Vacuum, RF-Power, & Pneumatics (3)
- ECET 165L Vacuum, RF-Power, & Pneumatics Lab (1)
- ECET 250 Electromechanical Systems (2)
- ECET 250L Electromechanical Systems Lab (2)
- ECET 260 Statistical Process Controls (3)
- SMT 100 Semiconductor Manuf. Technology I (2)
- SMT 100L Semiconductor Manuf. Technology I Lab (1)
- SMT 200 Semiconductor Manuf. Technology II (2)
- SMT 200L Semiconductor Manuf. Technology II Lab (1)

TOTAL CREDIT HOURS 70-71

Recommended Course Sequence

First Semester (Fall)	Second Semester (Spring)
ENG 111 (3)	ENG 116 (3)
ECET 100/100L (4)	MATH 155 (3)
ECET 115/115L (5)	ECET 110/110L (5)
MATH 150 (3)	ECET 111/111L (4)
HPER Elective (1)	Hum/SS Elective (3)
Third Semester (Fall)	Fourth Semester (Spring)
PHYS 121/121L (4)	PHYS 122/122L (4)
ECET 150/150L (5)	Hum/SS Elective (3)
Program Electives (8-9)	Program Electives (10-11)

**Certificate
ELECTRONICS TECHNOLOGY**

15.0311

If you have already completed the associate degree in Electronics/Computer Engineering Technology with a concentration in Computer Electronics or Semiconductor Manufacturing, you may earn this certificate by completing the following courses.

PROGRAM REQUIREMENTS 20-21 hrs)

- ECET 130 Microcomputer Systems (3)
- ECET 130L Microcomputer Systems Lab (1)
- ECET 213 Digital Systems I (3)
- ECET 213L Digital Systems I Lab (2)

Electives (Choose 11-12 hours from the following):

- EPDT 110 Printed Circuit Board Design (4)
- ECET 210 Electronics Systems (3)
- ECET 210L Electronics Systems Lab (2)
- ECET 250 Electromechanical Systems (2)
- ECET 250L Electromechanical Systems Lab (2)
- ECET 295 Electronics Project (3)

Any program advisor approved ECET, EPDT, SMT, or ENGR course.

TOTAL CREDIT HOURS 20-21

**Certificate
COMPUTER ELECTRONICS TECHNOLOGY**

15.0312

If you have already completed the associate degree in Electronics/Computer Engineering Technology with a concentration in Electronics Technology or Semiconductor Manufacturing, you may earn this certificate by completing the following courses.

PROGRAM REQUIREMENTS (20-21 hrs)

- ECET 130 Microcomputer Systems (3)
- ECET 130L Microcomputer Systems Lab (1)
- ECET 213 Digital Systems I (3)
- ECET 213L Digital Systems I Lab (2)
- ECET 215 Digital Systems II (3)
- ECET 215L Digital Systems II Lab (2)
- ECET 230 Microcomputer Systems II (3)
- ECET 230L Microcomputer Systems II Lab (1)

Any program advisor-approved ECET, EPDT, SMT, or ENGR course.

TOTAL CREDIT HOURS 20-21

**Certificate
SEMICONDUCTOR
MANUFACTURING TECHNOLOGY**

15.0313

If you have already completed the associate degree in Electronics/Computer Engineering Technology with a concentration in Electronics Technology or Computer Electronics Technology, you may earn this certificate by completing the following courses.

PROGRAM REQUIREMENTS (21 hrs.)

- CHEM 121 General Chemistry I (3)

- CHEM 121L General Chemistry I Lab (1)
- ECET 165 Vacuum, RF-Power, & Pneumatics (3)
- ECET 165L Vacuum, RF-Power & Pneumatics Lab (1)
- ECET 250 Electromechanical Systems (2)
- ECET 250L Electromechanical Systems Lab (2)
- ECET 260 Statistical Process Controls (3)
- SMT 100 Semiconductor Manuf. Technology I (2)
- SMT 100L Semiconductor Manuf. Techny I Lab (1)
- SMT 200 Semiconductor Manuf. Technology II (2)
- SMT 200L Semiconductor Manuf. Techny II Lab (1)

TOTAL CREDIT HOURS 21

**Associate of Applied Science
ELECTRONICS PACKAGING
DESIGN TECHNOLOGY**

48.0114

This program prepares you to become an electronics package designer whose primary task is to translate engineering ideas and schematics into the design drawings and documents needed to manufacture an electronics package.

GENERAL EDUCATION (22 hrs.)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- Choose one of the following courses:
- ENG 116 Technical Writing (3)
- SPCH 130 Public Speaking (3)

Humanities (3 hrs)

- Elective (3)

Math/Computer/Lab Sciences (10 hrs)

- ENGR 110 Intro to Engineering Technology (4)
- CS 102 Computer Literacy (3)
- MATH 130 Intermediate Algebra (3)

Social/Behavioral Sciences (3 hrs)

- Social/Behavioral Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hrs)

- Electives (1)

PROGRAM REQUIREMENTS (40 hrs)

- EPDT 100 Electronics Packaging Design (4)
- ECET 100 Introduction to Electronics (3)
- ECET 100L Introduction to Electronics Lab (1)
- ECET 115 Digital Fundamentals (3)
- ECET 115L Digital Fundamentals Lab (2)
- EPDT 110 Printed Circuit Board Design I (4)
- EPDT 120 Printed Circuit Board Design II (4)
- EPDT 200 Integrated Circuit Design I (5)
- EPDT 250 Integrated Circuit Design II (5)
- SMT 100 Semiconductor Manuf. Technology I (2)
- SMT 100L Semiconductor Manuf. Techny I Lab (1)
- DRFT 122 Geometric Dimensioning/Tolerancing(3)
- Electives (4) 4 hours of approved electives from DRFT, EPDT, ENGR, ECET, or Math, Science, Engineering Technology.

TOTAL CREDIT HOURS 64

**Associate of Applied Science
ENGINEERING TECHNOLOGY**

15.0203

This program is designed to provide general entry-level engineering technician skills for employment in an engineering-related field. Although not fully transferable to four-year programs, a considerable portion of this program will transfer to engineering technology programs. If you desire to continue to a four-year institution, you should meet with the receiving institution to determine the specifics of transfer.

GENERAL EDUCATION (21 hrs)

Communication (6 hrs)

ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)

Humanities (3 hrs)

Elective (3)

Math/Computer/Lab Sciences (9 hrs)

CS 102 Computer Literacy (3)
MATH 150 College Algebra (3)
MATH 155 Trigonometry (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (42 hrs)

ENGR 110 Intro. to Engineering Technology (4)
DRFT 100 Introduction to Drafting (3)
DRFT 199 How to Get a Job (1)
DRFT 208 Computer Aided Drafting I (3)
DRFT 209 Computer Aided Drafting II (3)
PHYS 121 Applied Physics I (3)
PHYS 121L Applied Physics I Lab (1)
PHYS 122 Applied Physics II (3)
PHYS 122L Applied Physics II Lab (1)
CHEM 110 Introduction to Chemistry (3)
CHEM 110L Introduction to Chemistry Lab (1)
Electives (16 crs): Any advisor-approved courses from the following disciplines: BIOL, CHEM, CS, DRFT, ECET, ENGR, GEOL, MATH, MT, PHYS, or WELD, or up to six additional electives from the Humanities and/or Social Science disciplines.

TOTAL CREDIT HOURS 64

**Associate of Applied Science
MACHINING TECHNOLOGY**

48.0503

This program is for students who are actively participating in the Machinist Apprenticeship Program.

GENERAL EDUCATION (18-19 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)

Choose **one** of the following three courses:

ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computer/Lab Sciences (6-7 hrs)

CS 102 Computer Literacy (3)
MATH 130 Intermediate Algebra (3)

or

ENGR 110 Intro to Engineering Technology (4)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION, & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (52 hrs)

MT 100 MAP Basic Machining Operations I (2)
MT 120 MAP Basic Machining Operations II (2)
MT 130 MAP Basic Print Reading (2)
MT 140 MAP Basic Math for Machinists (2)
MT 210 MAP Advanced Math for Machinists (2)
MT 220 MAP Advanced Machining Operations I (2)
MT 230 MAP Adv.Print Reading & Measurement (3)
MT 240 MAP Adv. Machining Operations II (1)
MT 190A Machinist Apprenticeship Training A (12)
MT 191B Machinist Apprenticeship Training B (12)
MT 290D Machinist Apprenticeship Training D (12)

TOTAL CREDIT HOUR 71-72

**Associate of Applied Science
WELDING TECHNOLOGY**

48.0509

This program prepares you for the more technical aspects of the welder's trade, with emphasis on jobs available in the government sector, particularly at sites such as the Los Alamos National Laboratory.

GENERAL EDUCATION (21-22 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computer/Lab Sciences (6-7 hrs)

CS 102 Computer Literacy (3)
ENGR 110 Intro to Engineering Technology (4)

or

MATH 130 Intermediate Algebra (3)

62 COMPUTER SCIENCE & ENGINEERING TECHNOLOGY

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hrs)

Electives (1)

PROGRAM REQUIREMENTS (41-42 hrs)

BA 120 Introduction to Business (3)

DRFT 100 Introduction to Drafting (3)

or

DRFT 208 Computer-Aided Drafting I (3)

DRFT 199 How to Get a Job (1)

WELD 110 Introduction to Welding (3)

WELD 111L Fundamentals of Oxyacetylene Welding(3)

WELD 112L Fundamentals of Arc Welding (3)

WELD 120L Oxyacetylene Welding (3)

WELD 121L Arc Welding (3)

WELD 122L Inert Gas Welding (3)

WELD 210 Welding Blueprint Reading (3)

WELD 211L Practical Arc Lab (3)

WELD 212L Practical Oxyacetylene Lab (3)

WELD 213L Practical Inert Gas Lab (3)

Approved Technical Elective (4-5) such as ABR, ATEC, DRFT, ECET, ELEC, WELD, etc.

TOTAL CREDIT HOURS 63-65

Certificate WELDING

48.0508

This program prepares you for entry-level jobs in the manufacturing and construction trades as production or specialized welders, welder fitters, and welder-tackers. When you have completed the program you will be eligible to apply for national certification from the American Welding Society.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG 108N Basic English I (3)

Mathematics (3-6 hrs)

MATH 100N (6) or a higher level math course (3)

PROGRAM REQUIREMENTS (30 hrs.)

WELD 110 Introduction to Welding (3)

WELD 111L Fundamentals of Oxyacetylene Welding (3)

WELD 112L Fundamentals of Arc Welding (3)

WELD 120L Oxyacetylene Welding (3)

WELD 121L Arc Welding (3)

WELD 122L Inert Gas Welding (3)

WELD 210 Welding Blueprint Reading (3)

WELD 211L Practical Arc Lab (3)

WELD 212L Practical Oxyacetylene Lab (3)

WELD 213L Practical Inert Gas Lab (3)

TOTAL CREDIT HOURS 39

**DEPARTMENT OF
DEVELOPMENTAL STUDIES**

SPECIAL SERVICE PROGRAMS

Special Service programs provide an important component in the comprehensive mission of Northern by providing specialized certificate programs in various specialized certificate programs. At present, Northern offers such programs in the area of Auto Mechanics and Plumbing Assistant. Other programs are being developed as this catalog goes to print.

These programs are designed for students who are disabled but who, with occupational training, are able to obtain positions in competitive employment. Class sizes are small and emphasis is placed on the completion of skills necessary for employment. Those interested should contact Ms. Kim Dickman, Director of Special Needs, at (505) 747-2152.

**CERTIFICATE
AUTO MECHANICS**

32.0199

This program is designed to train you to be an assistant in the field of auto mechanics. You must have special permission from the instructor for admission into this program which runs for two consecutive semesters (Fall and Spring) and one Summer Session.

PROGRAM REQUIREMENTS (30.5 hrs)

ATEC	101L	Basic Service Fundamentals (4)
ATEC	104L	Brake Systems (4)
ATEC	105L	Suspension and Alignment (4)
ATEC	114	Service Writer/Customer Service (1)
ATEC	115L	Basic Electrical & Engine Maintenance (4)
CS	103	Introduction to Computer Applications I (1)
HSCI	109	CPR/First Aid (.5)
PD	090	Independent Living I (2)
PD	090L	Independent Living I Lab (1)
PD	091	Independent Living II (2)
PD	091L	Independent Living II Lab (1)
PD	093	Social Skills I (1)
PD	094	Social Skills II (1)
PD	095	Job Skills I (1)
PD	096	Job Skills II (1)
HPER		Electives (2)

TOTAL CREDIT HOURS 30.5

SEQUENCE OF COURSES

Fall Semester		Spring Semester	
ATEC	101L	ATEC	104L
ATEC	114	ATEC	105L
CS	103	HPER	
HPER		PD	091
PD	090	PD	091L
PD	090L	PD	094
PD	093	PD	096
PD	095		

Summer Session

ATEC	115L
HSCI	109

**CERTIFICATE
PLUMBING ASSISTANT**

32.0199

This program is designed to train you to be a plumber's helper. You must have special permission from the instructor for admission into this program which runs for two consecutive semesters (Fall and Spring) and one Summer Session.

PROGRAM REQUIREMENTS (34.5 hrs)

CS	103	Introduction to Computer Applications I (1)
HSCI	109	CPR/First Aid (.5)
PLB	130	Plumbing Systems I (2)
PLB	130L	Plumbing Systems I Lab (5)
PLB	131	Plumbing Code I (2)
PLB	132	Blueprint Reading (2)
PLB	140	Plumbing Systems II (2)
PLB	140L	Plumbing Systems II Lab (5)
PLB	141	Plumbing Code II (2)
PLB	150L	Plumbing Practicum (4)
PD	090	Independent Living I (2)
PD	090L	Independent Living I Lab (1)
PD	091	Independent Living II (2)
PD	091L	Independent Living II Lab (1)
PD	093	Social Skills I (1)
PD	094	Social Skills II (1)
PD	095	Job Skills I (1)
PD	096	Job Skills II (1)
HPER		Electives (2)

TOTAL CREDIT HOURS 30.5

SEQUENCE OF COURSES

Fall Semester		Spring Semester	
PLB	130	PLB	140
PLB	130L	PLB	140L
PLB	131	PLB	141
PD	090	PD	091
PD	090L	PD	091L
PD	093	PD	094
PD	095	PD	096

Summer Session

HSCI	109
PLB	132
PLB	150

DEPARTMENT OF EDUCATION

Beginning with the Fall semester 2004, Northern began to offer a Bachelor of Arts degree in Elementary Education. This degree requires 52 credits in Education, 4 credits in related courses, and 24 credits in a Humanities/Social Sciences major. The Humanities/Social Sciences major is structured in a seminar format similar to that followed by St. John's College. This degree is accredited at the four-year level by the Commission on Higher Education of the North Central Association of Colleges and Schools.

Our Associate of Arts in Elementary Education provides a smooth transition to our BA in Elementary Education as well as providing an opportunity to transfer to other colleges and universities with minimal loss of credit.

We also offer an Associate of Arts in Early Childhood Education, designed for those of you who wish to prepare for working with younger children (birth-grade three).

Northern also offers an Alternative Licensure Program for Teachers in Elementary Education (K-8), Secondary Education (7-12), or in Special Education (K-12). Completion of these courses of study lead to teacher licensure and/or to subject endorsements through the New Mexico Department of Public Education.

In Fall 2005, Northern anticipates offering a 24-credit hour program of study leading to an endorsement in Bilingual Education or TESOL. The course work will allow students to readily transfer into our BA program, or transfer to other institutions, prepare for New Mexico state licensure and competency examinations, and provide a rich foundation in bilingual theory and practical classroom experience.

**Bachelor of Arts
EDUCATION
Elementary Education
Major: Humanities/Social Science**

13.1205

This program is designed so that you may earn your baccalaureate degree in Elementary Education completely at Northern. Upon successful completion of the baccalaureate program and passing the New Mexico Teacher Assessment tests, you will be eligible to apply for teacher certification through the New Mexico Department of Public Education.

If you apply for/ after Fall 2004, you must submit the following materials to the Office of Admissions and Records prior being accepted into the major:

1. Application for Admission to the College.
2. Letter of Intent: a one page typed letter stating your reason for wanting to become a teacher and including your strengths and experiences.
3. Personal Philosophy of Education essay: a one page typed statement.
4. Official transcripts from all colleges.
5. Application for acceptance into the BA Elementary Education Program: available from the Education Department or from the Office of Admissions and Records.

Your completed application packet (items 2, 3, and 5, along with copies of your transcripts, will be forwarded from the Office of Admission and Records when it is complete. Until

this has been accomplished, you may not enroll in any of the program-required courses.

If you are a student transferring to Northern's program from another Elementary Education program, you must have a 2.25 gpa in each major academic area and/or a C or better in Northern's General Education Common Core requirements. You must maintain an overall 2.25 gpa in the BA Elementary Education program. If, at the time of your application to the program, you have less than a 2.25 overall gpa, you may be considered for conditional admission in special circumstances, to be determined by the Education Department.

Anyone who has not provided passing scores from the New Mexico Teacher Assessment of Basic Skills exam before the end of the fourth semester will be dropped from the program. Also, anyone who has not passed the New Mexico Content Knowledge Assessment of Elementary Education examination will not be permitted to enter into ED 479 (Student Teaching).

GENERAL EDUCATION (54 hrs)

Communications (9)

ENG 111	English Comp. I (3)
ENG 112	English Comp. II (3)
SPCH 130	Public Speaking (3)

Fine Arts (6)

ART 105	Introduction to Art (3)
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Choose **one** introductory courses (*no applied courses*) from the following: ART, MUSIC, THEATRE.

Humanities (12)

HIST 161	History of the U.S. to 1877 (3)
HIST 162	History of the U.S. from 1877 (3)
HIST 260	History of New Mexico (3)

Choose **one** of the following two courses:

HIST 101	Western Civilization I (3)
HIST 102	Western Civilization II (3)

Literature (3)

ENG	Elective from ENG 260-296 (3)
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Mathematics (6)

MATH 150	College Algebra (3)
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Choose **one** of the following three courses:

MATH 145	Intro to Probability and Statistics (3)
MATH 155	Trigonometry (3)
MATH 162	Calculus (4)

Laboratory Sciences (12)

BIOL 110	Current Topics in Biology (3)
BIOL 110L	Current Topics in Biology Lab (1)

Any **two** laboratory science courses from the following list: ASTR 110/L, CHEM 110/L, GEOL 101/L, or PHYS 110/L.

Social/Behavioral Sciences (6)

PSY 105	General Psychology (3)
SOC 101	Introduction to Sociology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1)

Elective	(1)
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PROGRAM REQUIREMENTS

Education (52 hrs)

- ED 201 Foundations of Education (3)
- ED 205L Integrating Technology in the K-8 Classroom (2)
- ED 213 Field Experience (1)
- ED 220 Educational Psychology (3)
- ED 226 Strategies for Successful Classrooms (2)
- ED 311 Practicum I (1)
- ED 313 Science & Math for Educators I (3)
- ED 322 Math for Educators I (3)
- ED 331 English as a Second Language (3)
- ED 404 Music & Art Across the K-8 Classroom (2)

or

- ED 420 Creative Movement for the Classroom (2)
- ED 411 Practicum II (1)
- ED 422 Math for Educators II (3)
- ED 423 Science & Math for Educators II (3)
- ED 450 Pedagogy and Learning (3)
- ED 460 Reading & Writing Across the Curriculum (Elem.) (3)
- ED 470 Teaching & Diagnosis of Reading (3)
- SPED 475 Curric. Methods & Materials-Special Ed(3)
- ED 479 Student Teaching (5)
- ED 480 Student Teaching Seminar (1)
- ED 481 Dossier Preparation (1)
- ED 495 Assessment & Evaluation of Student Learning (3)

Major: Humanities/Social Sciences * (24 hrs)

- HSS 222 Understanding Diverse Communities (3)
- HSS 310 Indigenous Perspectives of New Mexico History and Culture (4)
- HSS 311 Why the Social Sciences Matter (4)
- HSS 320 Genesis of Math and Science (4)
- HSS 414 Humanity and Creativity (4)
- HSS 421 History, Literature, Art, and Philosophy (4)
- HSS 422 Senior Seminar Thesis in Humanities/Social Sciences (1)

Related Requirements (4 hrs)

- LT 223 Library Information for Educators (1)
- Choose any **one** of the following Spanish courses:
SPAN 100, 101, 102, 111, or 112.

TOTAL CREDITS 134

**Associate of Arts
ELEMENTARY EDUCATION**

13.1202

This program is designed so that you may easily transition into Northern's BA in Elementary Education after completion of this Associate of Arts.

GENERAL EDUCATION (54 hrs)

Communications (9)

- ENG 111 English Comp. I (3)
- ENG 112 English Comp. II (3)
- SPCH 130 Public Speaking (3)

Fine Arts (6)

- ART 105 Introduction to Art (3)
- Choose **one** introductory course (*no applied courses*) from the following disciplines: ART, MUSIC, THEATRE.

Humanities (12)

- HIST 161 History of the U.S. to 1877 (3)
 - HIST 162 History of the U.S. from 1877 (3)
 - HIST 260 History of New Mexico (3)
- Choose **one** of the following two courses:
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)

Literature (3)

- ENG Elective from ENG 260-296 (3)

Mathematics (6)

- MATH 150 College Algebra (3)
- Choose **one** of the following:
MATH 145 Introduction to Probability and Statistics (3)
MATH 155 Trigonometry (3)
MATH 162 Calculus I (4)

Laboratory Sciences (12)

- BIOL 110 Current Topics in Biology (3)
 - BIOL 110L Current Topics in Biology Lab (1)
- Any **two** laboratory science courses from the following list:
ASTR 110/L, CHEM 110/L, GEOL 101/L, or PHYS 110/L.

Social/Behavioral Sciences (6)

- PSY 105 General Psychology (3)
- SOC 101 Introduction to Sociology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION

- Elective (1)

PROGRAM REQUIREMENTS (13)

- ED 201 Foundations of Education (3)
 - ED 205L Integrating Technology in the K-8 Classroom (2)
 - ED 213 Field Experience I (1)
 - ED 220 Educational Psychology (3)
 - LT 223 Library Information for Educators (1)
- Choose **one** of the following 3-credit Spanish courses:
SPAN 100, 101, 102, 111, or 112

TOTAL CREDIT HOURS 68

**Associate of Arts
EARLY CHILDHOOD EDUCATION**

13.1204

This program offers instruction and practical experience in working with young children and their families. Academic learning is integrated with on-site experience which builds the pre-service teacher's confidence and hands-on competence.

This degree also addresses the general early childhood competency areas which partially fulfill the requirements for the New Mexico Department of Public Education licensure in Early Childhood Education (birth-grade three).

In addition, this degree provides an excellent background if you wish to transfer into the Education Program at New Mexico Highlands University or to the College of Santa Fe. However, to insure the best transition to another college, you must work closely with your Northern advisor and with department advisors in the institution to which you wish to transfer.

GENERAL EDUCATION (35 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two course (with labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)

BIOL 110/L Current Topics in Biology w/lab (4)

BIOL 112 Environmental Science w/Lab (4)

CHEM 110/L Introduction to Chemistry w/lab (4)

GEOL 101/L Physical Geology w/Lab (4)

GEOL 102/L Historical Geology w/Lab (4)

PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 hrs) *

You must select courses from at least *two different discipline areas* from the following list:

ANTH 101/I Physical Anthropology w/Lab (4)

ANTH 102 Intro to Social & Cultural Anthropology (3)

ANTH 111 Language and Culture (3)

ANTH 207 Cultures of New Mexico (3)

ECON 200 Macroeconomics (3)

ECON 201 Microeconomics (3)

GEOG 111 World Geography (3)

PSCI 110 The Political World (3)

PSCI 200 American Politics (3)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

SOC 220 Social Problems (3)

SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select courses from at least *two different discipline areas* from the following list:

ART 105 Introduction to Art (3)

ART 107 History of Art (3)

ENG Lit. courses numbered 260-298

HIST 101 Western Civilization I (3)

HIST 102 Western Civilization II (3)

HIST 161 History of the U.S. to 1877 (3)

HIST 162 History of the U.S. from 1877 (3)

HIST 260 History of New Mexico (3)

HUM 101 Humanities I (3)

HUM 102 Humanities II (3)

MUS 105 Music Appreciation (3)

PHIL 110 Intro to Philosophical Problems (3)

PHIL 220 Ethics (3)

THE 120 Introduction to Theatre I (3)

THE 130 History of Theatre (3)

THE 220 Introduction to Theatre II (3)

THE 225 Creative Drama Techniques for the Classroom K-12 (3)

THE 238 Teatro Chicano (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (30 hrs)

CS 102 Computer Literacy (3)

ECE 202 Child Development (3)

ECE 218 Nutrition, Health, and Safety (3)

ECE 219 Intro to Early Childhood Education (3)

ECE 221 Methods/Materials- Early Childhood Ed.(3)

ECE 224 Learning Environments (3)

ECE 226 Parent/Community Involvement in School (3)

ECE 234 Field Based Practicum (2)

ECE 285 Child Guidance (3)

Choose **one** of the following courses:

ECE 235 Student Teaching: Infant/ Toddler (3)

ECE 236 Student Teaching: Preschool (3)

ECE 237 Student Teaching: Elem. School (3)

TOTAL CREDIT HOURS 66

ALTERNATIVE LICENSURE FOR ELEMENTARY or SECONDARY EDUCATION

The Alternative Licensure Program for Teachers provides a course of study leading to teacher licensure. The program, approved by the New Mexico Department of Public Education and the Professional Standards Commission, offers elementary- and secondary- track course work.

Students enrolled in the Alternative Licensure Program must complete all course work, pass the required New Mexico Teachers Assessment Tests (NMTA), and complete other application requirements for licensure.

DEGREE REQUIREMENTS

Each applicant must hold a degree in a field other than education: Bachelor's including 30 credits in a particular field; or Master's, including 12 graduate credits in a particular field; or Doctorate in a particular field.

TESTING REQUIREMENTS

After admission into the program and during the first semester of enrollment, you must pass the NMTA Basic Skills and General Knowledge tests; you will take other required tests at the end of the program. Those tests include:

Teacher Basic Skills

Teacher Competency Elementary

or

Teacher Competency Secondary

Content Knowledge Assessment of Elementary Ed.

GENERAL REQUIREMENTS: Submit to Northern’s Teacher Education Department an application packet that includes: a letter of intent; two letters of recommendation; copies of transcripts to the Education Department; and an Alternative Licensure Program Application form.

You must have already applied and been accepted to Northern and have had official transcripts sent to the Office of Admissions.

PROFESSIONAL EDUCATION REQUIREMENTS: 20 credit hours for the Elementary track and 18 credit hours for the Secondary track program, as approved by the New Mexico Department of Public Education and the Professional Standards Commission.

ELEMENTARY (K-8)

- ED 201 Foundations of Education (3)
- ED 450 Pedagogy and Human Learning (3)
- ED 460 Reading and Writing Across the Curriculum (3)
- ED 470 Teaching and Diagnosis of Reading (3)
- ED 493 The Integrated Elementary Classroom (3)
- ED 495 Assessment and Evaluation of Student Learning (2)
- ED 496 Supervised Field Experience (1)
- ED 496L Supervised Field Experience Lab (3)

TOTAL CREDIT HOURS 20

SECONDARY (7-12)

- ED 201 Foundations of Education (3)
- ED 450 Pedagogy and Human Learning (3)
- ED 462 Reading and Writing Across the Curriculum (3)
- ED 474 Methods and Materials in Secondary Education (3)
- ED 495 Assessment and Evaluation of Student Learning (2)
- ED 496 Supervised Field Experience (1)
- ED 496L Supervised Field Experience Lab (3)

TOTAL CREDIT HOURS 18

**ALTERNATIVE LICENSURE
for
SPECIAL EDUCATION**

The Special Education Alternative Licensure Program for teachers provides a course of study leading to teacher licensure. The program, approved by the New Mexico Department of Public Education and the Professional Standards Commission, offers elementary- and secondary-track course work.

Students enrolled in this program must complete all course work, pass the required New Mexico Teachers Assessment tests (NMTA) and complete other application requirements for licensure.

DEGREE REQUIREMENTS

Applicants must hold a degree in education or in any other field of study.

Bachelor’s including 30 credits in a particular field; or
Master’s, including 12 graduate credits in a particular field; or
Doctorate in a particular field.

TESTING REQUIREMENTS

After admission into the program and during the first semester of enrollment, you must pass the NMTA Basic Skills and General Knowledge tests; you will take other required tests at the end of the program.

- Basic Skills
- Teacher Competency Elementary
- or**
- Teacher Competency Secondary

GENERAL REQUIREMENTS: Submit to Northern’s Teacher Education Department an application packet that includes: a letter of intent; two letters of recommendation; copies of transcripts to the Education Department; and an Alternative Licensure Program Application form.

You must have already applied and been accepted to Northern and have had official transcripts sent to the Office of Admissions.

PROFESSIONAL EDUCATION REQUIREMENTS: 20 credit hours for the Special Education program, as approved by the New Mexico Department of Public Education and the Professional Standards Commission.

SPECIAL EDUCATION (K-12)

- SPED 201 Foundations of Education (3)
- SPED 455 The Special Education Program (4)
- SPED 465 Reading for Special Learners (3)
- SPED 475 Curric. Methods/Materials-Special Learners(3)
- SPED 485 Teaching Reading in Special Education (3)
- SPED 497 Supervised Field Experience (1)
- SPED 497L Supervised Field Experience Lab (3)

TOTAL CREDIT HOURS 20

READING ENDORSEMENT

This program is designed for students interested in becoming reading endorsed in the State of New Mexico. The endorsement consists of 24 credit hours in the area of reading theory, assessment, and instruction. The courses address the standards set forth by the New Mexico Department of Public Education and the International Reading Association guidelines for reading and reading assessment.

In order to take any of these courses, you must have been admitted into our Teacher Education program or have a valid New Mexico teaching certificate.

Program Requirements (24 hrs)

- ERDG 361 Integrating Children’s Lit. into the Curric(3)
- ERDG 371 Language Essentials for the Reading Pro(3)
- ERDG 461 Evaluating research-based Reading programs (3)
- ERDG 471 Remediation of Reading Difficulties I (3)
- ERDG 476 Remediation of Reading Difficulties II (3)
- ERDG 481 Practicum in Reading Instruction (3)
- ED 470 Teaching & Diagnosis of Reading (3)
- Choose one of the following:
- ED 460 Reading/Writing Across Curric.(Elem.) (3)
- or**
- ED 462 Reading/Writing Across Curric(Secondary3)

**Associate of Arts
SPECIAL EDUCATION**

13.1001

This program is designed to empower teaching assistants and other individuals with the knowledge and skills necessary to work with exceptional children in a variety of special education settings. The program also provides an excellent foundation for those who are interested in pursuing a baccalaureate degree in special education. Field-based experiences and observations are integrated with instruction to assure a critical link between theory and practice.

GENERAL EDUCATION (36 hrs)

Communications (10 hrs)

ENG 110 Writing the Research Paper (1)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (8 hrs)

Choose **two course (with labs)** from the following list:

ASTR 110/L Introduction to Astronomy w/lab (4)

BIOL 110/L Current Topics in Biology w/lab (4)

BIOL 112 Environmental Science w/Lab (4)

CHEM 110/L Introduction to Chemistry w/lab (4)

GEOL 101/L Physical Geology w/Lab (4)

GEOL 102/L Historical Geology w/Lab (4)

PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 hrs) *

You must select courses from *at least two different discipline areas* from the following list:

ANTH 101/I Physical Anthropology w/Lab (4)

ANTH 102 Intro to Social and Cultural Anthropology (3)

ANTH 111 Language and Culture (3)

ANTH 207 Cultures of New Mexico (3)

ECON 200 Macroeconomics (3)

ECON 201 Microeconomics (3)

GEOG 111 World Geography (3)

PSCI 110 The Political World (3)

PSCI 200 American Politics (3)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

SOC 220 Social Problems (3)

SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select courses from *at least two different discipline areas* from the following list:

ART 105 Introduction to Art (3)

ART 107 History of Art (3)

ENG Lit. courses numbered 260-298

HIST 101 Western Civilization I (3)

HIST 102 Western Civilization II (3)

HIST 161 History of the U.S. to 1877 (3)

HIST 162 History of the U.S. from 1877 (3)

HIST 260 History of New Mexico (3)
HUM 101 Humanities I (3)
HUM 102 Humanities II (3)
MUS 105 Music Appreciation (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 220 Ethics (3)
THE 120 Introduction to Theatre I (3)
THE 130 History of Theatre (3)
THE 220 Introduction to Theatre II (3)
THE 238 Teatro Chicano (3)

* You must complete at least 15 crs between these two areas, maintaining at least two disciplines in each area.

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

Elective (2)

PROGRAM REQUIREMENTS (26 hrs)

ED 201 Foundations of Education (3)

ED 234 Field Based I Practicum (3)

SPED 210 Intro to Children with Special Needs (3)

SPED 234 Field Based Practicum I -Special Education (1)

PSY 212 Child Psychology and Development (3)

PSY 282 Educational Psychology (3)

SPED 284 Curriculum Development in Special Ed (3)

SPED 285 Nature/Needs of the Learning Handicapped(3)

CS 102 Computer Literacy (3)

HSCI 109 CPR/First Aid (1)

TOTAL CREDIT HOURS 64

**Associate of Applied Science
EDUCATIONAL ASSISTANT**

13.1209

In response to Public Law 107-110, No Child Left Behind Act of 2002, this degree provides a specified course of study to prepare students for employment with the public school districts as assistants to certified instructional staff. The curriculum involves courses that will teach students how to assist with large and small group instruction, individualized instruction, testing of students, keeping records and preparation of classroom materials. This program is not designed for transfer to a four-year college or university, though some of the courses may be transferable on a course-by-course basis.

GENERAL EDUCATION (23 hrs)

Communications (7 hrs)

ENG 110 Writing the Research Paper (1)

ENG 111 English Composition I (3)

Choose **one** of the following three courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

SPCH 130 Public Speaking (3)

Humanities (3 hrs)

HIST 260 History of New Mexico (3)

Math/Computer Science/Lab Sciences (10 hrs)

- CS 102 Computer Literacy (3)
- MATH 210 Math for Elementary Teachers (3)
- Select **one** of the following science lab courses (4)
 - ASTR 110/L Intro. to Astronomy w/lab (4)
 - BIOL 110/L Current Topics in Biology w/lab (4)
 - CHEM 110/L Intro to Chemistry w/lab (4)
 - GEOL 101/L Physical Geology w/lab (4)
 - PHYS 110/L Intro to Physics w/lab (4)

Social/Behavioral Sciences (6)

- PSY 105 General Psychology (3)
- SOC 101 Introduction to Sociology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (44 hrs)

- Choose **one** of the following two courses:
- EDUC 100 Foundations of Education for Educ. Assistant (3)
 - ED 201 Foundations of Education (3)
 - EDUC 105 Intro to Pedagogy for Educational Assistant (4)
 - EDUC 115 Principles of Bilingual/Multi-Cultural Education for the Educational Assistant (3)
 - EDUC 125 Reading and Writing Across the Curriculum (3)
 - EDUC 135 Assessment and Evaluation of Students for the Educational Assistant (3)
 - EDUC 145 Children's Literature for the Educ. Assistant (3)
 - EDUC 155 Intro to Children with Special Needs for the Educational Assistant (3)
 - EDUC 165 Classroom Management (3)
 - EDUC 175 Integrating Technology for the Educational Assistant (3)
 - EDUC 185 Field-Based Practicum for the Educational Assistant (4)
 - EDUC 195 Tutoring and Mentoring for the Educational Assistant (3)
 - EDUC 200 Teaching Higher Order Thinking Skills for the Educational Assistant (3)

TOTAL CREDIT HOURS 67

Certificate

EDUCATIONAL ASSISTANT

13.1209

In response to Public Law 107-110, No Child Left Behind Act of 2002, and New Mexico State Department of Education requirements, which can also be satisfied with the Associate of Arts in Teacher Education. Completion of this program with its 48 semester hours of academic credit, which includes 12 semester hours in non-remedial coursework, will allow you to apply for and obtain a New Mexico State Level III Educational Assistant Licensure.

GENERAL EDUCATION (26 hrs)

Communications (7)

- ENG 110 Writing the Research Paper (1)
- ENG 111 English Composition I (3)
- Choose **one** of the following two courses:
 - ENG 260 Children's Literature (3),
or any higher level English literature course (3)
 - SPCH 130 Public Speaking (3)

Humanities (3)

- HIST 260 History of New Mexico (3)

Math/Computer Science/Lab Sciences (10)

- CS 102 Computer Literacy (3)
- MATH 210 Math for Elementary Teachers (3)
- Select **one** of the following science lab courses (4)
 - ASTR 110/L Intro. to Astronomy w/lab (4)
 - BIOL 110/L Survey of Modern Biology w/lab (4)
 - CHEM 110/L Intro to Chemistry w/lab (4)
 - GEOL 101/L Physical Geology w/lab (4)
 - PHYS 110/L Intro to Physics w/lab (4)

Social/Behavioral Sciences (6)

- PSY 105 General Psychology (3)
- SOC 101 Introduction to Sociology (3)

PROGRAM REQUIREMENTS (22 hrs)

- Choose **one** of the following two courses:
- EDUC 100 Foundations of Education for Educ. Assistant (3)
 - ED 201 Foundations of Education (3)
 - EDUC 125 Reading and Writing Across the Curriculum (3)
 - EDUC 135 Assessment and Evaluation of Students for the Educational Assistant (3)
 - EDUC 145 Children's Literature for the Educ. Assistant (3)
 - EDUC 165 Classroom Management (3)
 - EDUC 175 Integrating Technology for the Educational Assistant (3)
 - EDUC 185 Field-Based Practicum for the Educational Assistant (4)

TOTAL CREDIT HOURS 48

DEPARTMENT OF HEALTH OCCUPATIONS

The Department of Health Occupations provides employment-related associate degree and certificate programs in the fields of Nursing and Allied Health, as well as in the fields of Radiation Protection, Radiography and Massage Therapy.

Associate of Applied Science ALLIED HEALTH

51.9999

This program provides basic courses designed for maximum transfer to satisfy the requirements for pre-professional allied health programs at four-year institutions, as well as entry-level employment in the health care field for those who choose a career in the area of health aide.

GENERAL EDUCATION (29 hrs.)

Communications (6 hrs)

ENG 111 English Composition I (3)

Choose **one** of the following:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

SPCH 130 Public Speaking (3)

Humanities (6 hrs)

Elective (6)

Mathematics (3 hrs)

Choose **one** of the following three courses:

MATH 130 Intermediate Algebra (3)

MATH 145 Intro to Probability and Statistics (3)

MATH 150 College Algebra (3)

Laboratory Sciences (8 hrs)

BIOL 237 Human Anatomy & Physiology I (3)

BIOL 237L Human Anatomy & Physiology I Lab (1)

BIOL 238 Human Anatomy & Physiology II (3)

BIOL 238L Human Anatomy & Physiology II Lab (1)

Social/Behavioral Sciences (6 hrs)

PSY 105 General Psychology (3)

SOC 101 Introduction to Sociology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (34 hrs.)

CS 102 Computer Literacy (3)

HSCI 204 Nutrition (3)

HSCI 105 Nurse Aide (4)

HSCI 105L Nurse Aide Lab (1)

HSCI 125 Medical Terminology (2)

SOC 105 Introduction to Human Services (3)

PSY 290 Developmental Psychology (3)

SPAN 230 Spanish for the Health Professions (3)

Electives: HSCI or Laboratory Science electives * (12)

*NURS 243 and 244 may be used to satisfy this requirement.

TOTAL CREDIT HOURS 64

Certificate MASSAGE THERAPY

12.0405

This program provides 650+ hours of Massage Therapy Training designed to meet the requirements to sit for the state licensure exam which is required for entry-level employment in massage therapy. Formal application to and acceptance into the program is necessary before you may enroll in any MAS-prefixed courses. Acceptance is granted for the fall semester of each year. To be accepted into the program, you must have already completed ENG 109N (Basic English II) and MATH 100N (Fundamentals of Mathematics). The massage courses have been developed to coincide with the general education courses, so the sequence as listed must be followed once you have entered the massage program.

GENERAL EDUCATION (6-9 hrs)

Communications (3 hrs)

ENG 109N Basic English II (3)

Math/Computers/Lab Sciences (3-6 hrs)

MATH 100N (6) or a higher-level math course (3)

PROGRAM REQUIREMENTS (34 hrs)

BA 124 Intro to Business- Massage Therapists(3)

HSCI 110 Intro to Anatomy & Physiology(4)

or

BIOL 237 Human Anatomy & Physiology I (3)

BIOL 237L Human Anatomy & Physiology I Lab (1)

and

BIOL 238 Human Anatomy & Physiology II (3)

BIOL 238L Human Anatomy & Physiology II Lab (1)

HSCI 112 Pathology for Massage Therapists (3)

HSCI 114 Kinesiology for Massage therapists (2)

HSCI 152 Legal & Ethical Issues-Massage Thrpy(2)

MAS 101L Massage Therapy I (4)

MAS 103L Massage Therapy II (4)

MAS 104L Massage Therapy Internship (3)

MAS 108L Massage Therapy Practice Lab (1)

Choose **8 crs** from the following electives:

HSCI 115 Introduction to Chinese Medicine (2)

HSCI 116 Essentials of Essential Oils (2)

HSCI 118 Introduction to Integrative Healing (2)

HSCI 125 Medical Terminology (2)

HSCI 150 Personal Growth and Self-Healing I (3)

HSCI 204 Nutrition (3)

HSCI 255 Introduction to Herbal Medicine (2)

HSCI 257 Herbal Pharmacy (2)

HSCI 264 Therapeutic Touch Techniques (3)

MAS 100L Introduction to Professional Massage (3)

MAS 110 Improving Your Body Mechanics (1)

MAS 113 Introduction to Foot Reflexology (2)

MAS 115 Intro to Cranial Sacral Techniques (1)

PSY 217 Interviewing & Assessment (3)

TOTAL CREDIT HOURS 40

Prerequisites:

ENG 109N Basic English II (3)

MATH 100N (6) or a higher-level math course (3)

Required sequence of courses

Fall semester	Spring semester
MAS 101L (4)	[BIOL 238/L (4)]
BIOL 237/L or HSCI 110 (4)	MAS 103L (4)
MAS 108L (1)	MAS 104L (4)
BA 124 (3)	HSCI 112 (3)
HSCI 152 (2)	HSCI 114 ((2)
Electives (3)	Electives (5)

NURSING

Northern offers a two-year nursing program leading to an associate degree in nursing (ADN). Upon completion of the program, you will be eligible to take the National Council Licensure Examination for Registered Nursing (NCLEX- RN). After completion of the associate degree in nursing, you may continue to a baccalaureate degree in nursing (BSN) program offered at some four-year colleges.

Upon completion of the first level of courses, you have the option of taking additional required coursework and completing the Certificate of Practical Nursing with eligibility to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).

Licensed Practical Nurses (LPN/LVN) who are graduates of state approved programs of practical nursing may be admitted directly into Level II of the Nursing program based on individual assessment of transcripts.

If you are interested in the Nursing program, please contact the Director of Nursing for information, advisement, and application packet. Call (505) 747-2207.

Formal application and acceptance into the Nursing program is required before you enroll in any NURS-prefixed courses listed in the program requirements. Support courses may be taken before entry into the program.

The New Mexico Board of Nursing requires fingerprinting for a federal background check before allowing graduates to obtain a license. (Some clinical agencies may also require fingerprinting, criminal background checks, and/or drug screens.) The NM State Board of Nursing may deny, revoke, or suspend any license upon grounds that the licensee or applicant violates any of the following actions: is guilty of fraud or deceit in attempting to procure a license; is unfit or incompetent; has been convicted of a felony; is habitually intemperate, is addicted to habit-forming drugs, or is mentally incompetent. Please consider this before applying to this program. If you have questions, you may contact the NM State Board of Nursing.

After entry into the program, you must achieve a grade of "C" or better in each required course in order to remain in the program.

Prerequisites required for entry into the Nursing Program

1. Graduation from High School or GED
2. Completion of the following course work or equivalent with a minimum grade of "C" or equivalent:

ENG	111	English Composition I
BIOL	237	Human Anatomy and Physiology I within the last five (5) years
BIOL	237L	Human Anatomy and Physiology I Lab I within the last 5 years
BIOL	238	Human Anatomy and Physiology II within the last five (5) years
BIOL	238L	Human Anatomy and Physiology II Lab within the last five (5) Years
PSY	105	General Psychology

Demonstrate competency in calculations for administration of drugs and solutions by testing or by completing HSCI 190 Dosage Calculation with a minimum grade of "C" within last two years.

Beginning Fall 2006, entering Year I, Level I students for Fall 2006 will demonstrate competency in basic nursing skills by testing or by completion of NURS 105/L (Nurse Aide).

All Nursing students are expected to have basic computer skills, including word processing and Internet access.

All Nursing students must have current American Heart Association Basic Life Support (CPR) Certification and current immunizations prior to participating in clinical Nursing courses (contact Nursing Office for specifics).

Test of Essential Academic Skills (TEAS) within two years of application (LPN/LVN applicants take the Comprehensive Practical Nurse Predictor exam instead).

Cumulative GPA of 2.5 or greater.

CERTIFICATE NURSE AIDE

51.1614

If you are interested in the health field, this program will provide the skills necessary to become a nursing assistant while serving as preparation if you might decide to continue your education in nursing, radiography, or hospice. When you successfully complete this course of study you will be eligible to take the New Mexico Nurse Aide Certification Exam and move immediately into the workplace while completing some of the general education requirements for other health occupation programs.

You must complete or have tested above PD 108N/PD 108L (Basic Computational Skills w/Lab). Elective courses must be approved by an advisor.

GENERAL EDUCATION (6-9 hrs)**Communications (3 hrs)**Choose **one** of the following two courses:

ENG 109N Basic English II (3)

or

ENG 111 English Composition I (3)

Mathematics (3-6 hrs)

MATH 100N (6) or a higher level math course (3)

PROGRAM REQUIREMENTS (10 hrs)

HSCI 204 Nutrition (3)

HSCI 105 Nurse Aide (4)

HSCI 105L Nurse Aide Lab (1)

HSCI 125 Medical Terminology (2))

TOTAL CREDIT HOURS 16-19

**Associate of Applied Science
NURSING (ADN)**

51.1601

GENERAL EDUCATION (30 hrs)**Communications (6 hrs)**

ENG 111 English Composition I (3)

Choose **one** of the following **four** courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

SPCH 130 Public Speaking (3)

SPAN 230 Span. for Health Professions

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (15 hrs)

BIOL 210 Microbiology (3)

BIOL 210L Microbiology Lab (1)

BIOL 237 Human Anatomy & Physiology I (3)

BIOL 237L Human Anatomy & Physiology I Lab (1)

BIOL 238 Human Anatomy & Physiology II (3)

BIOL 238L Human Anatomy & Physiology II Lab (1)

Social/Behavioral Sciences (6 hrs)

PSY 105 General Psychology (3)

PSY 290 Developmental Psychology (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (39-41 hrs)

HSCI 204 Nutrition (3)

NURS 105 Pharmacology (3) [**within last 5 years**]

NURS 113 Nursing Fundamentals (4)

NURS 113L Nursing Fundamentals Clinical (2)

NURS 115 Medical/Surgical Nursing I (4)

NURS 115L Medical/Surgical Nursing I Clinical (2)

NURS 116 Intro to Maternal/ Child Nursing (2)

NURS 116L Intro to Maternal/Child Nursing Clinical (1)

(NURS 200 Role Transition - RN (2) *)

*Required as pre- or co-requisite for LPNs who completed two or more years ago.)

NURS 214	Psychiatric/Mental Health Nursing (2)
NURS 214L	Psychiatric/Mental Health Nursing Clinical (1)
NURS 215	Medical/Surgical Nursing II (4)
NURS 215L	Medical/Surgical Nursing II Clinical (2)
NURS 216	Maternal/Child Nursing (4)
NURS 216L	Maternal/Child Nursing Clinical (2)
NURS 228	Integrated Adult Nursing (3)
NURS 228L	Integrated Adult Nursing Clinical (2)

TOTAL CREDIT HOURS 68-70**Required sequence of courses
for pursuit of nursing programs**

Prerequisites for applying to the Nursing Program

Course Number	Credits
BIOL 237	3
BIOL 237L	1
BIOL 238	3
BIOL 238L	1
ENG 111	3
PSY 105	3
Total	14

**Competency in calculations for drug administration by
testing or HSCI 190****Sequence of Courses****Year I, Level I**

Fall Semester	Spring Semester
NURS 113	NURS 115
NURS 113L	NURS 115L
NURS 105	NURS 116
BIOL 210	NURS 116L
BIOL 210L	PSY 290
HSCI1 204	(NURS 119*)

Year II, Level II

Fall Semester	Spring Semester
(*NURS 200)	HPER Elective
NURS 215	NURS 228
NURS 215L	NURS 228L
NURS 216	NURS 214
NURS 216L	NURS 214L
	Humanities Elective

Comms Elective

Choose **one** of the following **four** courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

SPCH 130 Public Speaking (3)

SPAN 230 Span. for Health Professions

(*NURS 200 (Role Transition – RN) is a pre- or co-requisite for Licensed Practical Nurses who completed their programs two or more years ago)

**Certificate
PRACTICAL NURSE**

51.1613

Students who complete the pre-requisites and Level I course work for the Associate of Applied Science in Nursing and NURS 119 Role Transition – Practical Nursing have the option to petition for the Certificate in Practical Nurse and to exit and/or to continue to Year II/Level II.

GENERAL EDUCATION (24 hrs)

Communications (3 hrs)

ENG 111 English Composition I (3)

Math/Computers/Lab Sciences (12 hrs)

BIOL 210 Microbiology (3)
 BIOL 210L Microbiology Lab (1)
 BIOL 237 Human Anatomy & Physiology I (3)
 BIOL 237L Human Anatomy & Physiology I Lab (1)
 BIOL 238 Human Anatomy & Physiology II (3)
 BIOL 238L Human Anatomy & Physiology II Lab (1)

Social/Behavioral Science (6 hrs)

PSY 105 General Psychology (3)
 PSY 290 Developmental Psychology (3)

PROGRAM REQUIREMENTS (23 hrs)

HSCI 204 Nutrition (3)
 NURS 105 Pharmacology (3)
 NURS 113 Nursing Fundamentals (4)
 NURS 113L Nursing Fundamentals Clinical (2)
 NURS 115 Medical/Surgical Nursing I (4)
 NURS 115L Medical/Surgical Nursing I Clinical (2)
 NURS 116 Intro to Maternal/ Child Nursing (2)
 NURS 116L Intro to Maternal/Child Nursing Clinical(1)
 NURS 119 Role Transition – PN (2)

TOTAL CREDIT HOURS 47

**Associate of Science
NURSING (ADN)**

18.1102

This degree is designed as an alternative to the Associate of Applied Science degree in Nursing to allow students to more closely meet the baccalaureate requirements of colleges of nursing, such as that at The University of New Mexico and New Mexico state university, while completing their requirements to apply for state licensure as an RN.

GENERAL EDUCATION (39 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)
 SPCH 130 Public Speaking (3)
 Choose **one** of the following two courses:
 ENG 112 English Composition II (3)
 ENG 116 Technical Writing (3)

Mathematics (3 hrs)

MATH 150 College Algebra (3)

Laboratory Science (12 hrs)

Completion of BIOL 237/L (4) and 238/L (4) will satisfy the Laboratory Science requirement in the General Education core. Additional requirement: BIOL 210/L (4).

Social/Behavioral Sciences (6-9 hrs) *

PSY 105 General Psychology (3)
 PSY 290 Developmental Psychology (3)

If you choose to take a third course in this discipline, it must be from a discipline other than PSY. If you choose a third course from this area, you need only complete two (6 crs) of humanities courses.

ANTH 101/L Physical Anthropology w/Lab (4)
 ANTH 102 Intro to Social & Cultural Anthropology (3)
 ANTH 111 Language and Culture (3)
 ANTH 207 Cultures of New Mexico (3)
 ECON 200 Macroeconomics (3)
 ECON 201 Microeconomics (3)
 GEOG 111 World Geography (3)
 PSCI 110 The Political World (3)
 PSCI 200 American Politics (3)
 SOC 101 Introduction to Sociology (3)
 SOC 220 Social Problems (3)
 SOC 225 Marriage and the Family (3)

Humanities and Fine Arts (6-9 hrs) *

You must select courses from *at least two different discipline areas* from the following list. If you have chosen to take three courses from the social sciences area, you will need two courses from this area, each of which must be from different disciplines.

ART 105 Introduction to Art (3)
 ART 107 History of Art (3)
 ENG Lit. courses numbered 260-298
 HIST 101 Western Civilization I (3)
 HIST 102 Western Civilization II (3)
 HIST 161 History of the U.S. to 1877 (3)
 HIST 162 History of the U.S. from 1877 (3)
 HIST 260 History of New Mexico (3)
 HUM 101 Humanities I (3)
 HUM 102 Humanities II (3)
 MUS 105 Music Appreciation (3)
 PHIL 110 Intro to Philosophical Problems (3)
 PHIL 220 Ethics (3)
 THE 120 Introduction to Theatre I (3)
 THE 130 History of Theatre (3)
 THE 220 Introduction to Theatre II (3)
 THE 225 Creative Drama Techniques for the Classroom K-12 (3)
 THE 238 Teatro Chicano (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (39-41)

HSCI 204 Nutrition (3)
 NURS 105 Pharmacology (3)
 NURS 113 Nursing Fundamentals (4)
 NURS 113L Nursing Fundamentals Clinical (2)
 NURS 115 Medical/Surgical Nursing I (4)

NURS	115L	Medical/Surgical Nursing I Clinical (2)
NURS	116	Intro to Maternal/ Child Nursing (2)
NURS	116L	Intro to Maternal/Child Nursing Clin. (1)
(NURS	200	Role Transition - RN (2) *

**Required as pre- or co-requisite for LPNs who completed two or more years ago.)*

NURS	214	Psychiatric/Mental Health Nursing (2)
NURS	214L	Psychiatric/Mental Health Nursing Clin.(1)
NURS	215	Medical/Surgical Nursing II (4)
NURS	215L	Medical-Surgical Nursing II Clinical (2)
NURS	216	Maternal-Child Nursing II (4)
NURS	216	Maternal-Child Nursing II Clinical (2)
NURS	228	Integrated Adult Nursing (3)
NURS	228L	Integrated Adult Nursing Clinical (2)

(NURS 200 is a prerequisite for LPN/ LVN's who completed their programs two or more years prior to entry into the RN level of training.)*

TOTAL CREDIT HOURS 75-80

Certificate
Associate of Applied Science
RADIATION PROTECTION

41.0271

This program is designed to prepare you for a career as a Health Protection Technician in environmental programs and scientific laboratories. The program prepare you to conduct radiation surveys, interpret survey data, assess personnel protection requirements, and instruct personnel in appropriate protective procedures and environmental clean-up.

GENERAL EDUCATION (43 hrs)

Communications (6 hrs)

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (32 hrs)

BIOL	201	Principles of Molecular and Cell Biology(3)
BIOL	201L	Principles of Molecular & Cell BiologyLab (1)
BIOL	202	Genetics (3)
BIOL	202L	Genetics Lab (1)
CHEM	121	General Chemistry I (3)
CHEM	121L	General Chemistry I Lab (1)
CHEM	122	General Chemistry II (3)
CHEM	122L	General Chemistry II Lab (1)
CS	102	Computer Literacy (3)
MATH	130	Intermediate Algebra (3)
MATH	145	Intro to Probability and Statistics (3)
MATH	150	College Algebra (3)
PHYS	121	Applied Physics I (3)
PHYS	121L	Applied Physics I Lab (1)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (19 hrs)

RAD	233	Radiation Biology (3)
RAD	234L	Intro Radiation Science & Technology (4)
RAD	238L	Introduction to Radiation Protection (4)
RAD	242	Problems in Radiation Protection (4)
RAD	243	Practical Radiological Programs and Sampling Methods (4)

TOTAL CREDIT HOURS 64

Associate of Applied Science
RADIOLOGIC SCIENCE

17.0209

The Radiologic Science program is a 24-month program leading to an associate of applied science degree in Radiologic Technology. As a student in this program, you will prepare to meet the health care needs of the community by functioning as a Radiographer in hospitals, clinics, doctors' offices, and in similar health delivery agencies. Upon completion of the program, you will be eligible to take the examination for National Registration. Passing the National Registry exam fulfills the New Mexico requirements for licensure.

You will be mixing classroom time with time spent in the clinical setting, working and training with technologists in the field. The classroom (didactic) phase will incorporate the formal education process along with laboratory experience giving you a hands-on approach to learning while applying the knowledge currently being learned to practical experience.

Formal application to and acceptance into the program is necessary before you may enroll in any clinical radiography courses. Acceptance is granted for the fall semester of each year. Applications for the program may be obtained from the Radiologic Science Department after you have been granted admission to the College. If you are interested, contact the Radiologic Science department at 505-747-2220, or visit www.nnmcc.edu for further information.

Pre-requisites for Completion of the following required courses should be done **before** you apply to the program. CS 102, ENG 111, MATH 102N, and BIOL 237/L.

GENERAL EDUCATION (23 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)

Choose **one** of the following three courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

SPCH 130 Public Speaking (3)

Humanities (3 hrs)

Elective (3)

Math/Computers/Lab Sciences (11 hrs)

BIOL	237	Human Anatomy & Physiology I (3)
BIOL	237L	Human Anatomy & Physiology I Lab (1)
BIOL	238	Human Anatomy & Physiology II (3)
BIOL	238L	Human Anatomy & Physiology II Lab (1)
CS	102	Computer Literacy (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)
Elective (1)

PROGRAM REQUIREMENTS (67 hrs.)

HSCI	125	Medical Terminology (2)
RAD	108	Basic Patient Care (3)
RAD	135L	Principles of Radiographic TechniquesI(3)
RAD	136L	Principles -Radiographic Techniques II(3)
RAD	140L	Radiographic Procedures I (4)
RAD	141L	Radiographic Procedures II (4)
RAD	142L	Radiographic Procedures III (4)
RAD	145L	Clinical Experience I (4)
RAD	146L	Clinical Experience II (4)
RAD	149L	Clinical Experience III (4)
RAD	235	Radiological Physics (4)
RAD	236	Principles of Radiographic TechniquesIII (2)
RAD	240	Radiographic Procedures III (3)
RAD	241	Radiographic Procedures IV (3)
RAD	245L	Clinical Experience IV (5)
RAD	246L	Clinical Experience V (5)
RAD	248L	Clinical Experience VI (6)
RAD	250	Radiographic Pathology (1)
RAD	251	Registry Review (3)

TOTAL CREDIT HOURS 91

Required Sequence of Courses

First Year

Fall Semester	Spring Semester
RAD 135L (3)	RAD 136L (3)
RAD140L (4)	RAD 141L (4)
*BIOL 238/L (4)	RAD 146L (4))
HPER Elective (1)	RAD 145L (4)
*RAD 108 (3)	Social/Behav.elective (3)
Sub-total (19)	Sub-total (18)

First Summer Session

RAD 149L (4)
RAD 142 (2)
Sub-total (6)

Second Year

Fall Semester	Spring Semester
RAD 235 (4)	RAD 236 (2)
RAD 240 (3)	RAD 241 (3)
RAD 245L (5)	RAD 250 (1)
Humanities elective (3)	RAD 246L (5)
HSCI 125 (2)	RAD 250 (1)
*ENG 111 (3)	*Choose one of following (3)
*CS 102 (3)	ENG 112 (3)
*HSCI 125 (1)	ENG 116 (3)
RAD 138 (1)	SPCH 130 (3)
Sub-total (17)	Sub-total (15)

Second Summer Session

RAD 248L (6)
RAD 251 (3)
Sub-total (9)

* These courses may be taken prior to admission to the program or in any other sequence. Only RAD courses must be taken in sequence.

DEPARTMENT OF MATH and SCIENCE

The Department of Mathematics and Science offers degree programs in Biology, Laboratory Biotechnology, Environmental Sciences, Science, Pre-Engineering, Chemical Technology, Materials Science Technology, and Visual Communications.

Many of the courses in the associate programs offered by this department are designed to transfer to four-year colleges and universities, the Associate of Science degrees in Science and Pre-Engineering are specifically designed to represent the first two-years of a four-year science program.

Associate of Science BIOLOGY

26.0101

This program prepares you to pursue a university degree in biology or for the pre-professional medical studies. Training in biology prepares you for a wide variety of career fields, including the health sciences, research, teaching, industry, governmental agencies, and environmental consulting firms. While positions are open to holders of the associate and bachelor's degrees, most of the opportunities exist at the master's and doctoral levels.

GENERAL EDUCATION (36 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Choose **one** of the following courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

Humanities (9 hrs)

PHIL 220 Ethics (3)

Elective (6)

Mathematics (4 hrs)

MATH 162 Calculus I (4)

Laboratory Sciences (8 hrs)

BIOL 201 Intro to Molecular and Cell Biology (3)

BIOL 201L Intro to Molecular and Cell Biology Lab (1)

BIOL 202 Genetics (3)

BIOL 202L Genetics Lab (1)

CHEM 121 General Chemistry I (3)

CHEM 121L General Chemistry I Lab (1)

Social/Behavioral Sciences (6 hrs)

Elective (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (25 hrs)

BIOL 210 Microbiology (3)

BIOL 210L Microbiology Lab (1)

BIOL 203 Ecology and Evolution (3)

BIOL 203L Ecology and Evolution Lab (1)

CHEM 122 General Chemistry II (3)

CHEM 122L General Chemistry II Lab (1)

MATH 145 Intro to Probability and Statistics (3)

PHYS 121 Applied Physics I (3)

PHYS 121L Applied Physics I Lab (1)

Electives (choose **10 crs** from the following):

BIOL 112 Environmental Science (3)

BIOL 112L Environmental Science Problems (1)

BIOL 160 Biotechnology Seminar I (3)

BIOL 160L Biotechnology Lab I (1)

BIOL 260 Biotechnology Seminar II (3)

BIOL 260L Biotechnology Lab II (1)

BIOL 290 Undergraduate Research Experience I (3)

BIOL 292 Undergraduate Research Experience II(3)

CHEM 210 Integrated Organic and Biochemistry (3)

CHEM 210L Integrated Organic 7 Biochemistry Lab (1)

CHEM 221 Quantitative Analysis (3)

CHEM 221L Quantitative Analysis Lab (1)

TOTAL CREDIT HOURS 70

Associate of Applied Science CHEMICAL TECHNICIAN

41.0301

This program provides you with the concepts and practical skills needed for employment as a chemical technician. It is designed to complement training for full-time employment or for students seeking such employment. You may use this program in planning to transfer to related academic programs.

GENERAL EDUCATION (27 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

ENG 116 Technical Writing (3)

SPCH 130 Public Speaking (3)

Humanities (3 hrs)

PHIL 220 Ethics (3)

Math/Compute/Laboratory Science (12 hrs)

CS 102 Computer Literacy (3)

MATH 145 Intro to Probability & Statistics (3)

MATH 150 College Algebra (3)

MATH 155 Trigonometry (3)

Social/Behavioral Sciences (3 hrs)

SOC 211 Small Group Communications Studies (3)

Health, Physical Education & Recreation (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (38 hrs)

CHEM 121 General Chemistry I (3)

CHEM 121L General Chemistry I Lab (1)

CHEM 122 General Chemistry II (3)

CHEM 122L General Chemistry II Lab (1)

CHEM 210 Integrated Organic & Biochemistry (3)

CHEM	210L	Integrated Organic & Biochemistry Lab (1)
CHEM	221	Quantitative Analysis (3)
CHEM	221L	Quantitative Analysis Lab (1)
CHEM	260	Standard Laboratory Protocols (4)
CS	105	Introduction to Databases (3)
CS	205	Databases (3)
ECET	260	Statistical Controls (3)
ES	126	Introduction to Waste Management (3)
ES	134	OSHA Health and Safety (3)
ES	138	Environmental & Occupational Law and Regulations (3)

TOTAL CREDIT HOURS 66

Associate of Applied Science ENGINEERING TECHNOLOGY

15.0203

This program is designed to provide general entry level engineering technician skills for employment in an engineering-related field. Although not fully transferable to four-year programs, a considerable portion of this program will transfer to engineering technology programs. If you desire to continue to a four-year institution, you should meet with the receiving institution to determine the specifics of transfer.

GENERAL EDUCATION (21 hrs)

Communications (6 hrs)

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)

Humanities (3 hrs)

Elective (3)

Math/Computer/Lab Sciences (9 hrs)

CS	102	Computer Literacy (3)
MATH	150	College Algebra (3)
MATH	155	Trigonometry (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)

Electives (2)

PROGRAM REQUIREMENTS (41 hrs)

ENGR	110	Intro to Engineering Technology (4)
DRFT	100	Introduction to Drafting (3)
DRFT	199	How to Get a Job (1)
DRFT	208	Computer Aided Drafting I (3)
DRFT	209	Computer Aided Drafting II (3)
PHYS	121	Applied Physics I (3)
PHYS	121L	Applied Physics I Lab (1)
PHYS	122	Applied Physics II (3)
PHYS	122L	Applied Physics II Lab (1)
CHEM	110	Introduction to Chemistry (3)
CHEM	110L	Introduction to Chemistry Lab (1)

Electives (15 crs): Any advisor-approved courses from the following discipline: BIOL, CHEM, CS, DRFT, ECET, ENGR,

GEOL, MATH, MT, PHYS, or WELD, or up to six additional electives from the Humanities and/or Social Science disciplines.

TOTAL CREDIT HOURS 64

Associate of Applied Science ENVIRONMENTAL MANAGEMENT

03.0104

This program is designed to provide the technical skills which will enable you to competently gather, record, and analyze critical environmental data and perform simple health risk assessment evaluations.

GENERAL EDUCATION (29 hrs)

Communications (9 hrs)

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)
SPCH	130	Public Speaking (3)

Humanities (3 hrs)

PHIL	220	Ethics (3)
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Math/Lab Sciences (14 hrs)

BIOL	112	Environmental Science (3)
BIOL	112L	Environmental Science Problems (1)
BIOL	201	Principles of Molecular and Cell Biology(3)
BIOL	201L	Principles of Molecular & Cell BiologyLab (1)
MATH	145	Intro to Probability and Statistics (3)
MATH	150	College Algebra (3)

Social/Behavioral Sciences (3 hrs)

SOC	211	Small Group Communications Studies (3)
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HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (39 hrs)

CHEM	121	General Chemistry I (3)
CHEM	121L	General Chemistry I Lab (1)
CHEM	122	General Chemistry II (3)
CHEM	122L	General Chemistry II Lab (1)
CHEM	210	Integrated Organic & Biochemistry (3)
CHEM	210L	Integrated Organic & Biochemistry Lab (1)
CHEM	221	Quantitative Analysis (2)
CHEM	221L	Quantitative Analysis Lab (2)
ES	126	Introduction to Waste Management (3)
ES	134	OSHA Health/Safety (3)
ES	236	Environmental Sampling (3)
ES	240	Introduction to Treatment, Storage, and Disposal of Hazardous Materials (3)
ES	280	Introduction to Toxicology/ Risk Assessment (3)
RAD	234L	Introduction to Radiation Science and Technology (4)
RAD	238L	Introduction to Radiation Protection (4)

TOTAL CREDIT HOURS 69

Certificate
ENVIRONMENTAL MONITORING

03.0105

This program provides hands-on training in environmental monitoring methods at Los Alamos National Laboratory. It is intended for current employees of the environmental programs of the 4 ACCORD tribes (Santa Clara, San Ildefonso, Jemez, and Cochiti).

GENERAL EDUCATION (6 hrs)

Communications (3 hrs)

ENG 108N Basic English I (3)

Math/Computers/Lab Sciences (3)

MATH 102N Basic Algebra (3)

PROGRAM REQUIREMENTS (12 hrs)

ES 101 Radiological Worker (1)
ES 102 Environmental Safety, and Health (1)
ES 121 Environmental Air Monitoring (3)
ES 122 Environmental Radioactivity (3)
ES 123 Environmental Hydrology & Ecology (3)

TOTAL CREDIT HOURS 17

Associate of Applied Science
LABORATORY BIOTECHNOLOGY

26.0616

The Laboratory Biotechnology program is designed to train you as a laboratory technician with industrial, medical, or research laboratories. The program provides a practical background and experience with the techniques and instruments used for the isolation and analysis of biomedical and biotechnological samples.

Qualifying students in this program are eligible for paid internships at the Biosciences Division at Los Alamos National Laboratory. This internship program is supported by the National Science Foundations Research Experiences for Undergraduates (NSF-REU) program and recruits an annual cohort of 6-7 students. Students in this program may also participate in other internships with the National Center for Genome Research (NCGR) in Santa Fe or in similar summer institutes at universities throughout in the nation.

GENERAL EDUCATION (21 hrs)

Communications (6 hrs)

ENG 111 English Composition I (3)

ENG 116 Technical Writing (3)

Humanities (6 hrs)

PHIL 110 Intro to Philosophical Problems (3)

PHIL 220 Ethics (3)

Math/Computers/Lab Sciences (6 hrs)

MATH 145 Intro to Probability and Statistics (3)

MATH 150 College Algebra (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)
Electives (1)

PROGRAM REQUIREMENTS (43 hrs)

BIOL 201 Principles of Molecular & Cell Biology (3)
BIOL 201L Principles of Molecular & Cell Biol. Lab (1)
BIOL 202 Genetics (3)
BIOL 202L Genetics Lab (1)
BIOL 160 Biotechnology Seminar I (3)
BIOL 160L Biotechnology Lab I (1)
BIOL 210 Microbiology (3)
BIOL 210L Microbiology Lab (1)
BIOL 260 Biotechnology Seminar II (3)
BIOL 260L Biotechnology Lab II (1)
CHEM 121 General Chemistry I (3)
CHEM 121L General Chemistry I Lab (1)
CHEM 122 General Chemistry II (3)
CHEM 122L General Chemistry II Lab (1)
CHEM 210 Integrated Organic & Biochemistry (3)
CHEM 210L Integrated Organic & Biochemistry Lab (1)
ES 134 OSHA Health/Safety (3)
BIOL 290 Undergraduate Research Experience I (3)
HSCI 125 Medical Terminology (2)
BIOL 292 Undergraduate Research Experience II (3)

TOTAL CREDIT HOURS 65

Associate of Science
MATERIALS SCIENCE TECHNOLOGY

14.3101

This program prepares you with technical training in materials science and engineering for job available in the government sector, particularly at sites such as LANL. Program courses will transfer to a four-year institution for bachelor's degree in materials engineering; however, it may take 3 years (instead of the expected 2 years) after you complete this associate degree because it is a mix of pre-engineering, drafting, and materials engineering courses.

GENERAL EDUCATION (36 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)

SPCH 130 Public Speaking (3)

Choose **one** of the following two courses:

ENG 112 English Composition II (3)

ENG 116 Technical Writing (3)

Humanities (6 hrs)

PHIL 220 Ethics (3)

Elective (3)

Lab Sciences (8 hrs)

CHEM 121 General Chemistry I (3)

CHEM 121L General Chemistry I Lab (1)

PHYS 215 Engineering Physics I (3)

PHYS 215L Engineering Physics I Lab (1)

Mathematics (4 hrs)

MATH 162 Calculus I (4)

Social/Behavioral sciences (9 hrs)

SOC 101 Introduction to Sociology (3)
Elective (6)

Health, Physical Education Y Recreation (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (30-31 hrs)

CS 102 Computer Literacy (3)
CE 233 Statics (3)
DRFT 100 Introduction to Drafting (3)
DRFT 102 Mechanical Engineering CAD I(4)
or
DRFT 209 Computer-Aided Drafting II (3)
DRFT 208 Computer-Aided Drafting I (3)
ENGR 110 Introduction to Engineering (4)
ES 126 Introduction to Waste Management (3)
MATE 101 Materials Structure and Properties (2)
MATE 290 Introduction to Materials Science (3)
WELD 110 Introduction to Welding (3)

TOTAL CREDIT HOURS 67-68

**Associate of Applied Science
NATURAL RESOURCES -
RANGE ECOLOGY MANAGEMENT**

03.0303

This program is designed to provide entry-level skills for employment with the national park service or with other state and federal natural resource agencies. In addition, when you complete this program, you will have obtained the necessary courses to transfer to a four-year college or university to further pursue a degree in the field of range ecology.

GENERAL EDUCATION (47 hrs)

Communications (9 hrs)

ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

PHIL 220 Ethics (3)

Math/Computer/Lab Sciences (29 hrs)

BIOL 112 Environmental Science (3)
BIOL 112L Environmental Science Problems (1)
BIOL 201 Principles of Molecular and Cell Biology(3)
BIOL 201L Principles of Molecular 7 Cell Biology Lab (1)
BIOL 202 Genetics (3)
BIOL 202L Genetics Lab (1)
CHEM 121 General Chemistry I (3)
CHEM 121L General Chemistry I Lab (1)
GEOL 101 Physical Geology (3)
GEOL 101L Physical Geology Lab (1)
CS 102 Computer Literacy (3)
MATH 145 Intro to Probability and Statistics (3)
MATH 150 College Algebra (3)

Social/Behavioral Sciences (6 hrs)

Elective (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (21 hrs.)

FOR 123 Forest Ecology (3)
NR 101 Soils (3)
NR 101L Soils Lab (1)
NR 102 Water Management (3)
NR 103 Botany of Forest and Range (3)
DRFT 110 GIS/GPS (3)
RLM 123 Range Ecology (3)
ES 134 OSHA Health/Safety (3)
ES 242 Special Environmental Topics (1)

TOTAL CREDIT HOURS: 74

**Associate of Science
PRE-ENGINEERING**

This program will prepare you for transfer to a four-year institution for a bachelor's degree in engineering. You will obtain a general background in mathematics and the physical sciences, and will be introduced to the concepts and methods of engineering. This program is not a professional degree and does not prepare you for specific job opportunities. It does, however, provide a broad educational background on which to build a career through additional education or work experience.

GENERAL EDUCATION (52 hrs)

Communications (12 hrs)

ENG 111 English Composition I (3)
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Humanities (6 hrs)

Electives (6)

Mathematics (12 hrs)

MATH 162 Calculus I (4)
MATH 163 Calculus II (4)
MATH 264 Calculus III (4)

Laboratory Sciences (16 hrs)

CHEM 121 General Chemistry I (3)
CHEM 121L General Chemistry I Lab (1)
CHEM 122 General Chemistry II (3)
CHEM 122L General Chemistry II Lab (1)
PHYS 215 Engineering Physics I (3)
PHYS 215L Engineering Physics I Lab (1)
PHYS 216 Engineering Physics II (3)
PHYS 216L Engineering Physics II Lab (1)

Social/Behavioral Science (6 hrs)

Electives (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 hrs)
Electives (2)**PROGRAM REQUIREMENTS (14-15 hrs)**

You should choose technical electives to maximize transferring credits into a specific engineering major. This may be accomplished by taking courses from the math/science/engineering department at Northern or by taking courses from UNM via satellite, at one of the branch campuses, or directly from the main campus. The following choices **suggest** some options.

General Engineering (14.0101)

*ENGR 110 Introduction to Engineering (3)
*DRFT 102 Engineering Graphics I using CAD (4)
*DRFT 208 Computer-Aided Drafting I (3)
Any course from Math, Science, or Engineering department

Electrical Engineering (14.0102)

#ENGR-F 122L Introduction to Engineering Methods (3)
#EECE 203 Circuit Analysis I (3)
#EECE 238 Computer Logic Design (4)
CE 233 Statics (3)
Any course from Math, Science, or Engineering department

Mechanical Engineering (14.0103)

#ENGR-F 122L Introduction to Engineering Methods (3)
CE 233 Statics (3)
#ME 201L Intro to Mechanical Engineering (2)
*PHYS 215 Engineering Physics I (3)
Any course from Math, Science, or Engineering department

* These courses are accepted for transfer between Northern and all New Mexico institutions of higher education in the area of engineering.

These courses are university course numbers and serve only to guide an engineering student toward a four-year degree.

TOTAL CREDIT HOURS 68-69

**Associate of Applied Science
PRE-FORESTRY**

03.0101

This program is designed to provide entry-level skills for employment with the national park service or with other state and federal natural resource agencies. In addition, when you complete this program, you will have obtained the necessary courses to transfer to a four-year college or university to further pursue a degree in the forestry field.

GENERAL EDUCATION (44 hrs)**Communications (9 hrs)**

ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Humanities (3 hrs)

PHIL 220 Ethics (3)

Math/Computer/Lab Sciences (29 hrs)

BIOL 112 Environmental Science (3)
BIOL 112L Environmental Science Problems (1)
BIOL 201 Principles of Molecular and Cell Biology(3)
BIOL 201L Principles of Molecular & Cell Biology Lab (1)
BIOL 202 Genetics (3)
BIOL 202L Genetics Lab (1)
CHEM 121 General Chemistry I (3)
CHEM 121L General Chemistry I Lab (1)
GEOL 101 Physical Geology (3)
GEOL 101L Physical Geology Lab (1)
CS 102 Computer Literacy (3)
MATH 145 Intro to Probability and Statistics (3)
MATH 150 College Algebra (3)

Social/Behavioral Sciences (3)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (26 hrs)

FOR 101 Introduction to Forestry (3)
FOR 113 Dendrology (3)
FOR 123 Forest Ecology (3)
NR 101 Soils (3)
NR 101L Soils Lab (1)
NR 102 Water Management (3)
NR 103 Botany of Forest and Range (3)
RLM 123 Range Ecology (3)
ES 134 OSHA Health/Safety (3)
ES 242 Special Environmental Topics (1)

TOTAL CREDIT HOURS 71

**Associate of Science
SCIENCE**

24.0103

If you wish to transfer to a four-year college or university and earn a degree in one of the many fields of science, you should follow this degree. The science department provides basic courses in biology, chemistry, engineering, geology, and physics, in addition to courses in computer science, and anatomy & physiology for students wishing to transfer to allied science programs.

GENERAL EDUCATION (42 hrs)**Communications (9 hrs)**

ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)
Choose **one** of the following courses:
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)

Humanities (9 hrs)

PHIL 220 Ethics (3)
Elective (6)

Mathematics (10 hrs)

- MATH 150 College Algebra (3)
- MATH 155 Trigonometry (3)
- MATH 162 Calculus I (4)

Laboratory Sciences (8 hrs)

Choose **one** of the following *two-semester sequences* (with lab)

- BIOL 201 Principles of Molecular and Cell Biology(3)
- BIOL 201L Principles of Molecular & Cell Biol. Lab (1)
- BIOL 202 Genetics (3)
- BIOL 202L Genetics Lab (1)

or

- CHEM 121 General Chemistry I (3)
- CHEM 121L General Chemistry I Lab (1)
- CHEM 122 General Chemistry II (3)
- CHEM 122L General Chemistry II Lab (1)

or

- PHYS 215 Engineering Physics I (3)
- PHYS 215L Engineering Physics I Lab (1)

Social/Behavioral Sciences (6 hrs)

Elective (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Electives (1)

PROGRAM REQUIREMENTS (29 hrs)

- CS 102 Computer Literacy (3)
- CS 132 Introduction to Programming (3)
- MATH 145 Intro to Probability and Statistics (3)

Two additional semesters of lab courses (8 hrs):choose from:

BIOL, CHEM, or PHYS

Approved Electives (12)

TOTAL CREDIT HOURS 72

**Associate of Applied Science
VISUAL COMMUNICATION**

50.0401

This program is designed to prepare you for the general area of electronic imaging and publication, animation and digital production for film, with the option of transferring to a four-year institution and a professional degree.

GENERAL EDUCATION (18- hrs)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- Elective (3)

Humanities (3 hrs)

- VC 280 Visual Communication History (3)

Math/Computers/Lab Sciences (6 hrs)

- MATH 130 or higher level math course (3)
- Elective (3)

Social/Behavioral Science (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)
Elective (1)

PROGRAM REQUIREMENTS (46 hrs)

- VC 110 Fundamentals of Visualization (3)
- VC 111 2-D Computer Visualization (4)
- VC 120 3-D Visualization (3)
- VC 121 3-D Computer Visualization (4)
- VC 135 Electronic Publications I (4)
- VC 140 Digital Imaging I (4)
- VC 155 Computer Animation I (4)
- VC 160 Digital Production for Film I (4)
- VC/CT 175 Internet Publication I (4)

Choose **three** from the following eight courses:

- VC 165 Visual Communications I (4)
- VC 265 Visual Communications II (4)
- VC 235 Electronic Publication II (4)
- VC 240 Digital Imaging II (4)
- VC 255 Computer Animation II (4)
- VC 260 Digital Production for Film II (4)
- VC 275 Internet Publication II (4)
- VC 290 Multimedia (4)

TOTAL CREDIT HOURS 65

**Associate of Applied Science
VISUAL COMMUNICATION –
DRAFTING AND MACHINING**

48.0113

When you successfully complete this program you will be prepared for the general area of computer aided drafting, visual communication, and computer aided manufacturing.

GENERAL EDUCATION 18 hrs)

Communications (6 hrs)

- ENG 111 English Composition I (3)
- Elective (3)

Humanities (3 hrs)

Approved Elective (3)

Math/Computer/Lab Sciences (6 hrs)

- CS 102 Computer Literacy (3)
- MATH 130 or higher level math course (3)

Social/Behavioral Sciences (3 hrs)

Social/Behavioral Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (45 hrs)

- DRFT 199 How to Get a Job (1)
- DRFT 100 Introduction to Drafting (3)
- DRFT 208 Computer Aided Drafting I (3)
- DRFT 209 Computer Aided Drafting II (3)
- DRFT 215 Computer Aided Machining I (3)
- VC 110 Fundamentals of Visualization (3)
- VC 111 2-D Computer Visualization (4)

VC	120	3-D Visualization (3)
VC	121	3-D Computer Visualization (4)
VC	155	Computer Animation I (4)

Electives (14 hrs) from DRFT or VC.

TOTAL CREDIT HOURS 64

**Associate of Applied Science
WASTE RESOURCES MANAGEMENT**

03.0302

This program is designed to prepare you for a variety of environmental careers with private contractors, state governments, and scientific laboratories. As a student entering this program, you will typically have an interest in restoring our land, air, and water to a healthy environment. The program teaches basic skills in environmental restoration and waste management of radioactive and non-radioactive hazardous materials. The curriculum is designed with broad-based science and environmental courses which will allow the graduate to adapt to various positions as needs in the work force change. The program prepares you for conducting sampling techniques, site assessment, environmental compliance, and in various phases of waste management.

GENERAL EDUCATION (45 hrs)

Communications (6 hrs)

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)

Humanities (3 hrs)

PHIL	220	Ethics (3)
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Math/Computers/Lab Sciences (33 hrs)

BIOL	112	Environmental Science (3)
BIOL	112L	Environmental Science Problems (1)
BIOL	201	Principles of Molecular and Cell Biology(3)
BIOL	201L	Principles of Molecular & Cell Biol. Lab (1)
BIOL	202	Genetics (3)
BIOL	202L	Genetics Lab (1)
CHEM	121	General Chemistry I (3)
CHEM	121L	General Chemistry I Lab (1)
CHEM	122	General Chemistry II (3)
CHEM	122L	General Chemistry II Lab (1)
GEOLOG	101	Physical Geology (3)
GEOLOG	101L	Physical Geology Lab (1)
CS	102	Computer Literacy (3)
MATH	145	Intro to Probability and Statistics (3)
MATH	150	College Algebra (3)

Social/Behavioral Sciences (3 hrs)

Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 hr)

Elective (1)

PROGRAM REQUIREMENTS (27-28 hrs)

RAD	234L	Intro to Radiation Science & Techny (4)
ES	126	Introduction to Waste Management (3)
ES	134	OSHA Health/Safety (3)

ES	136	Field Instrumentation (1)
ES	138	Environmental and Occupational Law & Regulations (3)
ES	236	Environmental Sampling (3)
ES	237	Pollution Prevention and Waste Minimization (3)
ES	238	Environmental Lab Instrumentation (3)
ES	240	Introduction to Treatment, Storage, and Disposal of Hazardous Materials (3)
ES	242	Special Environmental Topics (1-2)

TOTAL CREDIT HOURS 73-74

NOTE:

1. Freshman courses are numbered 100-199; sophomore courses are numbered 200-299; junior courses are labeled 300-399; senior courses are numbered 400-499.
2. Courses labeled with an "N" immediately after the course number are considered to be remedial in nature and will not be accepted to fill the requirements for any degree at Northern. Remedial courses will normally not transfer to other colleges.
3. No course with a grade of less than a C or CR (as appropriate) will be accepted for graduation.
4. Any course which is designated as a pre-requisite to another course must be passed with at least a grade of C or CR (as appropriate) in order to proceed to the next level course.
5. Immediately after the course description appears an entry inside parentheses. This number is read in two parts. For example, (3, 1T+2S) is read as: course value = 3 credits; 1 credit of theory, 2 credits of shop/activity. If the course were a laboratory, it might read (1, 0T+1L). Each credit of theory (T) requires the equivalent per week of 50 minutes of instructional time; each credit of shop/activity (S) requires 100 minutes per week; and each credit of laboratory (L) requires 150 minutes per week. Therefore, an entry of 3, 1T+2S would be scheduled to meet a total of 250 minutes per week of instructional time. These calculations refer to a course offered over a full sixteen-week semester. The amount of time per week for a course offered over a shorter period of time is increased to meet the required time in a shorter period.
6. Courses listed in this catalog are subject to change or deletion through normal academic channels. New courses and changes in existing course work are initiated by the responsible department chairperson, approved by the faculty curriculum committee, the faculty senate, and the academic dean.

ADOBE CONSTRUCTION (ADOB)

100 TRADITIONAL DWELLING DESIGN You will cover the design and construction techniques of traditional and modern adobe dwelling and monumental structures of Northern New Mexico from foundation to roof, including passive solar design. (Fall) (3, 3T+0S)

101 ADOBE DESIGN AND CONSTRUCTION WORLDWIDE You will cover the history of adobe buildings throughout the world, with emphasis on modern practices that meet building codes worldwide. You will examine design and construction techniques of homes, monumental structures, and settlements. You will also make adobes and build walls and other building components. Classes will be conducted on- and off-campus, and may utilize the Internet and other distance-learning facilitators. (3, 2T+1S)

102 ADOBE WALL CONSTRUCTION You will cover exterior and interior walls and buttresses, foundations, rough bucks, lintels, bond beams; and the installation of doors and windows, including wood frame, and post and beam techniques. Classes are conducted on- and off-campus. (Fall) (4, 2T+2S)

103 ROOF DESIGN AND CONSTRUCTION You will cover traditional Southwest designs of pitched and flat roofs: materials, structure, and plans, including vigas, beams, joists, rafters, trusses, latillas, rough boards, tongue-and-groove, deck sheathing, canales, and parapets. Class are conducted on- and off-campus. (4, 2T+2S)

104 FLOOR DESIGN AND CONSTRUCTION You will discuss and build (or mock up) traditional and modern floors and floor coverings found in the Southwest, including mud, wood, brick, stone, concrete, tile, and sheet goods. . Class are conducted on- and off-campus. (4, 2T+2S)

105 INTERIOR FINISH PRACTICES You will deal with traditional and modern finishes found in the buildings of the Southwest: mud plaster by hand and trowel, cement and gypsum plasters, exposed adobe bricks, carved adobe, wood trim at doors and windows, baseboards, wainscot, tile work, decorative stone, tin ceilings, nichos, carved columns, corbels, lintels, sheet rock hanging and finishing, and painting and staining. . Class are conducted on- and off-campus. (4, 2T+2S)

106 EXTERIOR FINISH PRACTICES You will deal with traditional and modern finishes found on buildings of the Southwest: mud stabilized mud, cement plasters, elastomeric plasters, insulation, vapor barriers, moisture protection, lath systems, exterior sheathing, patios, portales, vigas, posts, corbels, exposed lintels, wood trim at doors and windows, brick, stone, paint, and tile decoration. . Classes are conducted on- and off-campus. (4, 2T+2S)

107 PASSIVE SOLAR HEATING You will learn the passive solar heating systems that work well when integrated into the design of adobe homes, including direct gain systems, Trombe wall (indirect) systems, and greenhouse/sunspaces. You will learn the advantages and disadvantages of each system in order to choose between them for use in different parts of a house or commercial structure. You will cover calculations for appropriate sizing of systems as well as auxiliary back-up systems. (2, 2T+0S)

110 REMODEL THEORY AND PRACTICES You will learn stabilization, restoration, renovation, modernization, remodeling, and additions to existing adobe structures; surveying, estimating cost, historic building requirements, and safety considerations. Classes will be conducted both on-and-off-campus. (Spring) (2, 1T+1S)

111 HORNO DESIGN AND CONSTRUCTION You will study the history and design of hornos and mud ovens throughout the world. You will construct a traditional New Mexico horno and do a baking demonstration. Classes will be conducted on-and-off-campus. (1, 0T+1S)

112 ARCHES, DOMES, AND VAULTS You will learn systems to create openings and roofs in adobe structures using masonry materials in situations where wood and steel are not available or not desired. You will discuss and use traditional New Mexican and world-wide techniques. Classes will be conducted on-and-off-campus. (2, 1T+1S)

201 ADVANCED TOPICS IN ADOBE CONSTRUCTION This course is designed for you if you have completed the core adobe curriculum or who have construction industry experience and wish to gain skills beyond the entry level. Topics will range across the full curriculum, plus introduce new industry techniques and materials. Individualized learning objectives will be accommodated and research topics may be included. Topics may include computerized heat loss and gain analysis, super-adobe, cast-earth, rammed earth, straw-bale, straw/clay, and pumicecrete construction. If you wish to build skills to establish a business, you might pursue topics such as bidding with architects and designers; establishing credit with banks, suppliers, and subcontractors; and getting paid. May be repeated once for credit. Co-requisite: ADOB 202. (4, 4T+0S)

202 ADVANCED TOPICS PRACTICUM Hands-on experience for ADOB 201 topics, such as actual construction and finishing of full-scale. Field experience could be on-campus or off-campus with a local contractor or with Habitat for Humanity. You might choose to build a home for yourself or actually establish a contracting business. May be repeated once for credit. Co-requisite: ADOB 201. (9, 0T+9S)

ANTHROPOLOGY (ANTH)

101 PHYSICAL ANTHROPOLOGY You will cover the principles of human biology applicable to paleoanthropology and organic evolution of primates. Prerequisite: ENG 109N. Co-requisite: ANTH 101L. (3, 3T+0S)

101L PHYSICAL ANTHROPOLOGY LAB You will apply and demonstrate the principles of primate and human evolution. Co-requisite: ANTH 101. (1, 0T+1L)

102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY You will survey the disciplines of social and cultural anthropology, including culture, language, enculturation, subsistence patterns, economics, marriage, kinship, social groups, political systems, religion, art, and culture change. Prerequisite: ENG 109N. (Fall only) (3, 3T+0S)

110 INDIAN CULTURE OF THE SOUTHWEST You will study the culture of the indigenous peoples of the Southwest, including cultural patterns relative to agriculture, religion, arts, tribal governance, economics, etc., including both pre- and post-Columbian periods. Pre-requisite: ENG 109N. (3, 3T+0S)

111 LANGUAGE AND CULTURE You will study the historical and descriptive linguistics, with emphasis on linguistic theory and on the interrelationship between language and culture. (3, 3T+0S)

207 CULTURES OF NEW MEXICO You will study of the contemporary cultural and ethnic groups of New Mexico, including Native American, Hispanic, Anglo, and others.. (3, 3T+0S)

210 SOUTHWESTERN FOLKLORE You will survey the expressive culture systems such as art, music, architecture, religion; space/time orientation of the predominant Southwestern cultures. (3, 3T+0S)

ART (ART)

100 INTRODUCTION TO BASIC WOODCARVING You will learn the basic techniques of woodcarving and safety through carving one small project. (1, .5T+.5S)

101 INTERMEDIATE WOODCARVING Using more advanced techniques than learned in ART 100, such as hand-tool usage, carving techniques and safety, you will produce two small projects. (2, 1T+1S)

105 INTRODUCTION TO ART You will study basic problems in the understanding and criticism of painting, sculpture, and architecture in Western and non-Western cultures from pre-historic to present time; introduction to basic terminology of the arts and to the language of stylistic criticism; relationships of the arts to each other and their historical background. Includes museum/gallery visits when relevant. Prerequisite: ENG 109N. (3, 3T+0S)

107 HISTORY OF ART I You will study the development of Western art from pre-historic times to the Renaissance through slide and film presentations combined with lecture and analysis. Prerequisite: ENG 109N. (3, 3T+0S)

110 DRAWING I You will study the basic materials and mechanics of drawing, with an emphasis on the development of descriptive and perceptual skills. You will also study in line, value, mass, texture, and shape as applied to still life, landscape, and the human figure. (3, 1T+2S)

115 TRADITIONAL WOODCARVING You will study the basic methods of woodcarving, including the use and care of tools. Layouts, processes, and techniques are demonstrated with an emphasis on traditional New Mexico styles. (3, 1T+2S)

120 PAINTING I You will learn acrylic painting techniques, including color and pictorial space, still life, landscape, figure, and the abstract Prerequisite: ART 110. (3, 1T+2S)

122 BASIC DESIGN You will study traditional two- and three-dimensional art media: drawing, painting, and sculpture; explore the principles of pictorial structure through studio work; studies problems in black-and-white and color; 3-dimensional form and spatial organization. You will participate in discussions of historic art forms as related to design. May include gallery/museum visits. (3, 1T+2S)

125 INTRODUCTION TO GRAPHIC DESIGN You will study the elements of graphic design with an emphasis on presentation and advertising concepts and techniques. Class assignments will be "hands-on" work. (3, 1T+2S)

129 BASIC TINSMITHING You will learn the elementary techniques of designing, cutting, punching, and embossing tin in the northern New Mexico style. May be repeated twice for credit. (1, .5T+.5S)

130 TINSMITHING I You will study the basic techniques of punching, embossing, cutting, and designing in the tradition of northern New Mexico. May be repeated for credit. (3, 1T+2S)

150 BASIC JEWELRY AND METAL WORKING You will study jewelry and metalworking as they are practiced in New Mexico. May be repeated once for credit. (3, 1T+2S)

152 TRADITIONAL SPANISH COLONIAL RETABLO MAKING You will look at traditions in iconography: European traditions, New World, and New Mexico styles beginning with hide paintings, oil-on-panel retablos, and works from the colonial periods. You will create retablos based on these various styles. (3, 1T+2S)

156 PUEBLO SASH WEAVING You will study the technique of pueblo sash weaving, including the construction of hand looms, warping, and weaving of a simple design. (3, 1T+2S)

157 RETABLO MAKING You will create retablos in the northern New Mexico style by choosing appropriate wood, paint, and hand-made materials such as gesso and pinon varnish. May be repeated four times for credit. (1, .5T+.5S)

158 BULTO MAKING You will study the basic techniques for carving and painting bultos in the northern New Mexico style. May be repeated four times for credit. (1, .5T+.5S)

160 POTTERY I You will study hand-built and wheel-thrown pottery, learning various hand-building methods for pinch, coil, and slab construction ceramic forms. You will also study wheel-throwing methods for making basic utilitarian ceramic items, including glaze decoration and electric kiln firing of stoneware pottery. May be repeated for credit. (3, 1T+2S)

170 PHOTOGRAPHY I You will study the basic materials and processes of photography. May be repeated once for credit. (3, 1T+2S)

173 MURAL PAINTING You will use acrylic paints to create murals on interior walls, making preparatory drawings, after group development and discussion of the concepts and ideas for each space. (3, 1T+2S)

180 MICACEOUS POTTERY I You will use micaceous clay to form utilitarian vessels with the coil and scrape method to make bowls, bean pots, pitchers, cups, and lidded jars. You will decorate by incising or appliqué and wood-fire pottery in the traditional manner. May be repeated for credit. (3, 1T+2S)

185 SOUTHWEST CRAFTS You will become familiar with all the crafts from the Southwest, their value and cultural background, the techniques employed in producing such crafts, and the history of their development. (3, 3T+0S)

190 TRADITIONAL SILVER SMITHING You will study the basic techniques of silver smithing, including cutting and joining silver, forging, gemstone setting, tufa casting, and sand casting. (3, 1T+2S)

200 POTTERY GLAZE MAKING AND STUDIO PRACTICES If you are interested in setting up a studio to market your work, in this course you will learn to make pottery glazes, fire a kiln, and maintain a production pottery studio. Pre-requisite: ART 160. May be repeated for credit. (1, 0.5T+0.5S)

208 HISTORY OF NM ART AND ARCHITECTURE You will explore the tri-cultural area of northern New Mexico through the history of art and architecture. You will learn about the arts, crafts, and architecture of New Mexico through slides, lectures, field trips, and guest speakers. Prerequisite: ART 107 and ENG. (3, 3T+0S)

210 ART MARKETING STRATEGIES You will develop a business idea; profile, assess and define competition; identify potential markets; develop operational costs; and address pricing of work. You will also develop promotional materials, and write and present a marketing plan. (3, 3T+0S)

211 HISTORY OF ART II Continuation of ART 107 in which you will continue your study of the Renaissance to the present through slide and film presentations. Prerequisite: ENG. (3, 3T+0S)

221 DRAWING II Continuation of ART 110, in which you will study advanced concepts and technical processes. Prerequisite: ART 110. (3, 1T+2S)

230 ART BUSINESS PLANNING You will study the strategies required for pursuing and managing a career in the arts. (3, 3T+0S)

231 TINSMITHING II You will study advanced techniques of punching, embossing, cutting, and designing in the tinsmithing tradition of northern New Mexico. Your projects will include nichos, columns, sculpture, and chandeliers. Pre-requisite: ART 130. (3, 1T+2S)

232 PAINTING II Continuation of ART 120, including advanced study of concepts and technical processes; encourages independent initiative. Prerequisite: ART 120. (3, 1T+2S)

233 PRINTMAKING I You will study the skills and techniques of printmaking using various etching techniques which involve scratching through an acid-proof hard surface covered on a metal plate and then dipped in acid. Prerequisites: ART 110 and ART 120. (3, 1T+2S)

235 WATERCOLOR You will study transparent and opaque watercolor media, with emphasis on creative expression and techniques involving varied subject matter. Prerequisites: ART 110 and ART 120. (3, 1T+2S)

237 SCULPTURE You will study sculpture materials; basic consideration of form; technical and compositional exercises in clay, plaster, wood, and stone. Prerequisite: ART 160. (3, 1T+2S)

239 LIFE DRAWING You will draw the human figure from a life model, with emphasis on anatomy, gesture, and movement. (3, 1T+2S)

240 PORTRAIT PAINTING You will study the skills and techniques of portrait painting, with emphasis on facial structure and innovative color composition. Prerequisites: ART 110 and ART 120. (3, 1T+2S)

242 LIFE MODELING You will learn to construct an armature, model from life, make a piece mold, and cast a plaster copy of the clay original. (4, 2T+2S)

246 BOOK ARTS You will study the skills and techniques of book making, with emphasis on calligraphy and styles of format. (3, 1T+2S)

260 POTTERY II This is a continuation of ART 160, covering more complex methods for hand-building and wheel-throwing pottery. You will learn to combine building methods, form larger pieces and create more advanced wheel-thrown pottery. In addition, you will explore glazing techniques for stoneware pottery. Pre-requisite: ART 160. May be repeated for credit. (3, 1T+2S)

270 PHOTOGRAPHY II A continuation of ART 170 in which you will study advanced black and white techniques covering exposure, development, various films, and the use of filters, with special emphasis on tonal control through the creative use of the zone system; increased emphasis on personal vision, aspects of design, composition, and perception. Pre-requisite: ART 170. (3, 1T+2S)

280 MICACEOUS POTTERY II You will learn micaceous clay pottery in the tradition of northern New Mexico through a continuation of the techniques learned in ART 180. You will also experiment with advanced techniques of hand-building and out-door firing. Pre-requisite: ART 180. (3, 1T+2S)

285 CREATIVE PHOTO TECHNIQUE Expands the use of black and white films, papers, and photographic surfaces; explores the use of liquid light emulsion on a variety of surfaces including glass, paper, and canvas. In this class, you are highly encouraged to mix your media. Prerequisite: ART 170. (4, 3T+1S)

290 STUDIO PLANNING This course is designed to assist you in identifying and organizing costs for a personal craft studio. (3, 3T+0S)

295 ADVANCED BLACK & WHITE PHOTO PRINTING You will explore advanced black and white printing techniques. For maximum control, you will learn single filter printing techniques, split filter printing processes, and high key printing. Pre-requisite: ART 270, or permission of the instructor. (3, 1T+2S)

296 PHOTOGRAPHY PORTFOLIO To assist you in entering the world of professional photography, you will create your own portfolio with a strong emphasis on editing, content, printing, and presentation. You will engage in discussions on how to market your work to enter graduate schools; includes publications, shows, and galleries. Pre-requisite: ART 295, or permission of instructor. (3, 1T+2S)

414 HUMANITY AND CREATIVITY Petroglyphs on a rock wall, a Bach Sonata, Hip Hop, Our Lady of Guadalupe retablo, Gone With the Wind, a Laura Gilpin photograph, the Egyptian Pyramids, Sherman Alexis poetry, a beautiful carved tool, a Navajo weaving, a Michelangelo statue, a Georgia O'Keefe painting are contributions of art to humanity. Since the begin-

ning of time, humans have been creating art and enriching civilization. In this course you will explore human creativity through the arts and challenge yourself to explore creativity and the effect it has on our lives. [Cross-listed as HUM 414 and HSS 414] Pre-requisite: ENG 112. (4,4T+OS)

421 HISTORY, LITERATURE, ART, AND PHILOSOPHY Who are you? Who are we? How did we become what and who we are? What role did we play in shaping the world and ourselves? Different cultures and different interpretations of who we are and what we value and how we represent them. How does the study of the "Humanities" guide us in these explorations? Using the 'tools' of the humanities including expression, beliefs and traditions, you will be challenged to reflect deeply on these questions, which you will discuss through the integrated readings in history, literature, arts and philosophy. [Cross-listed as HIST 421, HUM 421, and PHIL 421] Pre-requisite: ENG 112. (6, 6T+OS).

ASTRONOMY (ASTR)

110 INTRODUCTION TO ASTRONOMY You will study the fundamentals of modern astronomy, including coverage of the physical and historical nature of the universe, with emphasis on stellar evolution, the Milky Way galaxy, and our solar system. Prerequisites: ENG 109N and MATH 100N. Co-requisite: ASTR 110L. (3, 3T+0S)

110L INTRODUCTION TO ASTRONOMY LAB Laboratory experience to accompany ASTR 110. You will learn terrestrial and stellar observation, physical science laboratory exercises, and using the World Wide Web for accessing astronomy links. Co-requisite: ASTR 110. (1, 0T+1L)

AUTO BODY REPAIR (ABR)

110 INTRODUCTION TO AUTO BODY REPAIR You will be introduced to a work program consisting of on-the-job training, in which you will be exposed to introductory aspects of auto body repair, including tools, safety, work habits, metal work, framework, and refinishing. Prerequisite: MATH 100N and ENG 108N. (4, 0T+4S)

111 METAL WORK I In this course, you will learn metal work in the auto body field. Emphasis is placed on the different types of mild and high strength steel sheet metals used in automobile construction; the physical changes that sheet metal undergoes when damaged; classifications of the different types of sheet metal damage; various techniques for straightening sheet metal damage; introduction to the different types of plastic body fillers and their usage; associated hand tools, power tool applications, and personal safety. Prerequisites: ENG 108N and MATH 100N; Co-requisite: ABR 110. (4, 0T+4S)

112 REFINISHING I You will learn the basic skills and knowledge associated with refinishing equipment used in automobile refinishing, with emphasis on how a spray gun works; basic techniques of good spraying vs. bad spraying; surface preparation; recognizing the variables that influence the quality of the spray finish; adjusting the spray equipment to test and

develop a good spray pattern; various types of spray coats; cleaning and caring for a spray gun, siphon, gravity, HVLP type spray guns; operation of the spray booth; and personal safety, including respirators and the handling of hazardous materials. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (5, 0T+5S)

113 FRAME REPAIR Through this course you will expand your knowledge of metal work to include minor and major conventional frame repair techniques. You will demonstrate compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (5, 0T+5S)

114 UNITIZED BODY REPAIR You will develop the necessary skills and knowledge associated with repair, replacement, and alignment of components used in unitized construction, placing emphasis on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (5, 0T+5S)

115 ESTIMATION - AUTO BODY REPAIR You will learn the methods and procedures involved in shop estimating of collision damage. You will visually inspect and record physical damage, and prepare and record preliminary information associated with collision damaged vehicles. You will discuss business practices, with emphasis placed on personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (4, 0T+4S)

211 METAL WORK II In this continuation of ABR 111, you will learn about the preparation of non-structural analysis and damage repair. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, power equipment; and outer body panel repairs. Prerequisite: ABR 111. (4, 0T+4S)

212 REFINISHING II You will continue to develop skills in the application of modern automotive paint systems. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, power equipment; surface preparation, uses and properties of refinishing material; spray gun and related equipment operation; paint measuring and mixing; color matching, and base/clear applications. Prerequisite: ABR 112. (5, 0T+5S)

213 METAL WORK III You will continue to expand your skills in metal work, concentrating on outer body panel repairs, replacements, and adjustments. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ABR 211. (4, 0T+4S)

214 REFINISHING III You will refine your painting skills to include complete refinishing jobs in various types of paint systems, refinishing defects, causes, and cures. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ABR 212. (5, 0T+5S)

215 SOFTWARE APPLICATIONS You will learn the use of software associated with estimating overall costs for auto body repair jobs. Prerequisite: ENG 108N and MATH 100N. (3, 0T+3S)

AUTOMOTIVE TECHNOLOGY (ATEC)

To enroll in any of these courses, you must have first successfully completed MATH 100N or a higher level math course, or scored above MATH 100N on the Course Placement test, or have permission of the instructor.

100 DEFENSIVE DRIVING This course meets the National Safety Council's requirements for safe driving by identifying risky attitudes and behavior on the roads that cause problems, explaining the difference between good driving and defensive driving by identifying whether a collision was preventable, recognizing driving hazards, and listing the three basic steps in collision avoidance. (1, 1T+0S)

101L BASIC SERVICE FUNDAMENTALS You will study the essential automotive skills needed by repair shops that specialize in maintenance and light repair; highlights workplace safety, industry repair procedures, tools and equipment use, and employment skills valued by employers. (4, 2T+2S)

102L ENGINE REPAIR You will study internal combustion theory, engine overhaul procedures and precision tool measuring; includes practice of essential engine testing skills and identification of needed repairs, along with removal and replacement of engines. Pre-requisite: ATEC 101L or instructor permission. (4, 2T+2S)

103L AUTOMOTIVE ELECTRICAL You will study critical troubleshooting skills necessary for identifying and correcting problems found in automotive electrical/electronic systems; includes Digital Voltage Ohmmeter (DVOM) and analog meter use, voltage drop testing, wiring schematic interpretation, and electrical diagnostic routines. Pre-requisite: ATEC 101L or instructor permission. (Fall) (4, 2T+2S)

104L BRAKE SYSTEMS You will study the principles of hydraulic brake operation and practical skills of diagnosis and repair of standard and anti-lock brakes; includes lab activities on bleeding and adjustment, drum and rotor machining, master cylinder overhaul and brake caliper repair. Co-requisite: ATEC 101L. (4, 2T+2S)

105L SUSPENSION AND ALIGNMENT You will study system repairs and adjustments on a variety of modern automotive suspension types; strut replacement, wheel alignment and tire balancing, steering gear repair, and rebuilding of common suspension component, including lab activities using a COATS tire machine, COATS computer balancer, Hunter com-

puter alignment machine, and hydraulic suspension equipment. Co-requisite: ATEC 101L. (4, 2T+2S)

106L MANUAL SUSPENSION You will study the fundamentals of design and operation of front and rear drive manual transmissions, differentials and drive line components; activities include disassembly, measurement, inspection, and re-assembly of various transmissions in the car and on the bench. Pre-requisite: ATEC 101L or instructor permission. (Fall) (4, 2T+2S)

107L AUTOMATIC TRANSMISSION You will study the fundamentals of design and operation of automatic transmissions and transaxles, servicing, and proper repair procedures; includes performance pump, clutch repair, valve body overhaul, and gear replacement on a variety of transmissions. Pre-requisite: ATEC 101L or instructor permission. (Spring) (4, 2T+2S)

108L AUTOMATIC ELECTRONICS You will learn testing and diagnostic skills in more complex automotive systems; includes lighting circuits, body computers and sensors, use of lab scopes and scan tools, and supplemental restraint systems. Pre-requisites: ATEC 101L and 103L. (Fall) (4, 2T+2S)

109L AIR CONDITIONING AND HEATING You will learn testing, evacuating, and charging air conditioning systems while maintaining an awareness of potential environmental concerns caused by automotive refrigerants, as well as cooling and heating diagnosis, climate control, trouble shooting, and repair. Pre-requisites: ATEC 101L and 103L. (Spring) (4, 2T+2S)

110L ENGINE PERFORMANCE I You will study basic fuel and ignition systems along with early emission systems; structured lab activities permit in-depth analysis of how these systems affect drivability. Pre-requisites: ATEC 10L, 102L, and 103L. (Spring) (4, 2T+2S)

111L ENGINE PERFORMANCE II You will study fuel, ignition and emission devices in early generation computer system; diagnostic skills and repair methods include throttle body fuel injection, electronic feedback carburetors, and distributor ignition (DI). Pre-requisite: ATEC 110L. (Spring) (4, 2T+2S)

112L ENGINE PERFORMANCE III You will study current production automobile and light truck computerized engine management systems; includes operation, trouble code analysis, diagnostic routine, and proper repair procedures for electronic ignition (EI< DIS), port fuel injection, and emission devices. Pre-requisite: ATEC 111L. (Spring) (4, 2T+2S)

113L SPECIAL TOPICS You will explore changes in automotive industry and different forms of vehicle fuels. Allows for charges toward GPA emission testing and required training to allow for design specific courses as needed by businesses, state and local government toward employee training. Permission of instructor. (Var., 2T+1-4S)

114 SERVICE WRITER/CUSTOMER SERVICE You will learn the basics of customer service, repair order (RO) writing, and the general front-office service process. Permission of instructor. (Fall) (1, 1T+0S)

115L ELECTRICAL SYSTEMS/ENGINE PERFORMANCE

You will learn the basics of diagnostics and the repair of automotive electrical systems and vehicle maintenance, including battery, starting systems, lighting systems, gauges and warning devices, and horn and wiper/washer components. Pre-requisite: ATEC 101L. (Summer only) (4, 0T+4S)

280L PRACTICUM At the start of this course, you will be placed in an approved automotive repair facility or automotive service department, working in an internship program involving approval of a special project and demonstration of quality and professional workmanship. The course is designed to allow you to explore your potential as a professional automobile mechanic. Each hour of credit requires 50 clock hours of practicum. Pre-requisite: Permission of instructor. (1-4, 0T+1-4S)

BARBERING (BARB)

Pre-requisite for any Barbering course is completion of ENG 108N, or adequate score on the Course Placement Evaluation instrument.

110 BARBERING I You will study the history and principles of hygiene, bacteriology, sanitation and sterilization. Emphasis is on implements and nomenclature of the profession. (5, 5T+0S)

110L BARBERING I LAB You will practice the fundamentals and basic haircutting techniques, including practice in linen use, draping, shampooing, and use of implements. (9, 0T+9S)

120 BARBERING II You will study the chemistry, anatomic and physiological disorders of skin, hair, and scalp, along with an overview of shop management, and the rules and regulations of the Board. (5, 5T+0S)

120L BARBERING II LAB You will practice haircutting, shaving, massage, facial, scalp, and hair treatments and hair styling. (9, 0T+9S)

280L BARBERING PRACTICE You will practice haircutting, shaving, massaging, and chemical treatments. You will also review and prepare for the state licensing exam. You will enroll in this course if you still need to complete hours for the state board or if you wish to get a cross-over license or for refresher training. You will enroll for one credit hour for each 30 clock hours needed. (Variable, 0T+1-9S)

290 BARBERING INSTRUCTOR THEORY I You will gain an understanding of and skills in developing lesson plans, professional conduct, teaching methods, testing measurements, clinic supervision, and classroom management. Pre-requisite: you must be a barber licensed in New Mexico. (5, 5T+0S)

290L BARBERING INSTRUCTOR INTERNSHIP I You will practice preparing lesson plans, developing your teaching methodology, using teaching aids, developing tests, and doing records keeping.. Pre-requisite: you must be a barber licensed in New Mexico. (9, 0T+9S)

291 BARBERING INSTRUCTOR THEORY II You will gain an understanding in the development of lesson plans, in-depth notes, preparation of all teaching materials for supervised teaching experience; test development, lecture preparation, demonstration, and audio-visual presentations. (5, 5T+0S)

291L BARBERING INSTRUCTOR INTERNSHIP II You will practice teaching, theory and laboratory, under the direction of a licensed instructor. (9, 0T+9S)

BILINGUAL EDUCATION (BLED)

305 SPANISH LITERACY FOR BILINGUAL EDUCATION You will study the practical implementation of Spanish literacy skills, including reading, writing, listening, and speaking. Your instructor will teach the course in Spanish and monitor your Spanish language proficiency throughout the course. (3, 3T+0S)

330L MODELS & STRATEGIES FOR TEACHING IN BILINGUAL EDUCATION You will focus on assessing the needs of students in bilingual classrooms, developing curriculum and materials, and effective teaching methods in the dual language or multilingual classroom. You will also examine the theoretical foundations and recent research findings that align classroom practice. (3, 2T+1L)

438 CONCEPTS OF LINGUISTICS IN EDUCATION You will review basic concepts of linguistics and subsystems of language. You will examine and discuss a review of the research on language acquisition, and you will analyze the different kinds of language processing that are involved in comprehension and expression in first (L1) and second (L2) languages. Prerequisite: BLED 305. (3, 3T+0S)

450L INTEGRATING BI-LITERACY AND BILINGUAL CONTENT STRATEGY INSTRUCTION You will be provided authentic application of the content-based instruction for bilingual education and ESL. You will demonstrate theoretical and practical applications of ESL for academic instruction. You will discuss and demonstrate the principles of differentiating instruction in the bilingual education and/or ESL classroom. The course content will be taught in both English and Spanish, and you will be required to participate in a field-based practicum in a bilingual and/or ESL classroom. Prerequisites: ED 331, BLED 305, BLED 330, BLED 438, and department permission. (3, 2T+1L)

BIOLOGY (BIOL)

110 CURRENT TOPICS IN BIOLOGY You will study important current issues in biology, including changes in the biosphere, evolution, genetics, medical advances, and biotechnology. Co-requisite: BIOL 110L. (3, 3T+0S)

110L CURRENT TOPICS IN BIOLOGY LAB Co-requisite: BIOL 110. (3, 3T+0S)

112 ENVIRONMENTAL SCIENCE You will study ecological principles as they apply to society, with a focus on impact biology;

population growth and problems, resource depletion and pollution. You will examine the role of ecology in the institution of legislation and policies. Co-requisite: BIOL 112L; Prerequisite: ENG 109N; Pre- or Co-requisite: CHEM 110. (3, 3T+0S)

112L ENVIRONMENTAL SCIENCE PROBLEMS You will learn to analyze local environmental science problems. Your experience will involve three eight-hour sessions in the field collecting data or responses to local impact biology issues. Co-requisite: BIOL 112. (1, 0T+1L)

136 HUMAN ANATOMY & PHYSIOLOGY I FOR HEALTH SCIENCES You will study basic human anatomy and physiology for students in the health science programs. This course covers important biological concepts (including biological chemistry, cells, and tissues) and the integumentary, skeletal, muscular, and nervous systems. Prerequisite: ENG 109N. Co-requisite: BIOL 136L. (3, 3T+0L)

136L HUMAN ANATOMY & PHYSIOLOGY I LAB FOR HEALTH SCIENCES In this lab experience for BIOL 236, you will cover basic biological concepts, cells, tissues, and the integumentary, skeletal, and nervous systems. Co-requisite: BIOL 136. (1, 0T+1L)

137 HUMAN ANATOMY & PHYSIOLOGY II FOR HEALTH SCIENCES In this continuation of BIOL 136, you will study the endocrine, cardiovascular, respiratory, digestive, excretory, reproductive systems, and human genetics. Prerequisites: BIOL 136 and 136L. (3, 3T+0L)

137L HUMAN ANATOMY & PHYSIOLOGY II LAB FOR HEALTH SCIENCES In this lab experience for BIOL 137, you will cover the structure and function of various systems (endocrine, cardiovascular, respiratory, immune, digestive, excretory, reproductive, and human genetics. Prerequisites: BIOL 136 and 136L. Co-requisite: BIOL 137. (1, 1T+1L)

160 BIOTECHNOLOGY SEMINAR I You will study the eight areas of modern biotechnology: microbial, agricultural, animal, forensic, aquatic, medical, regulatory, and bioremediation, involving discussions on the ethical, legal, and societal issues in biotechnology, as well as modern laboratory techniques. This course is suitable for science majors and non-majors, as well as those interested in career opportunities in the field. Co-requisite: BIOL 160L. Prerequisite: Prerequisites: BIOL 110 and BIOL 110L or higher-level BIOL. (Fall) (3, 3T+0L)

160L BIOTECHNOLOGY LAB I (2, 0T+2L) In this laboratory experience, you will study techniques focusing on proper protocols in record keeping, genomic and plasmid DNA isolation, determining DNA concentration by UV spectroscopy, cloning and subcloning, preparation of growth curves, measuring bacterial growth by viable counts and spectroscopy, restriction mapping, enzyme assays, regulation of gene expression, cloning vectors, DNA sequencing, preparation of DNA probes, and hybridization. (Fall) Co-requisite: BIOL 160. Prerequisites: BIOL 110 and BIOL 1110L or higher-level BIOL. (Fall) (1, 0T+3L)

201 PRINCIPLES OF MOLECULAR AND CELL BIOLOGY

Through scientific methods, you will study the role of water in cell biology, carbon and molecular diversity, macromolecules, an introduction to metabolism, tour of cell structures and functions, membrane structure and function, cellular respiration, photosynthesis, cell communication, and the cell cycle. Prerequisite: CHEM 110/L; co-requisite: BIOL 201L. [Fall only]. (3, 3T+0L)

201L PRINCIPLES OF MOLECULAR AND CELL BIOLOGY LAB

You will experiment with techniques and methods in molecular and cell biology to support concepts in lecture. Co-requisite: BIOL 201. (1, 0T+1L)

202 PRINCIPLES OF GENETICS You will be exposed to an overview of Mendelian genetics: physical and chemical structure of the hereditary molecules and the role of chromosomes; mitosis, meiosis, and the molecular basis of inheritance; DNA metabolism to include replication, repair, and recombination; genes to proteins; genetic models (viruses and bacteria), eukaryotic genomes, genetic basis of development, and an overview of genomes. Pre-requisite: BIOL 201 and 201L; Co-requisite: BIOL 202L. [Spring only] (3, 3T+0S)

202L PRINCIPLES OF GENETICS LAB You will experiment in genetics with a focus on bacterial, yeast, plant, and drosophila models, with an emphasis on supporting concepts from the lecture. Co-requisite: BIOL 202. [Spring only] (1, 0T+1L)

203 ECOLOGY AND EVOLUTION You will study the principles of evolution on the origin of the biosphere and the diversifications of life; the processes of natural selection and the origin of species, and the evolution of populations; evolutionary ecology with emphasis on behavioral, population, and community ecology, along with the impacts on the ecosystem, ecology, and conservation biology. Pre-requisite: BIOL 202 and MATH 130; co-requisite: BIOL 203L. (3, 3T+0L)

203L ECOLOGY AND EVOLUTION LAB You will learn practical applications of the tools and methods used by ecologists and evolutionary biologists to address research questions; an introduction to statistical and sampling techniques used to collect and analyze data on fossils, plants, and animals. Co-requisite: BIOL 203. (1, 0T+1L)

210 MICROBIOLOGY You will concentrate on the characteristics of microbes (particularly the bacteria), the influence of microbes on man and his environment and of man on the microbial environment, with a focus on medically significant microbes, physiologic responses to infection, clinical aspects of asepsis, proper procedures in the handling, isolation, and identification of bacteria. Prerequisite: CHEM 110 and 110L, or the equivalent at high school or college within past two years. Co-requisite: BIOL 210L. (3, 3T+0L)

210L MICROBIOLOGY LAB Co-requisite: BIOL 210. (1, 0T+1L)

237 HUMAN ANATOMY AND PHYSIOLOGY I You will study the structure, function, and chemistry of the human membranes

and glands of the integumentary system, skeletal system, muscular system, and muscle and neuron membrane physiology. Prerequisite: CHEM 110 and 110L, or the equivalent at high school or college within past two years. Co-requisite: BIOL 237L. (3, 3T+0L)

237L HUMAN ANATOMY AND PHYSIOLOGY I LAB Co-requisite: BIOL 237. (1, 0T+1L)

238 HUMAN ANATOMY AND PHYSIOLOGY II Continuation of BIOL 237. Studies fluid and electrolytes, and the following systems: nervous (central and peripheral), circulatory, urinary, respiratory, digestive, and endocrine and reproductive. Prerequisite: BIOL 237/237L or permission of instructor. Co-requisite: BIOL 238L. (3, 3T+0L)

238L HUMAN ANATOMY AND PHYSIOLOGY II LAB Co-requisite: BIOL 238. (1, 0T+1L)

260 BIOTECHNOLOGY SEMINAR II Continuation of Biotechnology Seminar I. You will discuss current issues in DNA technology and biotechnology applications; explores career options in the biomedical research area. (Spring) Co-requisite: BIOL 260L. Prerequisite: BIOL 160 and 160L. (Spring) (3, 3T+0L)

260L BIOTECHNOLOGY LAB II You will develop techniques for PCR, DNA sequencing and analysis, gene expression in: lambda phage and E. coli, SDS-polyacrylamide gel electrophoresis, protein assays; and techniques for working with proteins, dialysis, and gel filtration and ion exchange chromatography. Co-requisite: BIOL 260. (Spring) (1, 0T+1L)

290 UNDERGRADUATE RESEARCH EXPERIENCE I In this laboratory-based experience in biological research, you will learn experimental design, library and internet information searches, research methodology, and how to maintain laboratory notes while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on molecular biology, ecology, and environmental science. Prerequisite: permission of department chairperson. Graded on a credit/no credit basis. (3, 3T+0L)

292 UNDERGRADUATE RESEARCH EXPERIENCE II In this laboratory-based experience in biological research, you will learn experimental design, library and internet information searches, research methodology, and how to maintain laboratory notes while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on molecular biology, ecology, and environmental science. Graded on a credit/no credit basis. Prerequisite: BIOL 290. (3, 3T+0L)

BUSINESS ADMINISTRATION (BA)

103 BUSINESS COMPUTER APPLICATIONS I You will learn basic through intermediate features of a Windows database (Access) through creating and editing databases using step-by-step activities. You will format fields and enter calculated fields, as well create forms and use queries to extract information. (3, 3T+0S)

104 BUSINESS COMPUTER APPLICATIONS II You will learn to use the features of Microsoft Excel, a spreadsheet program, to organize data, complete calculations, make decisions, graph (chart) data, and develop professional-looking reports. You will also learn to use Microsoft PowerPoint, a presentation graphics software program, to create professional-quality electronic side presentations. (3, 3T+0S)

111 MICROCOMPUTER APPLICATIONS IN BUSINESS You will study the owner/manager approach to the use of microcomputers: systems design, software, business applications, and the Windows environment. [Cross-listed as OA 111] (3, 3T+0S)

115 INTRODUCTION TO MS EXCEL Introduction to the electronic spreadsheet ? specifically how to use, design, and edit spreadsheets for use in a variety of personal and business applications. Microsoft Excel will be the specific software to which you will be exposed. (1, 1T+0S)

116 INTRODUCTION TO MS POWERPOINT Introduction to the electronic presentation ? specifically how to use, design, and edit presentation graphics for use in a variety of personal and business applications. Microsoft PowerPoint will be the specific software to which you will be exposed. (1, 1T+0S)

117 BUSINESS MATH Fundamental operations including fractions, decimals, percentages, interest computation, present value, amortization, and accounting math within the context of business-oriented word problems. Prerequisite: MATH 100N. (3, 3T+0S)

120 INTRODUCTION TO BUSINESS Provides an integrated overview of American business and its operations. You will pay special attention to current business, marketing, finance, accounting, and the legal environment of business, and you will complete a small-business plan. Co-requisite: ENG 109N. (3, 3T+0S)

124 BUSINESS FOR MESSAGE PROFESSIONALS Addresses the business needs of wellness professionals with an emphasis on start-up, marketing, and financial management of a massage therapy practice. You will become familiar with general business terminology. A personal finance unit will be included. (3, 3T+0S)

130 ACCOUNTING PRINCIPLES I This is an introductory course in accounting for both accounting majors and non-majors. It introduces you to the aspects of accounting theory and practice, with the fundamental purpose of providing information for decision making. Provides extensive coverage in preparing, analyzing, and interpreting financial statements. The goal is for you to become an intelligent user of financial as well as non-financial information. (4, 4T+0S)

131 ACCOUNTING PRINCIPLES II This course offers both accounting and non-accounting majors an introduction to managerial accounting. Your attention will be focused on use of accounting data as a basis for decision by management, stockholders, creditors and other users of financial statements and accounting reports. Prerequisite: BA 130. (4, 4T+0S)

135 COMPUTERIZED ACCOUNTING You will use prepared integrated business software, QuickBooks, on microcomputers for the computerization of accounting principles topics. Prerequisites: BA 130. (3, 3T+0S)

140 E-COMMERCE Techniques, problems, and solutions in eCommerce. You will cover topics such as marketing plan considerations, online catalogs, payment methods, security, outsourcing options, and the technologies behind eCommerce web sites. (Cross-listed as CT 140) (3, 3T+0S)

202 PRINCIPLES OF MANAGEMENT An overview of management principles as these apply to the public, private, and tribal sectors. You will pay special attention to techniques of managerial decision making, the planning process, motivation, leadership, and communication skills. Prerequisite: ENG 108N. (3, 3T+0S)

205 BUSINESS STATISTICS Introduces you to the use of statistics in business; techniques for describing and analyzing descriptive and numerical data; estimation, hypotheses testing, t-tests, and regression; application to business problems. Pre-requisite: MATH 102N. (3,3T+0S)

210 PRINCIPLES OF FINANCE Introduces you to the current practical and theoretical financial concepts in order to understand the finance function in today's business firm. Emphasizes the time value of money, investment valuation, and working-capital management; introduces financial analysis. Prerequisites: BA 131. (3, 3T+0S)

212 SCHOOL FINANCE You will study the basic principles of financing public education through analyzing reference sources from local, state, and federal levels of government, through analyzing existing plans of financing and proposed alternatives for financing the public school, and through conducting an in-depth study of budgeting and internal finance. Pre-requisites: BA 210 and ENG 109N with grades of ?C? or better. (3, 3T+0S)

225 EXCEL Illustrates the features of Microsoft Excel, a spreadsheet program that allows you to organize data, complete calculations, make decisions, graph (chart) data, and develop professional-looking reports. Prerequisite: CS 102. (3, 3T+0S)

226 POWER POINT Microsoft PowerPoint is a complete presentation graphics software program that allows you to produce a professional-looking presentation. PowerPoint teaches you to make informal presentations in a small conference room using overhead transparencies, to make electronic presentations using a projection device attached to a personal computer, and to make a formal presentation to a large audience using 35mm slides. Prerequisite: CS 102. (3, 3T+0S)

227 ADVANCED EXCEL You will gain a working knowledge of the advanced applications of Microsoft Excel, including topics in advanced formatting, interpreting, and integrating data. This course is required for Microsoft User Certification Specialist (MOS). Pre-requisite: BA 225. (Spring only) (3, 3T+0S)

230 INTERMEDIATE ACCOUNTING I Accounting principles for compilation of data, valuation of property, liabilities, introduction to analytic processes and advanced problems, with an emphasis on governmental applications. Prerequisite: BA 131. (3, 3T+0S)

231 INTERMEDIATE ACCOUNTING II Continuation of BA 230, including emphasis on problems relating to investments, liabilities, and stockholder equity; also covers earnings per share. Prerequisite: BA 230 (3, 3T+0S)

232 INCOME TAX ACCOUNTING Latest tax law changes as they apply to individuals; problems in tax computation and reporting for individuals, with some emphasis on taxation in business. Prerequisite: BA 131. (3, 3T+0S)

235 GOVERNMENTAL ACCOUNTING Accounting processes unique to the non-profit governmental organization, with emphasis on the uses of data in evaluation of past performance and planning future activities for projects. Prerequisite: BA 131. (3, 3T+0S)

242 BUSINESS INFORMATION SYSTEMS You will be introduced to business systems and the information technology that supports them, including systems theory, organizational structure and culture, and the role of information systems in a business environment. (3, 3T+0S)

245 COST ACCOUNTING Development and operation of cost accounting systems, with discussions and illustrations of procedures for each type of system. Emphasis is on development of budgets for overhead and assignment of costs to the production output of manufacturing firms. Prerequisites: BA 131. (3, 3T+0S)

251 PRINCIPLES OF MARKETING This course covers the marketing process from the inception to conclusion of goods and services, including market, product distribution, promotion, and pricing strategies; devotes special attention to analysis of market and consumer behavior. Prerequisite: BA 120. (3, 3T+0S)

262 HUMAN RESOURCES MANAGEMENT Provides you with the basic concepts of Human Resource Management functions and organizational processes. Emphasizes legislation, specialization, job description, job analysis, self-managed teams, profit/gain sharing, health care, medical leave, harassment, diversity, management and/or labor relations, recruitment, and training. Prerequisite: BA 202. (3, 3T+0S)

266 BUSINESS LAW Introduces you to general legal principles, including the creation of laws, contracts, sales, business, insurance, and other related matters. Prerequisites: ENG 109N. (4, 4T+0S)

268 SCHOOL LAW You will study legal principles that relate to such matters as authority, responsibility, and liability of school boards, districts, and state and federal organizations. You will also study the legalism of principals and teachers. Prerequisite: ENG 109N. (3, 3T+0S)

280 FINANCE PRACTICUM You will apply skills in your major area and focus on project management skills through group projects conducted in a professional setting. You may work with a private or public enterprise. With the instructor's guidance and permission, you will arrange for the experience, which requires at least 50 clock hours of supervised experience for each credit hour granted. Pre-requisite: BA 210 and BA 212 and permission of program director as this course is restricted to business majors. (3, 3T+0S)

CARPENTRY (CARP)

153 FRAMING CARPENTRY WITH WOOD / STEEL STUDS Covers the basics of standard stud frame building construction with emphasis on walls. Wood frame construction is emphasized; steel frame construction gets secondary attention. Safety, tools, measuring and cutting materials begin the course. You will learn the various parts of a wall framing system, their proper size, and how to fasten them together. Classes will be conducted on- and off-campus. (4, 2T+2S)

154 FINISH CARPENTRY Covers the techniques, materials, and tools used in finish carpentry. Emphasis is on interior finish woodwork, such as the trim around windows and doors, and at junctures between floors and walls. Also covers traditional and historical methods and materials found in the Southwest. Includes new materials and emerging techniques which are replacing wood. Classes will be conducted on- and off-campus. (4, 2T+2S)

155 SPECIALIZED CARPENTRY Covers the techniques, materials, and tools used in specialized carpentry. Includes stair building; deck and rail building; cabinetry installation; and the construction of light shafts, skylights, dormers, and site-built trusses; foundations of wood and concrete foundation formwork. . Classes will be conducted on- and off-campus. (3, 2T+1S)

171 CARPENTRY APPRENTICE LEVEL 1A This course is for Carpentry Apprentices in the National Construction Trades Center for Education and Research (NCCER) Program. The four-year program leads to Journeyman Certification by NCCER, where credentials reside in the National Registry. Instruction and testing is by NCCER certified instructors. The course covers basic safety, an introduction to construction math, an introduction to hand and power tools, an introduction to blueprints, basic rigging, and wood building materials. Pre-requisite: acceptance into the NCCER program. (6, 6T+0S)

172 CARPENTRY APPRENTICE LEVEL 1B This course covers floor systems, wall and ceiling framing, and windows and exterior doors. It is the second course in the four-year NCCER Carpentry Apprenticeship Program. Pre-requisite: CARP 171 (6, 6T+0S)

173 CARPENTRY APPRENTICE LEVEL 2A This course covers reading plans and elevations, site layout one, distance measurement and leveling, introduction to concrete and reinforcing materials, and foundations and flatwork. This is the

third course in the NCCER four-year program. Pre-requisite: CARP 172, .or NCCER admission at this level. (6, 6T+0S)

174 CARPENTRY APPRENTICE LEVEL 2B This course covers concrete forms, reinforcing concrete, handling and placing of concrete, and manufactured forms. This is the fourth in the NCCER program. Pre-requisite: CARP 173.

175 CARPENTRY APPRENTICE LEVEL 3A This course covers exterior finishing, roofing applications, thermal and moisture protection, stairs, and framing with metal studs. This is the fifth course in the NCCER program. Pre-requisite: CARP 174 or NCCER admission at this level. (6, 6T+0S)

176 CARPENTRY APPRENTICE LEVEL 3B This course covers drywall one, installation, drywall two, finishing, interior finish one, doors, interior finish two, suspended ceilings, interior finish three, window, door, floor, and ceiling trim, interior finish four, and cabinet installation. This is the sixth course in the NCCER program. Pre-requisite is CARP 175. (6, 6T+0S)

178 CARPENTRY APPRENTICE LEVEL 4A This course covers lite layout two, angular measurement, advanced roof systems, and advanced floor placement. Pre-requisite is CARP 176, or NCCER admission at this level. This course is the seventh course in the NCCER program. (6, 6T+0S)

179 CARPENTRY APPRENTICE LEVEL 4B This course covers advanced wall systems, advanced stair systems, introduction to light equipment, introductory skill for the crew leader, welding and metal buildings are elective modules. Pre-requisite is CARP 177. This is the eighth, and last, course in the NCCER program. (6, 6T+0S)

CHEMISTRY (CHEM)

110 INTRODUCTION TO CHEMISTRY Introductory course to prepare students with no high school chemistry for college level chemistry courses and to familiarize students in health occupations programs with basic concepts of inorganic, organic, and biochemistry in physiology and medicine. Prerequisite: MATH 102N; Co-requisite: CHEM 110L. (3, 3T+0L)

110L INTRODUCTION TO CHEMISTRY LAB Co-requisite: CHEM 110. (1, 0T+1L)

121 GENERAL CHEMISTRY I Chemical and physical behavior of matter. Prerequisite: MATH 130, high school chemistry, or an ACT score of 19 or higher in Natural Science. Co-requisite: CHEM 121L. (3, 3T+0L)

121L GENERAL CHEMISTRY I LAB Co-requisite: CHEM 121. (1, 0T+1L)

122 GENERAL CHEMISTRY II A continuation of CHEM 121. Co-requisite: CHEM 122L. (3, 3T+0L)

122L GENERAL CHEMISTRY II LAB Co-requisite: CHEM 122. (1, 0T+1L)

210 INTEGRATED ORGANIC & BIOCHEMISTRY Introduc-

tory, non-laboratory course designed to meet the entrance requirements in chemistry for students in allied-health fields in which some knowledge of organic chemistry and biochemistry is needed. Co-requisite: CHEM 210L. (3, 3T+0L)

210L INTEGRATED ORGANIC & BIOCHEMISTRY LAB A Co-requisite of CHEM 210, this course provides experiences with the physical properties and laboratory synthesis of organic compounds. Includes exercises in the preparation, separation, isolation, and characterization of biologically derived molecules. (1, 0T+1L)

221 QUANTITATIVE AND ANALYTICAL CHEMISTRY Basic theory and techniques of quantitative chemical analysis. Concepts of sampling and separation techniques with an emphasis on precision measurements and statistical analysis in volumetric and gravimetric procedures. Co-requisite: CHEM 221L. Prerequisites: CHEM 122L and MATH 145. (Spring) (2, 2T+0L)

221L QUANTITATIVE & ANALYTICAL CHEMISTRY LAB Laboratory experiments involving instrumentation emphasis on sampling, statistical, measurement, and separation techniques. You will focus on proper documentation and data analysis. Co-requisite: CHEM 221. Prerequisites: CHEM 121 and 121L. (Spring) (2, 0T+2L)

260 STANDARD LABORATORY PROTOCOLS Presents the theory and practice of basic laboratory protocols and analyses as performed in research and/or industrial settings. Emphasizes safety, detailed and accurate record keeping, data handling, and report writing. Beneficial to all majors in Biology, Materials Science, Environmental Management, and other applied science curricula. Prerequisites: CHEM 122 and 122L. (4, 4T+0L)

CIVIL ENGINEERING (CE)

233 STATICS Statics of particles and rigid bodies in two and three dimensions using vector algebra as an analytical tool. Includes centroids, loads, trusses, frames, and friction. Prerequisite: MATH 162. (3, 3T+0S)

COMMUNICATIONS (COMM)

111 BUSINESS AND PROFESSIONAL COMMUNICATIONS STUDIES Practical introduction to the principles and skills needed to communicate effectively for on-the-job success in business and other professional settings. Emphasis is on developing, organizing, and supporting ideas at interpersonal business encounters, groups, and meetings, and platform presentations. Prerequisite: ENG 111. (3, 3T+0S)

COMPUTER SCIENCE (CS)

Unless otherwise noted, these courses are offered each term.

102 COMPUTER LITERACY Overview of computer hardware, software, and the Windows or Linux environment. You will cover basic computer operating principles, file management, the using the Internet, along with an introduction to word

processors, spreadsheets, and database programs. (3, 3T+0S)

103 INTRODUCTION TO COMPUTER APPLICATIONS I

An introduction to software programs commonly used for personal or professional use. May be repeated for credit. (1, 1T+0S)

104 INTRODUCTION TO COMPUTER APPLICATIONS II

An introduction to software programs commonly used for personal or professional use. May be repeated for credit. (1, 1T+0S)

105 INTRODUCTION TO DATABASES Introduction to popular database software using the Microsoft Access environment. Covers basic database table, query, form, and report creation and management. Pre-requisite: CS 102. (3, 3T+0S)

106 INTRODUCTION TO THE INTERNET Fundamentals of the Internet, including the use of browsers for searches, menus, setting up preferences, bookmarks, and downloading files from the World Wide Web network. Introduction to how to prepare a home-page and linking to other existing web-pages. Also includes an introduction to e-mail. (1, 1T+0S)

132 INTRODUCTION TO PROGRAMMING Introduction to computer science using HTML and JavaScript. Covers the basics of web page creation using HTML, with an introduction to programming. Programming topics will include control of flow in a program, functions, and variables. This course is suitable for non-CS majors or those seeking an introduction to CS. Prerequisite: MATH 102N and CS 102 (3, 2T+1S)

142 COMPUTER SCIENCE I Program analysis and design using the Java language. Introduces the fundamentals of program design, basic programming techniques, and concepts of object-oriented programming. Prerequisites: CS 132. Co-requisite: MATH 130. (3, 2T+1S)

150 UNIX Introduction to the UNIX operating system using GNU/Linux; includes operating system basics and the operating system installation and configuration on a workstation. [Spring] (3, 2T+1S)

164 SCRIPTING LANGUAGES Introduces scripting languages and their uses, including shell scripts and Perl. Pre-requisite: CS 132. [Fall] (3, 2T+1S)

167 C PROGRAMING You will learn programming in the C Language. Pre-requisite: CS 132. [Fall] (3, 2T+1S)

170 MATHEMATICS FOR COMPUTER SCIENCE Introduces discrete mathematics: the logic of predicates, compound and quantified statements, application to digital logic circuits and computer arithmetic, programming logic, elementary number theory, and methods of proof, mathematical induction, algorithms, combinatorial reasoning, and the binomial theorem. Pre-requisite: MATH 130. [Spring] (3, 3T+0S)

200 C++ PROGRAMMING Covers programming using the C++ language, with emphasis on problem solving. Prerequisite:

site: CS 142. [Spring] (3, 2T+1S)

210 DATABASE DESIGN AND PROGRAMMING Database theory, design, and programming using Structured Query Language (SQL). Covers database definition and normalization, programming using the industry standard SQL, and Server operational considerations. Pre-requisite: CS 132. [Fall] (3, 2T+1S)

220 ADVANCED JAVA A graphical approach to object-oriented programming, continuing the exploration of classes, methods, encapsulation, and inheritance introduced in CS 142. Also covers event-driven programming. Pre-requisite: CS 142 and MATH 130. [Offered as needed] (3, 2T+1S)

242 COMPUTER SCIENCE II A continuation of CS 142, this course introduces algorithms and data structures, including trees, stacks, queues, and linked lists. Also covers basic operations using these structures, such as sorting and searching. Pre-requisites: CS 142 and CS 170. [Fall] (3, 2T+1S)

280 GUI/WINDOWS PROGRAMMING Introduction to event-driven programming and graphical user interfaces (GUI) on a windows platform. The class is taught using TCL/TK or an object-oriented approach using a development environment, such as Visual Studio with VisualBasic. Pre-requisite: CS 132. [Spring] (3, 2T+1S)

295 COMPUTER SCIENCE PROJECT Individual project using tools and skills developed in previous courses. You will define your own project and its goals. May be repeated for credit to a maximum of 3 credits. Pre-requisite: Three 200-level CS/CT courses, one of which may be taken concurrently. (Cross-listed as CT 295) (3, 3T+0S)

COMPUTER TECHNOLOGY (CT)

Unless otherwise noted, these courses are offered each term.

115 INTRODUCTION TO WEB TECHNOLOGY An overview of the basic WWW technology and disciplines, including Internet services and the programming and technical skills required to implement them. The core material will be supplemented with current topics, trends, and issues. Pre-requisites: CS 102, ENG 109N, and MATH 102N. [Fall] (2, 2T+0S)

120 NETWORKING ESSENTIALS Discusses the technologies and infrastructure necessary to create local area and wide area networks; covers ethernet standards, wireless principles, switches, and routers. Pre- or Co-requisites: ECET 130 and 130L. (3, 2T+1S)

125 TCP/IP Introduction to local and internet networking using TCP/IP, covering basic TCP/IP protocols, utilities, and services, such as telnet, ftp, ping, name resolution, and mail transport. Pre- or Co-requisite: CT 120. [Spring] (3, 3T+ 0S)

135 WEB PAGE ANIMATION Animation for web pages using Macromedia's Flash or other industry standard software. Pre-requisites: CS 132 and MATH 130. [Fall] (2, 1T+1S)

140 eCOMMERCE Techniques, problems, and solutions in eCommerce. Covers topics such as marketing plan considerations, online catalogs, payment methods, security, outsourcing options, and the technologies behind eCommerce web sites. (Cross-listed as BA 140) [Spring] (3, 3T+0S)

175 INTERNET PUBLICATIONS I Introduction to the production of web page design and publication on the Internet. (Cross-listed as VC 175.) [Spring] (4, 3T+1S)

200 ADVANCED WEB PAGE TECHNIQUES Advanced techniques in page development, including dynamic HTML, XML, cascading style sheets. Pre-requisite: CT/VC 175. [Spring] (3, 2T+1S)

205 BUILDING DYNAMIC WEBSITES Theory and practice of building web application solutions using html, http, database servers, web servers, and server-side scripting. You will use open source and/or proprietary software to complete a final project with a database back-end and a web site front-end. Pre-requisites: CS 132 and CT 115. [Fall] (3, 2T+1S)

215 SERVER SOFTWARE Explores server software, including web, mail, and name resolution servers, with an emphasis on selection of software based on any project's specific needs. You will set up several servers during class.. Pre-requisites: CT 120. [Spring] (3, 2T+1S)

220 NETWORKING WITH MICROSOFT An overview of Microsoft's networking architecture, services, and features, covering hardware requirements, software installation and administration. Topics include protocols, structures, security models, and printing. Pre-requisite: CT 125. [Fall] (3, 2T+1S)

225 NOVELL SYSTEMS Introduction to local area networks using Novell Netware, covering installation and configuration of a Netware server and clients (workstations). Pre-requisite: CT 120. [Offered as needed] (3, 2T+1S)

230 NETWORK SECURITY You will be introduced to network security, including security practices and software tools. Some of the topics you will cover will include secure software design and installation, malware including viruses and worms, and intrusion prevention. Pre-requisites: CT 120 or CT 125, and CS 150. [Spring] (3, 2T+1L)

290 WEB TEAM PROJECT Working with a client identified by the instructor, you will work as part of a team to design, build, and deliver a web-based project. Because both technical and social skills will be exercised, this course will prepare you for internship or employment. Pre-requisite: Three 200-level CS/CT courses, one of which may be taken concurrently. [Spring] (3, 3T+0S)

295 COMPUTER TECHNOLOGY PROJECT Individual project using tools and skills developed in previous courses. You will define your own project and its goals. May be repeated for credit to a maximum of 3 credits. Pre-requisite: Three 200-level CS/CT courses, one of which may be taken concurrently. (Cross-listed as CS 295) (3, 3T+0S)

CONSTRUCTION TRADES (CONS)

150 CONTRACTOR LICENSING REQUIREMENTS Licensing Act and requirements of the New Mexico Construction Industries Division; registering a business with the state and federal governments; financial responsibility determinants; bonding; insurance; workmen's compensation requirements; preparation for the state business and law examinations for contractors pursuing EE-98, MM-98, GB-98, and sub-categories. (2, 2T+0)

151 INSPECTION PROCESS Permit requirements, code enforcement, inspections, certificates of approval, and fees. (1, 1T+0S)

152 LABOR LAWS AND SAFETY Laws dealing with: Labor Standards, Fair Labor Standards, Worker's Compensation, Child Labor, Employment Security, and subcontractor status. Safety issues: Federal OSHA regulations, hazardous material handling, disposal of hazardous materials, New Mexico and federal reporting requirements. (2, 2T+0S)

153 CONSTRUCTION CONTRACTOR TAXATION Federal and New Mexico tax laws, employee withholding, unemployment insurance, FICA, NM Gross Receipts Tax, Calendar dates for filing CRS-1, 940, 941, NM U/I, W-4, W-3, 1099, 10096, and others. You will receive ample practice in filling out forms and using tables, formulas, and software to calculate tax liabilities. Covers the differences in proprietorship, partnership, and corporate requirements and reports; records keeping and bookkeeping requirements. (3, 3T+0S)

155 CONSTRUCTION MATH & BLUEPRINT READING Lumber and materials dimensions; scaling from plans; materials take-off; estimating costs; interpreting construction drawings, specifications, and blueprints; floor plans, elevations, sections, symbols, and notations. (3, 3T+0S)

156 UNIFORM BUILDING CODE As most of New Mexico is governed by the Uniform Building Code (UBC), special emphasis is given to regulations concerning dwellings. Commercial buildings will also be covered. Introduces the use of CodeCheck software. (2, 2T+0S)

157 SITE DEVELOPMENT AND LAYOUT Planning the layout of a site with regard for codes, covenants, planning and zoning regulations, utility easements, and other requirements; locating homes, outbuildings, wells, septic systems, utilities, and roads using the instruments and measuring devices normally associated with site preparation. Classes will be conducted on-and-off campus. (2, 1T+1S)

158 FOUNDATION THEORY AND CONSTRUCTION Site layout; footing and stem wall construction; flat concrete work; insulation systems; monolithic floor/foundations, foam form, and other alternative systems. Provides theory, laboratory instruction, and hands-on activities. Classes will be conducted on-and-off campus. (2, 1T+1S)

159 MASONRY THEORY AND CONSTRUCTION Theory and practice of concrete, stucco, stone, brick, and block ma-

sonry techniques. Classes will be conducted on-and-off campus. (3, 1T+2S)

COSMETOLOGY (COSM)

Pre-requisite for any Cosmetology course is completion of ENG 108N with a grade of C or better, or adequate score on the Course Placement Evaluation instrument.

110 COSMETOLOGY I Theoretical training in hygiene, physiology, anatomy, bacteriology, sterilization, sanitation, chemistry, rules and regulations of the State Board of Cosmetology. Co-requisite: COSM 110L. (5, 5T+0S)

110L COSMETOLOGY I LAB Practical applications on mannequins covering all areas of cosmetology, with the exception of manicuring, pedicuring, and sculptured nails; introduction to and practice in salon management techniques. Co-requisite: COSM 110. (9, 0T+9S)

120 COSMETOLOGY II Continuation of theoretical training including state laws, hair coloring, thermal applications, hair relaxing, hair pressing, cutting and blow dry styling. Prerequisite: COSM 110; Co-requisite: COSM 120L. (5, 5T+0S)

120L COSMETOLOGY II LAB Practical applications on patrons: haircutting, hair styling, chemical treatments and thermal applications. Co-requisite: COSM 120. (9, 0T+9S)

160L MANICURING/PEDI-CURING Theoretical and clinical training in all aspects of acrylic nails, manicuring, and pedicuring in preparation for you to take the state licensing examination. (Fall and Spring only) (12, 3T+9S)

210 COSMETOLOGY III Continuation of theoretical training including state laws, hair coloring, thermal applications, hair relaxing, hair pressing, cutting and blow dry styling. Prerequisite: COSM 120; Co-requisite: COSM 210L. (5, 5T+0S)

210L COSMETOLOGY III LAB Practical applications on patrons: haircutting, hair styling, chemical treatments and thermal applications. Co-requisite: COSM 210. (9, 0T+9S)

270L ESTHETICIAN Provides the theoretical and clinical training in all aspects of skin care in preparation for you to take the state licensing examination. (Fall and Spring only) (14, 5T+9S)

280L COSMETOLOGY PRACTICE Practical application training in hair coloring, chemical treatments, haircutting, thermal applications, facials, makeup, pedicures, and state laws. You will enroll in this course in order to finish your 1,600 clock-hour program or any other program, or for cross-over or refresher training. You will enroll in one credit hour for each 30 clock hours of training needed. (Variable, 1-9, 0T+1-9S)

290 COSMETOLOGY INSTRUCTOR THEORY I You will gain an understanding of and skills in developing lesson plans, professional conduct, teaching methods, testing measurements, clinic supervision, and classroom management. Pre-requisite: must be a cosmetologist licensed in New Mexico. (5, 5T+0S)

290L COSMETOLOGY INSTRUCTOR INTERNSHIP I You will practice how to prepare lesson plans, develop your teaching methodology, use teaching aids, develop tests, and do records keeping. Pre-requisite: must be a cosmetologist licensed in New Mexico. (9, 0T+9S)

291 COSMETOLOGY INSTRUCTOR THEORY II You will gain an understanding in development of lesson plans, in-depth notes, preparation of teaching materials for supervised teaching experience; test development, lecture preparation, demonstration and audio-visual presentations. (5, 5T+0S)

291L COSMETOLOGY INSTRUCTOR INTERNSHIP II You will practice teaching, theory and laboratory, under the direction of a licensed instructor. (9, 0T+9S)

CRIMINAL JUSTICE (CJ)

Note: Each course in this department bears a Pre-requisite of ENG 109N.

111 INTRODUCTION TO CRIMINAL JUSTICE You will study the agencies and processes involved in the criminal justice system, including the legislature, police, prosecutor, courts, corrections, industrial security, personnel security, and loss prevention. (4, 4T+0S)

132 INTRODUCTION TO CRIMINOLOGY Introduces you to the nature and extent of crime through an interdisciplinary perspective; theories focus on attempt to explain criminality and delinquency. (3, 3T+0S)

201 CRIMINAL LAW Covers legal definitions of crime and defense; purposes and functions of substantive criminal law; historical foundations; limits of the criminal law; focused approach through case study. (3, 3T+0S)

202 COURTS AND CRIMINAL JUSTICE You will acquire a basic knowledge of the history, organization, and dynamics of the different levels of court systems and their relation to the other entities that include the criminal justice system. You will examine the importance and impact of the courts upon society. Pre-requisite: ENG 109N. (3, 3T+0S)

211 INTRODUCTION TO LAW ENFORCEMENT Covers the social and historical settings of law enforcement; police role and career; police discretion; values and culture; organization and control. (3, 3T+0S)

221 CRIMINAL JUSTICE COMMUNITY RELATIONS You will study problems with citizen relations; treatment of victims, witnesses and jurors; citizen involvement in the criminal justice process; community resources related to criminal justice programming. (3, 3T+0S)

224 INTRODUCTION TO CORRECTIONS You will study the history, philosophy, legal issues, research, and models of the correction system and the impact of the system on prisoners and society, including the rights of the convicted criminal, the corrections process, the correctional system, community corrections and other alternative sentencing programs. Pre-requisite: ENG 109N. (3, 3T+0S)

228 FORENSIC INVESTIGATIONS Covers the fundamentals of crime scenes and criminal investigations, with an emphasis on procedural techniques and technological advancements and how these relate to the collection and documentation of the physical evidence present. Places emphasis on various types of crimes and physical evidence, and how to better assure a more competent successful case closure and courtroom presentation. (3, 3T+0S)

231 CRIMINAL INVESTIGATIONS Fundamentals of investigations: crime scene, search and recording; collection and preservation of physical evidence, modus operandi, scientific aids, sources of information, interviewing and interrogation, follow-up and case preparation, legal search and ,types and degrees of evidence, and rules governing admissibility. Pre-requisite: CJ 201 or its equivalent. (3, 3T+0S)

233 JUVENILE JUSTICE PROCEDURES Overview of the causes of juvenile delinquency and philosophy of the juvenile court. In depth instruction in practice of the Juvenile Court, police handling of juveniles, detention and processing, juvenile case disposition, and major juvenile crime problems. (3, 3T+0S)

251 LAW ENFORCEMENT MANAGEMENT You will study problems in organizational allocation of resources, information systems, determinants of police policy; principles of organizational functions, structures, processes, and behaviors. (3, 3T+0S)

DANCE (DANC)

Any DANC activity course may be used to satisfy graduation requirements for Health, Physical Education and Recreation.

126 MODERN DANCE Fundamentals of movement and its application to aesthetic communication. (2, 1T+1S)

149 BALLET I Fundamental work in vocabulary, techniques, and styles of ballet for the adult beginner. (2, 1T+1S)

150 HI-HOP AND JAZZ I You will explore the music and culture of Hip-Hop, focusing on dance techniques and styles of African dance, jazz, and hp-hop. As you learn the hip-hop dance movement, you will strengthen your ability to choreograph and execute a group performance. May be repeated for credit. (2, 1T+1S)

169 FLAMENCO DANCE I Develops the fundamentals of techniques and styles of Flamenco Dancing. (3, 1T+2S)

172 FLAMENCO TECHNIQUE I You will focus on flamenco rhythm, technique, and the structure of flamenco dance. Includes an introduction to the rich culture of flamenco. (3, 1T+2S)

211 CHOREOGRAPHY Selection of dance materials and sound accompaniment for solo and group composition. Co-requisite: DANC 212. (3, 1+2S)

212 DANCE IMPROVISATION You will discover the authen-

tic self in movement; developing skills in group interaction, including the first steps in the use of structure and form in dance composition. Prerequisite: DANC 126; Co-requisite: DANC 211. (2, 1T+1S)

214 KINESIOLOGY Practical applications of concepts and theories of kinesiology, in which you will cover the pathomechanics of injury, injury management, injury prevention, and the kinesiology of ballet, flamenco, and modern dance. Prerequisite: DANC 212 with a grade of "C" or better. (3, 1T+2S)

222 FLAMENCO RHYTHMIC FUNDAMENTALS You will be introduced to rhythms and meters common in flamenco dance. Includes dancing, percussion playing, singing, and recognition of audio rhythms. (2, 1T+1S)

240 DANCE APPRECIATION You will study forms of dance technique and performance while also exploring dance rituals within different cultures. (3, 3+0S)

250 HIP-HOP AND JAZZ II In this continuation of DANC 150, you will be exposed to more advanced dance movements and choreography for group performances. Pre-requisite: DANC 150. May be repeated for credit. (2, 1T+1S)

269 FLAMENCO DANCE II Continues DANC 169, adding the development of techniques and styles at the intermediate level. Prerequisite: DANC 169. (3, 1T+2S)

292 REPERTORY Professional training in the learning and performing of a new or staged choreography. Co-requisite: DANC 169. (1, 0T+1S)

DRAFTING (DRFT)

100 INTRODUCTION TO DRAFTING You will develop basic manual drafting skills using traditional manual drafting tools. Includes the application of lettering, scales, line weight, 3 view orthographic, section and isometric drawing skills toward mechanical, architectural, and surveying drawing projects. (3, 2T+1S)

101 RESIDENTIAL CAD I Introduction to residential computer-aided drafting, emphasizing the preparation of residential working drawings using AutoCAD. Pre-requisites: DRFT 100 and DRFT 208; Co-requisites: MATH 100N and ENG 108N. (4, 1T+3S)

102 MECHANICAL ENGINEERING CAD I Introduction to engineering graphics using AutoCAD. Includes 2 and 3 view orthographic projection, geometric construction and dimensioning. Pre-requisites: DRFT 100 and DRFT 208; Co-requisites: MATH 100N and ENG 108N. (4, 1T+3S)

103 SURVEYING AND CAD MAPPING I Introduces you to surveying using the transit, theodolite, level, etc. You will then convert the data you collected in the field to site plans/maps using AutoCad. Prerequisites: DRFT 100 and DRFT 208; Co-requisite: MATH 102N and ENG 108N. (4, 1T+3S)

107 GLOBAL POSITIONING SYSTEM GPS basics, including use of receivers, data collection, and differential correction. Pre-requisite: Familiarity with mapping. (1, 1T+0S)

108 AUTOCAD BASICS Basics of computer aided drafting using AutoCAD software. (1, 1+0S)

109 ARCVIEW GIS BASICS I Basics of map production using ArcView GIS software. Pre-requisite: must be computer literate. (1, 1T+0S)

110 GIS/GPS Introduction to geographical information systems (GIS) using ArcView and the Global Positioning System (GPS) using hand-held GPS receivers. Prerequisites: CS 102 or equivalent experience. (3, 2T+1S)

111 COMMERCIAL BUILDING CAD Introduction to commercial building computer-aided drafting, emphasizing the preparation of working drawings using AutoCAD and Architectural Desktop. Pre-requisites: DRFT 101 and DRFT 208, and MATH 100N and ENG 108N. (4, 1T+3S)

112 MECHANICAL ENGINEERING CAD II Continues DRFT 102 using AutoCAD including sectional, auxiliary, and isometric/3D views, and advanced dimensioning. Pre-requisites: DRFT 102, MATH 100N, and ENG 108N. (4, 1T+3S)

113 SURVEYING AND CAD MAPPING II Continues DRFT 103 using more advanced surveying and CAD mapping. Pre-requisite: DRFT 103 and MATH 102N. (4, 1T+3S)

119 ARCVIEW GIS BASICS II Continuation of DRFT 109, ArcVIEW GIS Basics I, focusing on more advanced GIS map production. Pre-requisite: DRFT 109 or permission of instructor. (1, 1T+0S)

122 GEOMETRIC DIMENSIONING AND TOLERANCING Principles and practices of geometric dimensioning and tolerancing. Pre-requisite: DRFT 100 or 208, or permission of instructor. (3, 3T+0S)

123 SURVEYING BASICS Basics of surveying theory and collection of field data using levels, transits and theodolites. Pre-requisite: MATH 102N or permission of the instructor. (2, 1T+1S)

199 HOW TO GET A JOB You will develop resumes, portfolios, job search strategies, and interviewing techniques. Pre-requisite: ENG 109N. (1, 1T+0S)

201 RESIDENTIAL CAD II You will design a residence using AutoCAD, with emphasis on the preparation of the design and working drawings. Pre-requisites: DRFT 101 and 208, and MATH 100N and ENG 109N. (4, 1T+3S)

202 MECHANICAL ENGINEERING CAD III You will design and draft, using AutoCAD, interrelated parts that make up an assembly or prototype product. Pre-requisites: DRFT 112. (4, 1T+3S)

203 CIVIL ENGINEERING CAD You will draft various civil engineering, highway projects, including plan and profile views, cross section and detailing. Pre-requisite: DRFT 113. (4, 1T+3S)

206 BUILDING CONSTRUCTION Introduces you to building construction, including building codes, construction sequencing, structural systems, construction methods, and estimating. Pre-requisites: MATH 100N and ENG 108N. (3, 3T+0S)

207 CONSTRUCTION MATERIALS AND ESTIMATING Introduces you to building materials and the preparation of a building project estimate. Pre-requisites: MATH 100N and ENG 108N. (3, 3T+0S)

208 COMPUTER-AIDED DRAFTING I Introduces you to 2D CAD using AutoCAD software. Uses drawing, modifying, geometric construction, dimensioning and symbol functions to draft several projects. Co-requisites: MATH 100N and ENG 108N. [This course articulates with CAD courses from area high schools.] (3, 2T+1S)

209 COMPUTER-AIDED DRAFTING II Introduces you to 3D Modeling and utilization of the more advanced features of the AutoCAD software. Pre-requisites: DRFT 208. (3, 2T+1S)

215 COMPUTER-AIDED MACHINING I Introduces you to CAM using the MasterCAM software. Includes part geometry, toolpath creation, and post processing to a CNC mill or lathe. Pre-requisite: ENG 108N and MATH 100N, or permission of instructor. (3, 2T+1S)

216 COMPUTER-AIDED MACHINING II Advanced CAM using the MasterCAM software, including multi-tool programming and 3D toolpaths. Pre-requisite: DRFT/MT 215. (3, 2T+1S)

238 3-D MECHANICAL MODELING You will develop mechanical parts, assemblies and working drawings, using 3-D models created with a 3D parametric modeling, such ProEngineering software. Pre-requisites: DRFT 209 or MT 130, or permission of instructor. (2, 2T+0S)

299 COOPERATIVE WORK EXPERIENCE You will be employed in an approved work-related experience following individualized on-the-job learning objectives. 48 work hours are required to earn one semester hour of credit. You will be responsible for finding employment and you will be evaluated jointly by program faculty and employer on a CR/NC basis. Pre-requisite: permission of instructor. (2-5)

EARLY CHILDHOOD EDUCATION (ECE)

Note: Unless shown otherwise, each course in this department has a minimum Pre- or Co-requisite of ENG 109N.

202 CHILD DEVELOPMENT This course focuses on the developmental stages, processes, theories of development and learning, and on their implications for developmentally appropriate practice. (3, 3T+0S)

218 HEALTH, SAFETY, AND NUTRITION Focuses on the relationship and interaction of the physical, social, psychological, and cultural factors that influence the healthy development of the child. You will learn to promote good health through educational experiences, appraise and access health conditions, and create and maintain a safe early childhood environment. (3, 3T+0S)

219 INTRODUCTION TO EARLY CHILDHOOD EDUCATION Introduction to the historical, philosophical, and social influences of early childhood education. You will investigate professional careers and opportunities, a variety of programs, and current trends and issues in early childhood education. (3, 3T+0S)

221 METHODS AND MATERIALS FOR EARLY CHILDHOOD EDUCATION Offers methods and activities for incorporating expressive arts (movement, music, creative arts, and drama) into the early childhood curriculum. Pre-requisites: (3, 3T+0S)

224 LEARNING ENVIRONMENTS Examines the social and physical environment within early childhood settings as an interactive and ongoing process. You will develop skills in implementing stimulating, secure, and enjoyable learning environments that encourage play, exploration, and cooperation. (3, 3T+0S)

226 PARENT/COMMUNITY INVOLVEMENT IN THE SCHOOL SETTING Focus on establishing collaborative relationships among families, communities and schools; explore the issues of diversity as they apply to family, community, culture, language and children with special needs. (3, 3T+0S)

234 FIELD-BASED PRACTICUM I Provides you with a supervised field experience with young children, hands-on training and interaction with children and teachers in such programs as Head Start, child care, kindergarten, elementary grades, family child care homes, etc. You will be required to spend 64 hours of observations at different locations, in addition to regular class meeting with the teacher. (4, 1T+3L)

235 STUDENT TEACHING: INFANT/TODDLER For those who plan to work in programs that serve children ages birth to two years, such as child care, family child care, and home visitors. Topics include setting up safe, healthy, multicultural learning environments; advancing children's physical and intellectual family and community communication and collaboration; program management and professionalism. Requires 64 contact hours with children, plus regularly scheduled seminars. (3, 3T+0S)

236 STUDENT TEACHING: PRESCHOOL For those who plan to work in programs that serve children ages three to six years, such as Head Start, child care, kindergarten, family child care, and home visitors. Topics include setting up safe, healthy, multicultural learning environments; advancing children's physical and intellectual development; supporting children's social and emotional development; intercultural family and community communication and collaboration; program management and professionalism. Requires 64 contact hours with children, plus regularly scheduled seminars. (3, 3T+0S)

237 STUDENT TEACHING: ELEMENTARY SCHOOL For those who plan to work in programs that serve children ages five to eight years. Topics include setting up safe, healthy, multicultural learning environments; advancing children's physical and intellectual development; supporting children's social and emotional development; intercultural family and community communication and collaboration; program management and professionalism. Requires 64 contact hours with children, plus regularly scheduled seminars. (3, 3T+0S)

285 CHILD GUIDANCE Offers classroom management strategies and developmentally appropriate methods for helping children to become competent, independent, and cooperative learners in a group setting. (3, 3T+0S)

ECONOMICS (ECON)

200 MACROECONOMICS Introduction to the fundamental principles underlying the operation of a market economy on a global scale, mainly with problems of unemployment and inflation. Also discusses related problems of income redistribution and international trade and exchange rates, and economic growth and development. (3, 3T+0S)

201 MICROECONOMICS Focuses on the problems specific to a household, firm, or industry, rather than those of a national or worldwide scale. Topics of concern are household and firm behavior, demand and supply, market structures, labor, and capital. Concentrates on the economics of the consumer, the business firm, the distribution of income, and the efficient allocation of resources. (3, 3T+0S)

EDUCATION (ED)

201 FOUNDATIONS OF EDUCATION This course introduces you to the basics of the teaching profession. It includes societal expectations of teachers, social problems which impact students, essential knowledge needed for teaching, recent reforms in education, historical perspectives on education, the role of schools in today's society, school governance, and the legal and ethical issues in education. You will be expected to participate in online activities and submit working using technology. Further, you will be expected to begin to articulate your philosophy of education. Pre-requisites: ENG 111 (3, 3T+ 0S)

205 INTEGRATING TECHNOLOGY IN THE K-8 CLASSROOM This course provides an overview of technology as a way of enhancing instruction and the assessment of student learning. You will examine and evaluate a variety of instructional software and you will become familiar with the Internet as a research tool. You will have extensive lab experiences with software applications and with other teaching and learning technologies. In addition, you will develop distance education and web-enhanced instructional skills and knowledge. (2, 1T+1S)

213 FIELD EXPERIENCE You will do initial observations of classroom environments and determinations of what classroom teacher do. You will combine field observations with

regularly scheduled on-campus seminar. Pre-requisite: ENG 111, or permission of instructor. (1, 0T+1L)

220 EDUCATIONAL PSYCHOLOGY Introduces you to psychological principles as they apply to teaching and learning. You will examine the relationships between theory, research, and practice in learning, memory, child development, motivation, and educational assessment for the school setting. You will address cognitive, linguistic, affective, and social development, with particular attention to the K-8 learner. Emphasis is on the integration of theory and practice, with numerous classroom applications of psychological theories and principles. Pre-requisite: ED 201 and PSY 105. (3, 3T+0S)

226 STRATEGIES FOR SUCCESSFUL CLASSROOMS You will develop a rationale and plan for creating classroom procedures, routines, and structures that lead to increased student learning. You will research and also be presented with learning theories and practices that result in the creation of learning environments which are safe physically and psychologically. You will understand the principles involved in motivating students and overcoming resistance to learning. Pre-requisite: ED 201. (2, 2T+0S).

311 PRACTICUM I This course is designed to supplement ED 226. As assigned by the instructor, you will be engaged in specific responsibilities over a sustained period of time in field and/or lab experiences. Pre-requisite: ED 201; Co-requisite: ED 226. Co-requisite: ED 226 and ED 322. (Spring) (1, 0T+1S)

313 SCIENCE AND MATH FOR EDUCATORS I This course is aligned to the following concepts and processes: systems, order and organization, evidence, models and explanation; constancy, change, and measurement; evolution and equilibrium, form and function. You will be prepared to understand the development of scientific inquiry and scientific thinking in grades K-4 and to teach the National Science Education Standard A (Science as Inquiry), Standard B (Physical Science), Standard C (Life Science), Standard D (Earth and Space Science), Standard E (Science and Technology), Standard F (Science in Personal and Social Perspectives), and Standard G (History and Nature of Science). As assigned by your instructor, you will be engaged in specific responsibilities over a sustained period of time in field and/or lab practice. Pre-requisite: ED 201 and MATH 130, and a 4-cr science course w/lab. (Fall) (3, 3T+0S)

322 MATH FOR EDUCATORS I This course is designed to prepare you to teach the National Council of Teachers of Mathematics Standard 1, K-8, Numbers and Operations, and Standard 2, K-8 Algebra, integrated with Standards 6, 7, 8, 9, and 10 Problem Solving, Reasoning and Proof, Communications, Connections, and Representations. You will be assessed based on performance measures designed to demonstrate mastery of mathematical concepts. As assigned by your instructor, you will be engaged in specific responsibilities over a sustained period of time in field and/or lab practice. Pre-requisite: ED 201 and MATH 130. (Fall) (3, 3T+0S)

331 ENGLISH AS A SECOND LANGUAGE This course provides you with a study of English as a second language,

conveying methods and procedures of teaching English to children and adults for whom English is not the native tongue. You will be introduced to second-language acquisition theories and to the basic elements of the sound system, focusing on research-based strategies for English Language Learners. Pre-requisite: ENG 111. (3, 3T+0S)

404 MUSIC AND ART ACROSS THE K-8 CURRICULUM You will learn how rhythm, color, design, texture, and elements of composition in various media can be used across the elementary curriculum to enhance learning and self-expression. You will correlate the application of theory with individual small and large group projects. (2, 2T+0S)

411 PRACTICUM II Designed to supplement the Teaching and Diagnosis of Reading (ED 470). As assigned by the instructor, you will be engaged in specific responsibilities over a sustained period of time in field and/or lab experiences. Co-requisite: ED 470. (1, 0T+1S)

420 CREATIVE MOVEMENT FOR THE CLASSROOM You will understand and appreciate the natural tendency of the human body to express feelings, thoughts, and sensations through moving and making sound. Creative Movement as a discipline encourages exploration and discovery of this natural movement impulse. Through this, you will develop learning skills, social skills, self-esteem, and self-expression leading to improved problem solving on all levels. You will correlate course objectives to individual and to small and large group activities. (2, 2T+0S)

422 MATH FOR EDUCATORS II This course is designed to prepare you to teach the National Council of Teachers of Mathematics Standard 3, K-8, Geometry, and Standard 4, K-8, Measurement. You will also address NCTM Standard 5, K-8, Data Analysis and Probability, integrated with NM Standards 6, 7, 8, 9, and 10. Problem Solving, Reasoning and Proof, Communications, Connections and Representations. You will be assessed based on performance measures designed to demonstrate mastery of mathematical concepts. Pre-requisite: ED 201 and MATH 130. (Spring). (3, 3T+0S)

423 SCIENCE AND MATH FOR EDUCATORS II This course is aligned to the following concepts and processes: systems, order and organization, evidence, models and explanation; constancy, change, and measurement; evolution and equilibrium, form and function. You will be prepared to understand the development of scientific inquiry and scientific thinking in grades 5-8, and to teach the National Science Education Standard A (Science as Inquiry), Standard B (Physical Science), Standard C (Life Science), Standard D (Earth and Space Science), Standard E (Science and Technology), Standard F (Science in Personal and Social Perspectives), and Standard G (History and Nature of Science). Pre-requisite: ED 201, MATH 130, and a 4-cr science course s/lab. (Spring) (3, 3T+0S)

450 PEDAGOGY AND LEARNING In this course, you will review the social, emotional, physical, and cognitive development of children from birth through adolescence, and it critically examines researched methods and theories, en-

abling you to become an effective practitioner. You will also explore brain-based learning, multi-sensory instruction, developmentally appropriate practice, multiple intelligences, and learning style. Pre-requisite: ED 201 and ENG 112. (Spring) (3, 3T+0S)

460 READING AND WRITING ACROSS THE CURRICULUM (ELEM.) This course provides you with an overview of literacy and language development, and focuses on the development and implementation of an integrated curriculum approach at the elementary level. You will see how the emphasis of the integration of state standards and benchmarks is through a literary approach. Pre-requisite: ED 201 and ENG 112. (3, 3T+0S)

470 TEACHING AND DIAGNOSIS OF READING This course provides you with a conceptual framework for understanding the growth of language development throughout the elementary years. You will be introduced to instructional strategies to build reading, writing, and speaking abilities. The course will address literacy differences through a literature-based approach to instruction, focusing on cognitive, affective, social, and cultural factors that created differences in literacy abilities. State standards and benchmarks are incorporated into this course. You will be required to do field work. Pre-requisite: ED 201 and ENG 112. Co-requisite: ED 411. (3, 3T+0S)

479 STUDENT TEACHING This is a full-time assignment during the semester, in conjunction with ED 480 (Student Teaching Seminar). As the student teacher, you will follow the daily schedule of the assigned grade, assume regular faculty and out-of-classroom duties, participate in faculty meetings, PTA/PTO meetings, and other appropriate school-community activities. Your final placement in a school is decided by the Teacher Education Department, contingent upon your being acceptable to the school in which you will do your teaching. Pre-requisite: permission only. You must have already passed the New Mexico Content Knowledge Assessment of Elementary Education examination; Co-requisite: ED 480. (5, 0T+5L)

480 STUDENT TEACHING SEMINAR This course provides you interaction with guided discussion on reflections of the student teaching experience. Supplemental requirements include outside readings based upon educational research and corresponding reflective papers. Pre-requisite: Department Permission. Co-requisite: ED 479. (1, 1T+0S)

481 DOSSIER PREPARATION This course provides experience with the Professional Development Dossier (PDD) required in the 3-Tiered Licensure Program for the New Mexico Public Education Department. You will address the conceptual framework in PDD preparation, which includes lesson descriptions, student work, video and audio recordings, photos, etc., with explanations of that data written by the contracted teacher. The course addresses the PED organization of five strands: Instruction, Student Learning, Professional Learning, Verification, and Evaluation. Pre-requisite: Department permission. (1, 1T+0S)

495 ASSESSMENT AND EVALUATION OF STUDENT LEARNING Explores the construction and utilization of

teacher-made and standardized tests. You will learn to gather data, report, and communicate assessment results to students, parents, and administrators in a variety of ways in an effort to meet diverse student needs. You will become familiar with the local school district's testing program, and will develop valid evaluation tools to measure student outcomes. Pre-requisite: ED 201 and ENG 112, and/or Department permission. **If you are taking this course as part of the BA-Elementary Education degree, you will enroll for 3 crs (3,3T+0S).** If you are taking this course as part of the Alternative Licensure Program, you will enroll for 2 crs (2,2T+0S).

EDUCATION - ALTERNATIVE LICENSURE PROGRAM (ED) Those enrolled in this program must achieve a minimum grade of 'B' for each of the following:

201 FOUNDATIONS OF EDUCATION This course introduces you to the basics of the teaching profession. It includes societal expectations of teachers, social problems which impact students, essential knowledge needed for teaching, recent reforms in education, historical perspectives on education, the role of schools in today's society, school governance, and the legal and ethical issues in education. You will be expected to participate in online activities and submit working using technology. Further, you will be expected to begin to articulate your philosophy of education. (3, 3T+0S)

450 PEDAGOGY AND HUMAN LEARNING This course reviews the social, emotional, physical, and cognitive development of children from birth through adolescence, and it critically examines researched methods and theories, enabling teachers to become effective practitioners. You will explore brain-based learning, multi-sensory instruction, developmentally appropriate practice, multiple intelligences, and learning style. (3, 3T+0S)

460 READING AND WRITING ACROSS THE CURRICULUM (ELEMENTARY) Provides an overview of literacy and language development, and focuses on the development and implementation of an integrated curriculum approach at the elementary level. Also emphasized is the integration of state standards and benchmarks through a literary approach (3, 3T+0S)

462 READING AND WRITING ACROSS THE CURRICULUM (SECONDARY) Provides an overview of literacy and language development, and focuses on the development and implementation of an integrated curriculum approach. at the secondary level. You will explore and practice alternative reading assessments which focus on teaching strategies incorporating state content and benchmarks. (3, 3T+0S)

470 TEACHING AND DIAGNOSIS OF READING (ELEMENTARY) This course provides a conceptual framework for understanding the growth of language development throughout the elementary years. The class provides instructional strategies to build reading, writing, and speaking abilities, and it addresses literacy differences through a literature-based approach to instruction. The class focuses on cognitive, affective, social, and cultural factors that created differences in lit-

eracy abilities. State standards and benchmarks are incorporated in this course. (3, 3T+0S)

475 METHODS AND MATERIALS IN SECONDARY EDUCATION This course explores the methods and materials appropriate in a secondary learning environment. You will learn teaching strategies, assessments, adaptive teaching for student learning styles, integration of content areas, and block scheduling. Alternatives to lecture are emphasized, with diversity of multiculturalism as a major focus. (3, 3T+0S)

493 THE INTEGRATED ELEMENTARY CLASSROOM Explores the historical and theoretical perspectives underlying and supporting the integrated curriculum approach to teaching and learning. You will explore practical approaches to thematic instruction and integration through content areas through incorporating state standards and benchmarks. Components include assessment methods, lesson plans, curriculum planning and development. (2, 2T+0S)

495 ASSESSMENT AND EVALUATION OF STUDENT LEARNING Explores that construction and utilization of teacher-made and standardized tests. You will learn to gather data, report, and communicate assessment results to students, parents, and administrators in a variety of ways in an effort to meet diverse student needs. You will become familiar with the local school district's testing program, and will develop valid evaluation tools to measure student outcomes. Pre-requisite: ED 201 If you are taking this course as part of the BA-Elementary Education degree, you will enroll for 3 crs (3,3T+0S). **If you are taking this course as part of the Alternative Licensure Program, you will enroll for 2 crs (2,2T+0S)**

496 SUPERVISED FIELD EXPERIENCE This course provides an interaction with other students in the field-experience setting. Guided discussions address classroom management, student learning, lesson plans, discipline, school/home communication, and professional development. Additional areas include professional issues and ethics, and portfolio preparation. (1, 1T+0S)

496L SUPERVISED FIELD EXPERIENCE LAB Provides a field experience in an appropriate classroom setting under the advisement and supervision of a mentor teacher and college supervisor; emphasizes observation of student learning styles, teaching strategies, classroom management, and discipline. Interaction with students on a one-to-one basis and in small group settings is provided. (3, 3T+0S)

EDUCATION - READING (ERDG)

361 INTEGRATING CHILDREN'S LITERATURE INTO THE CURRICULUM You will study the importance of literature suited to elementary and middle-school students, with an emphasis on the examination, evaluation, and discussion of various genres and diversity in children's literature. You will focus on developing methods of integrating literature throughout the curriculum. As teachers, you will discover creative ways to present literature, and you will become familiar with

methods of reviewing books in order to make informed decisions about texts to include in your classroom. Pre-requisite: enrollment in the BA program or possess a current teacher license. [Fall] (3, 3T+0S)

371 LANGUAGE ESSENTIALS FOR THE READING PROFESSIONAL You will do an in-depth study of the language structures of English in order to understand how students learn to read and write. You will explore reasons why some children fail to learn to read. You will focus on the fundamental components of reading instructions: phoneme awareness, phonics, decoding, spelling, oral language development, fluency, and comprehension. Throughout the course, you will address the characteristics of English language learners and students with other learning differences. Pre-requisite: enrollment in the BA program or possess a current teacher license. [Fall] (3, 3T+0S)

461 EVALUATING READING PROGRAMS You will study and evaluate current reading curricula with an emphasis on K-6 research-based programs. You will learn to make procurement, instructional, and advisory decisions pertaining to reading programs within the classroom and the school. You will develop a professional foundation of knowledge based on the International Reading Association and on the New Mexico Standards for the entry-level reading teachers. Pre-requisite: enrollment in the BA program or possess a current teacher license. [Fall] (3, 3T+0S)

471 REMEDIATION OF READING DIFFICULTIES I You will study the principles of traditional and alternative reading assessments. You will obtain the skills relevant to the development and use of reading assessments. You will attain a basic understanding of measuring student reading performance, formative and summative assessment strategies, and test construction. You will evaluate a variety of performance assessments from commonly used state and local reading tests. You will understand the content measured by the tests in order to use the data to improve student achievement in reading. This course will serve you as the foundation for Remediation of Reading Difficulties II. Pre-requisite: ED 470. [Fall] (3, 3T+0S)

476 REMEDIATION OF READING DIFFICULTIES II You will learn strategies for 1) recognizing a reader with reading problems, 2) identifying that reader's specific strengths and weaknesses, and 3) planning and implementing instruction that takes into account the basic skills needed to perform a certain reading and writing task. You will study a variety of teaching techniques to assist you in the remediation of reading problems. You will be required to complete a case study. Pre-requisite: ERDG 471. [Spring] (3, 3T+0S)

481 PRACTICUM IN READING INSTRUCTION You will study the principles of traditional and alternative reading assessments, learning the skills relevant to the development and use of reading assessments. You will gain a basic understanding of measuring student reading performance, formative and summative assessment strategies, and test construction. You will evaluate a variety of performance assessments from commonly used state and local reading tests. You

will understand the content measured by the tests in order to use the data to improve student achievement in reading. You will be assigned specific responsibilities over a sustained period of time in field and/or lab practice, as determined by your instructor. Pre-requisite: ERDG 476. [Fall and Spring] (3, 0T+3S).

ELECTRICITY (ELEC)

140 ELECTRICAL THEORY I Basic electrical theory, OHMs Law, series and parallel circuits, electrical symbols, AC and DC circuits. (3, 3T+0S)

141 ELECTRICAL CODE I National Electrical Code (NEC) requirements for single and multi-family dwellings, use of NEC tables and calculations. (3, 3T+0S)

142L RESIDENTIAL WIRING LAB Practical applications and operations in wiring techniques and codes for residential projects; tool safety, hardware use and identification. (6, 0T+6S)

150 ELECTRICAL THEORY II Basic principles of electromagnetic induction as applied to electric motors, transformers, and solenoid coils. (3, 3T+0S)

151 ELECTRICAL CODE II Code interpretation for commercial, industrial, and hazardous locations; load calculations, over-current protection and grounding. (3, 3T+0S)

152L COMMERCIAL WIRING LAB Practical applications and operations using field work: wiring techniques and codes for assigned commercial and industrial projects. (6, 0T+6S)

160 MOTOR CONTROLS Theory in across-the-line starters, solid-state control, programmable control, pilot devices, line and wiring diagrams, troubleshooting, repair techniques. Co-requisite: ELEC 160L. (3, 3T+0S)

160L MOTOR CONTROLS LAB Co-requisite: ELEC 160. (3, 0T+3S)

ELECTRONICS/ COMPUTER ENGINEERING TECHNOLOGY (ECET)

With the exception of ECET 100 and 100L, you must have tested into ENG 111 and MATH 130 before enrolling in one of these courses.

100 INTRODUCTION TO ELECTRONICS Serves as a foundation for several degree programs in technology, and also provides you with the specific knowledge and hands-on skills required by industry for entry-level employment in electronics. It covers DC and AC circuits, semiconductor circuits, and linear and digital circuits. You will develop competencies such as the use of test equipment, the basics of troubleshooting, and basic circuit operation. Prerequisites: MATH 102N and ENG 109N. Co-requisite: ECET 100L. (3, 3T+0S)

100L INTRODUCTION TO ELECTRONICS LAB Provides you with laboratory experience which applies the theoretical

material covered in ECET 100. You will become competent in the use of test equipment, the basics of troubleshooting, and basic circuit operation. Co-requisite: ECET 100. (1, 0T+1S)

106 ELECTRONICS MATH APPLICATIONS Using scientific calculators and personal computers when appropriate, you will use a variety of mathematical methods and techniques to solve problems encountered in DC and AC circuit analysis: exponential and scientific notation, basic trigonometric functions, fractional expressions, simultaneous linear expressions, exponential and logarithmic functions, and phasor notation. Prerequisite: ECET 100 and 100L. (Spring only) (3, 3T+0S)

110 ELECTRONICS I An in-depth study of basic semiconductor electronics in which you will understand, develop, analyze, and troubleshoot circuits containing rectifier and special diodes, bipolar transistors and field-effect transistors, and op-amps. Prerequisites: ECET 1100 and 100L. Co-requisite: ECET 106 and ECET 110L. (Spring only) (3, 3T+0S)

110L ELECTRONICS I LAB Practical applications of ECET 110: focuses on the design, construction, analysis, and troubleshooting of circuits, and on the production of both written and oral reports. Co-requisite: ECET 110. (Spring only) (2, 0T+2S)

111 AC CIRCUIT ANALYSIS In-depth analysis of the relationship between voltage, current, and power in AC circuits. Topics will include circuit network theorems, mesh and node analysis, magnetism and electromagnetism, phasors and complex numbers, and pulse response. The reactive circuits studied include resonance circuits and filters. Prerequisites: ECET 100 and 100L. Co-requisites: ECET 111L and ECET 106 (or MATH 150). [Spring] (3, 3T+0S)

111L AC CIRCUIT ANALYSIS LAB First hand experience of the ideas presented in ECET 111, using power supplies, ammeters, analog and digital voltmeters, oscilloscopes, and other appropriate instruments to measure and verify the electrical relationships in AC circuits. Troubleshooting skills will be integrated as needed. You will produce written and oral reports for lab activities. Co-requisite: ECET 111. (Spring only) (1, 0T+1S)

115 DIGITAL FUNDAMENTALS In-depth analysis of the theory and application of digital devices used in electronic equipment and computers through analysis of logic gates, number codes, Boolean algebra, combinational logic, logic functions, flip-flops and multi-vibrators, counters, shift registers, and memories. Prerequisites: MATH 102N and ENG 109N. Co-requisites: ECET 100, 100L, MATH 130, and ECET 115L. (Fall) (3, 3T+0S)

115L DIGITAL FUNDAMENTALS LAB Practical application of digital circuit fundamentals and focuses on the design, construction, analysis, and troubleshooting of digital circuits, and on the production of both written and oral reports. Co-requisite: ECET 115. [Fall] (2, 0T+2S)

120 INTRODUCTION TO ADVANCED TECHNOLOGY You will learn the basics of materials science, vacuum systems,

helium leak detection, microscopy, physical vapor and sputter deposition, furnace technology, photolithography, etching, clean room, and micro-electromechanical systems (MEMS). Pre-requisites: ENG 109N and MATH 102N. [Fall] (3, 2T+1L)

130 MICROCOMPUTER SYSTEMS I You will learn to configure, modify, maintain, and troubleshoot personal computers. Emphasizes microcomputer operation including applications software, operating systems, diagnostics, hardware modification, and upgrades. You will be able to set-up, upgrade, and install personal computers in a variety of settings. The course prepares you for professional computer certification, such as the A+ Certification Exam. Prerequisites: MATH 102N and ENG 109N. Co-requisite: ECET 130L. (3, 3T+0S)

130L MICROCOMPUTER SYSTEMS I LAB Practical applications designed to demonstrate firsthand the principles covered in ECET 130, including, as time allows, digital electronics, troubleshooting, repair, and board configuration. Co-requisite: ECET 130. (1, 0T+1S)

140 ELECTRIC VEHICLE CONVERSION:NUTS & BOLTS You will learn through hands-on experience how to convert an internal combustion engine vehicle to an electric vehicle (EV) powered by an electric motor and batteries. During the course, you will address vehicle selection, modification, removal of internal combustion-related parts, current EV technologies, performance considerations, driving techniques, charging infrastructure and safety issues. [Spring] (2, 1T+1S)

150 ELECTROMECHANICAL DEVICES You will study the theory and applications of transducers, electromechanical devices, and electronic control circuits. You will conduct, analyze, and troubleshoot related circuits using basic sensors, operational amplifiers, and digital logic circuits to control AC and DC motors, stepper motors, and servomechanisms. Prerequisite: ECET 110 and 110L, ECET 111 and 111L. Co-requisite: ECET 150L. (Spring only) (3, 3T+0S)

150L ELECTROMECHANICAL DEVICES LAB Practical applications of topics studied in ECET 150. You will design, construct, analyze, and troubleshoot related circuits, and produce both written and oral reports. You will gain skills in the assembly, operation, and troubleshooting of small-scale electromechanical systems. Co-requisite: ECET 150. (Spring) (2, 0T+2S)

160 ALTERNATIVE POWER SYSTEMS You will learn the basics of alternative power production from solar and wind energy. A hands-on approach will give you experience with actual solar photovoltaic panels, tracker, wind generator, charge controllers, battery storage, and grid tie systems. Prerequisites: ENG 109N and MATH 130; Co-requisites: ECET 100 and 100L. (2, 1T+1S)

165 VACUUM, RF POWER, AND PNEUMATICS You will study vacuum technologies, vacuum systems, RF energy and its application in the manufacturing industries, as well as pneumatics principles and applications. Topics include gas laws, vacuum theory, operation and applications of vacuum pumps, gauges and valves, vacuum system leak detection, plasma

physics, RF applications and safety, RF generators, transmission lines, and RF interference. Prerequisites: ECET 111 and 111L. Co-requisite: ECET 165L. [Fall] (3, 3T+0S)

165L VACUUM, RF POWER, AND PNEUMATICS LAB Application of vacuum, RF power, and pneumatics principles to manufacturing systems. Co-requisite: ECET 165 [Fall] (1, 0T+1S)

210 ELECTRONICS SYSTEMS Involves a comprehensive study of amplifier circuits (BJT and FET), specialized transistor circuits (UJT, SCR, and PUT), and advanced op-amp circuits and their use in electronic systems. You will apply your comprehensive knowledge to be able to understand, analyze, and troubleshoot an electronics system in communications, robotics, or process control. Prerequisite: ECET 150 and 150L. Co-requisite: ECET 210L (Spring) (3, 3T+0S)

210L ELECTRONIC SYSTEMS LAB Practical applications of electronic systems. You will design, construct, analyze, and troubleshoot related circuits, and produce both written and oral reports. You will obtain skills in the assembly, operation, and troubleshooting of an electronics system. Co-requisite: ECET 210 (Spring only) (2, 0T+2S)

213 DIGITAL SYSTEMS I You will focus on small digital systems, digital-to-analog and analog-to-digital conversion and communications; introductions to the microprocessor, microcomputer, and their programming and interfacing. Prerequisites: ECET 110/L and ECET 115/L; Co-requisite: ECET 213L. (Fall only) (3, 3T+0S)

213L DIGITAL SYSTEMS I LAB Practical applications using digital systems; emphasizes digital electronics troubleshooting, repairing, and prototyping. Co-requisite: ECET 213. (Fall only) (2, 0T+2S)

215 DIGITAL SYSTEMS II Interfacing of microprocessor-based systems to external devices and systems, with emphasis on interrupt-driven I/O, process control, and data communications. Prerequisites: ECET 213 and ECET 213L; Co-requisite: ECET 215L. (Spring only) (3, 3T+0S)

215L DIGITAL SYSTEMS II LAB Practical application of digital systems, with emphasis on digital electronics troubleshooting, repairing, and prototyping. Co-requisite: ECET 215. (Spring only) (2, 0T+2S)

230 MICROCOMPUTER SYSTEMS II Configuring, modifying, maintaining, and troubleshooting personal computers and computer networks. Emphasizes microcomputer operation advanced operating systems and advanced diagnostics; network installation and administration, system applications, and data communications basics. The course sequence of ECET 130 and 230 prepares you for professional computer certification such as the A+ Certification Exam. Prerequisite: ECET 130 and 130L; Co-requisite: ECET 230L. (3, 3T+0S)

230L MICROCOMPUTER SYSTEMS II LAB Firsthand laboratory exercises designed to demonstrate the principles cov-

ered in ECET 230, including digital electronics, troubleshooting, repair, board-configuration, and network cabling. (1, 0T+1S)

250 ELECTROMECHANICAL SYSTEMS Basic principles of control systems. Provides an overview of robotics systems, merges electronic and pneumatics theory with mechanical applications, and teaches the operation of programmable logic controllers. Prerequisite: ECET 150/L. Co-requisite: ECET 250L. (Spring) (2, 2T+0S)

250L ELECTROMECHANICAL SYSTEMS You will design and troubleshoot a variety of robotics and electromechanical systems. Co-requisite: ECET 250. (Spring) (2, 0T+2S)

260 STATISTICAL CONTROLS You will study the meaning of ?quality? and methods for maintaining and improving quality in a manufacturing operation. Emphasizes sampling techniques, basic statistics, variability, control charts, Pareto charts, probability plots, capability analysis, and design of experiments. You will learn to interpret data and make recommendations for improving the quality of a product or process. Meaningful and detailed interpretation of charts and graphs is stressed, and you will use software to analyze and present data graphically. You will be expected to solve problems individually as well as in groups. Prerequisite: MATH 130. (Fall only) (3, 3T+0S)

295 ELECTRONICS TECHNOLOGY PROJECT You will work on your own to complete an individual project using tools and skills developed in previous ECET courses. You will define your goal in consultation with an instructor. Pre-requisite: two 2xx-level ECET courses. (3, 3T+0S)

299 COOPERATIVE WORK EXPERIENCE You will be responsible for finding an approvable co-op job before the end of the third week of classes or be withdrawn from ECET 299. Forty-eight (48) work hours are required to earn one semester hour of credit. You may earn up to five credit hours. You will be evaluated jointly by program faculty and your employer on a CR/NC basis. Prerequisite: Permission of program advisor. (2-5)

ELECTRONICS PACKAGING DESIGN TECHNOLOGY (EPDT)

100 ELECTRONICS PACKAGING DESIGN Introduction to schematics, logic diagrams, and fabrication drawings using the Mentor Graphics software package. You will develop schematics and engineering drawings which include manufacturing data/drawings, and related control documentation. Prerequisite: MATH 102N and ENG 109N; Co-requisite: ECET 100L. (4, 2T+2S)

110 PRINTED CIRCUIT BOARD DESIGN I Using Mentor Graphics software, you will develop a complete set of drawings and documents for a printed circuit board, adhering to the ANSI/IPC standards and include Gerber artwork and numeric control drill files. You will develop the package using Mentor Graphics software. Prerequisites: EPDT 100, MATH 102N, and ENG 109N. (4, 2T+2S)

120 PRINTED CIRCUIT BOARD DESIGN II You will develop a complete set of drawings and documents for multiple layer printed circuit boards, including boards with analog and digital components, using Mentor Graphics, including the computer circuit simulation/analysis and component libraries modules. Prerequisite: EPDT 110. (4, 2T+2S)

200 INTEGRATED CIRCUIT DESIGN I Introduces you to the basics of designing an integrated circuit package using Mentor Graphics. Includes an overview of the various IC's, including monolithic, ASIC, hybrid, MCM, etc. Prerequisite: EPDT 120. (5, 3T+2S)

250 INTEGRATED CIRCUIT DESIGN II Continuation of the designing of integrated circuit packages using Mentor Graphics. Prerequisite: EPDT 200. (5,3T+2S)

ENGINEERING (ENGR)

110 INTRODUCTION TO ENGINEERING TECHNOLOGY Problem-solving using concepts from applied science. Emphasis on: communication of ideas and information, presentation of physical concepts, hypothesis testing, data acquisition and analysis, analytical modeling, and computational methods. Tools used include scientific calculators and computers. Topics are chosen from: work, force, rate, and resistance. Prerequisite: MATH 102N, or better or permission of instructor. (4, 4T+0S)

ENGLISH (ENG)

106N BASIC READING AND WRITING Studies grammar, simple sentence structure, and reading improvement skills; develops abilities in critical thinking. Pre-requisite: adequate score on Course Placement Evaluation; Co-requisites: Personal Development courses per direction of advisor. (4, 4T+0S)

108N BASIC ENGLISH I Developmental course for those unprepared for ENG 109N and/or ENG 111, and for those whose program requires it. Stress is on basic communications skills with instruction and guided practice in grammar, punctuation, and usage concentrating on paragraphs and the short essay, as well as in critical reading. Pre-requisites: ENG 106N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

109N BASIC ENGLISH II Developmental course building on skills mastered in ENG 108N. Stress is on basic communications skills concentrating on an understanding of the writing process and increasing ability to write the short essay and to read critically. Pre-requisite: ENG 108N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

111 ENGLISH COMPOSITION I Involves instruction and practice in expository writing and critical reading; reviews grammar and stresses vocabulary development. Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

112 ENGLISH COMPOSITION II Involves analytic writing, reading, and discussion of imaginative literature. Pre-requisite: ENG 111. (3, 3T+0S)

114 INTRODUCTION TO MASS COMMUNICATIONS Covers the functions and organization of the mass media system in the United States; analyses the cultural, social, and political impact of mass media, especially TV, on US society. Pre-requisite: ENG 111. (3, 3T+0S)

115 WRITING FOR THE MASS MEDIA I Introduces you to journalistic writing, including conventions of journalism, and the gathering and writing of news articles for print and broadcast media. Pre-requisite: ENG 111. (3, 3T+0S)

116 TECHNICAL WRITING This course covers the preparation of written reports of a scientific and/or technical nature, with emphasis on formal and informal reports, instructions, abstracts, technical articles, scientific and technical terminology and vocabulary, formats, tables, graphs, charts, and audio-visual and oral presentation techniques. Pre-requisite: ENG 111. (3, 3T+0S)

117 GRANT WRITING Provides you with an overview of the grant writing process, development of an idea, determining a need statement, evidence of need (statistics, etc.), defining the objective of the grant, story boarding and designing a program. Includes information on where and how to locate grants. (1-3, 1-3T+0S)

221 CREATIVE WRITING Involves the analysis and criticism of student-produced poetry or fiction (focus varies by semester). May be taken twice for credit. (3, 3T+0S)

260 THE BIBLE AS LITERATURE You will study and discuss the narratives and poetry found in the English Bible, with emphasis on the literary qualities of the readings. Pre-requisites: ENG 111. (3, 3T+0S)

262 SOUTHWEST LITERATURE You will learn to appreciate and analyze Southwest literature through reading, discussing, and writing. The literature chosen will be from a cross-section of cultures, genders, and genre (fiction, poetry, non-fiction). Pre-requisite: EN G 112. (3, 3T+0S)

265 NATIVE AMERICAN LITERATURE Involves a survey of Native American writing from the time of the European invasion to the present with an emphasis on contemporary authors. Pre-requisite: ENG 111. (3, 3T+0S)

270 CHILDREN'S LITERATURE Involves a survey of the history and development of literature written for children through study and analysis of selected readings from fiction and poetry. Projects will reflect students' majors. Pre-requisites: ENG 111. (3, 3T+0S)

280 READINGS IN LITERATURE You will study selected regional or ethnic themes in literature. As the content varies, consult a current Schedule of Classes for each term's specific content area. May be taken twice for credit. Pre-requisite: ENG 112. (3, 3T+0S)

290 STUDY OF LITERATURE Focused study of literary periods, types, traditions, themes, or individual authors; content varies from semester to semester; involves readings, lecture, discussion, and composition. As the content varies, consult a current Schedule of Classes for each term's specific content area. May be taken twice for credit. Pre-requisite: ENG 112. (3, 3T+0S)

292 WOMEN'S LITERATURE A study of literature written by and focusing on women, including novels, short stories, poetry, etc. As the content varies, consult a current Schedule of Classes for each term's specific content area. May be taken twice for credit. Pre-requisite: ENG 112. (3, 3T+0S)

294 MYTHOLOGY Provides a comparison and study of the mythologies of a variety of civilizations and their influences on literature. The course may focus on different mythologies depending on the semester. The areas of study may include Greek mythology, Roman mythology, Celtic mythology, and/or Native American mythology. May be repeated once for credit if the topic varies. Prerequisite: ENG 112. (3, 3T+0S)

296 FILM AS LITERATURE Focuses on viewing films and examining them in light of literary techniques as well as film techniques. Prerequisite: ENG 112. (3, 3T+0S)

ENVIRONMENTAL SCIENCE (ES)

101 RADIOLOGICAL WORKER Involves the successful completion of the following training modules offered by LANL: General Employee Training (8 hours) and Radiological Worker (12 hours). Pre-requisite: permission of instructor. (1, 1T+0S)

102 ENVIRONMENT, SAFETY, AND HEALTH TRAINING Includes the successful completion of the following training modules offered by LANL: First Aid and CPR (8 hours), Electrical Safety Program for Non-electrical Crafts (4 hours), Hazard Communication (4 hours), Batteries and Battery Banks (2 hours), and Lockout Tagout (3 hours). Pre-requisite: permission of instructor. (1, 1T+0S)

121 ENVIRONMENTAL AIR MONITORING Explores fundamentals and techniques of monitoring the environment with an emphasis on the air pathway, including the nature of gases and the atmosphere, the oxygen and carbon cycles, Stokes' law, the gas laws, Gaussian plume models, sources and pathways of pollutants, and the use of state-of-the-art equipment to measure pollutants and meteorological variables. You will experience hands-on work with LANL staff and technicians. Pre-requisites: MATH 102N, ES 101 and 102. (3, 1T+2S)

122 ENVIRONMENTAL RADIOACTIVITY Explores fundamentals and techniques of monitoring the environment with an emphasis on radioactivity, including electrons; protons; neutrons; photons; ionization; fission; units; the Chart of the Nuclides; half-life; spectroscopy; and the use of hand-held detectors TLDs, NEWNET, and AIRNET, to measure radionuclides in the environment. You will experience hands-on work with LANL staff and technicians. Pre-requisite: MATH 102N and ES 101. (3, 1T+2S)

123 ENVIRONMENTAL HYDROLOGY AND ECOLOGY

Explores fundamentals and techniques of monitoring the environment with an emphasis on the water pathway, including the periodic table, ions, bonds, pH, phase changes, fluid flow, Stokes' law, hydrostatic pressure, eco-toxology, the food chain, and the use of state-of-the-art equipment to measure pollutants in soils, and in surface and ground water. You will experience hands-on work with LANL staff and technicians. Pre-requisite: MATH 102N and ES 101 with grades of ?C? or better. (3, 1T+2S)

126 INTRODUCTION TO WASTE MANAGEMENT

Overview of the environmental impacts of hazardous material on air, surface water, ground water, and land. Introduces waste management issues such as hazardous waste characterization, treatment, disposal, and nuclear waste. Covers the common acronyms used in the environment field. (3, 3T+0S)

134 OSHA HEALTH AND SAFETY

Overview of the accepted technologies to protect the health and safety of personnel handling hazardous waste. Meets OSHA 29 CFR 1910.120 requirements for Hazardous Waste Operations. (3, 3T+0S)

136 FIELD INSTRUMENTATION

Operational theory, calibration, field operation, and maintenance of the commonly used monitoring equipment used on hazardous waste sites. Prerequisite: ES 134 with grade of ?C? or better. (1, 1T+0S)

138 ENVIRONMENTAL AND OCCUPATIONAL LAW AND REGULATIONS

Survey of federal and state regulations relating to waste management, occupational health, air and waste pollution, and environmental management. Prerequisites: ES 126 and ES 134. (3, 3T+0S)

222 APPLIED ECOLOGY AND ENVIRONMENTAL RESTORATION

Applications of ecological principles to solving environmental problems. Includes approaches in biological remediation, impact assessment, and restoration. Prerequisites: BIOL 112 and 112L. (3, 3T+0S)

224 ENVIRONMENTAL AND COMMUNITY PLANNING

Basic methodologies for planning, implementing, and affecting solutions to environmental problems. Examines governmental structures, laws, and regulations as well as ways to encourage community support. Pre-requisites: ENG 109N, ENG 110, and MATH 102N. (3, 3T+0S)

230 WATER RESOURCES AND BIOLOGICAL MONITORING

The physical and chemical properties of water, its mechanisms of flow, and important biological indicators of contamination. Includes analysis of water law and water resources planning. Prerequisites: BIOL 112 and 112L, and CHEM 110 and 110L. (3, 3T+0S)

230L WATER RESOURCES & BIOLOGICAL MONITORING LAB

Analysis of the physical and chemical properties of water, mechanisms of flow, and biological indicators of contamination. Includes practical applications in water resources planning. Co-requisite: ES 230. (1, 0T+1S)

236 ENVIRONMENTAL SAMPLING

Covers all aspects of environmental sampling including air, surface water, soil, ground water tanks, drums, and sludge; introduces map reading skills. Prerequisites: ES 126, ES 136, CHEM 121 and CHEM 121L (3, 3T+0S)

237 POLLUTION PREVENTION AND WASTE MINIMIZATION

Covers pollution prevention and hazardous waste minimization, with emphasis on techniques and implementation strategies. Prerequisites: ES 126 and ES 134. (3, 3T+0S)

238 ENVIRONMENTAL LAB INSTRUMENTATION

Provides training in techniques designed to evaluate contaminants in water, wastewater, sludge, ground water, soil, and air. Prerequisite: ES 236 (3, 3T+0S)

240 INTRODUCTION TO TREATMENT, STORAGE, AND DISPOSAL OF HAZARDOUS MATERIALS

Covers treatment, storage, and disposal of hazardous waste; treatment techniques including physical, chemical, biological, and thermal. Includes basic relations dealing with management and storage of hazardous materials. Prerequisites: ES 138, ES 236, and ES 237. (3, 3T+0S)

242 SPECIAL ENVIRONMENTAL TOPICS

Seminar, with presentations by experts and students, on topics pertinent to hazardous waste, environmental issues, and public communications. Prerequisite: permission of the instructor. (1-2)

280 INTRODUCTION TO TOXICOLOGY AND EPIDEMIOLOGY

Introduction to methods in environmental health survey and risk assessment. Discussion of exposure, dose, toxicity, testing, target organs, epidemiology and disease, and injury etiology. Prerequisites: BIOL 121 and 121L, CHEM 121 and 121L, and MATH 145. (3, 3T+0S)

299 PRACTICUM IN ENVIRONMENTAL MANAGEMENT

Learning experiences while employed in the field of environmental management. Forty-eight work hours are required to earn one semester hour of credit. You may earn up to four credit hours and will be evaluated jointly by program faculty and by employers on a Credit/No Credit basis. Prerequisite: permission of advisor. 1-4)

FIBER ARTS (FA)

100 INTRODUCTION TO WEAVING

An introduction to design work using basic shuttle techniques; an introduction to warping the loom and understanding how the loom works.. You will be required to complete a minimum of one weaving. (Var. 1-3,) (1, .5T+.5S) or (2, 1T+1S) or (3, 1T+2S)

101 WEAVING I

Design work of quality textile, warping the loom, weaving special projects using different warps, wefts, techniques, and proper finishing methods. You will weave several rugs. Co-requisite: FA 101L. (Fall only) (1, 1T+0S)

101L WEAVING I LAB

Practical application of warping looms and weaving. Five projects incorporating one, two, and three-shuttle techniques. Co-requisite: FA 101. (Fall only) (6, 0T+6S)

103 SPINNING I You will prepare fleece for spinning; including washing, carding, and blending of different fibers. You will spin on drop spindles and three different types of spinning wheels. (3, 1T+2S)

107 TEXTILE COLOR AND DESIGN You will explore elements of design and color theory. Emphasizes personal work with a focus on designing textiles. (2, 1T+1S)

109 LOOM BUILDING You will learn loom parts and how to maintain and repair any problem that may arise with a loom by constructing a two-harness or four-harness treadle loom. At the time you enroll for this class, you will be assessed a special materials fee to cover the cost of the lumber needed in constructing your loom. (1, .5T+.5S)

110 HISTORY OF TEXTILES History of world textile with emphasis on the southwest. (2, 2T+0S)

112 VEGETAL DYES: IDENTIFICATION & SELECTION Identification and selection of various dye plants and materials available during prime season. You will learn techniques of dyeing, and explore the possible colors obtained from local plants, roots, and barks, as well as from ancient historical dyes. You will dry and preserve materials, keep records of dye samples, and recipes for future use. Fall only. (5, 1T+4S)

116 QUILTING Beginning students will learn techniques of piecing a quilt together, preparing the top of the quilt and sandwiching, and they will explore the traditional designs and contemporary styles. Advanced students will learn strip piecing, simple patchwork, hand and machine appliques, and more advanced traditional piecwork. Each student will design and finish a quilt. This class may be repeated twice for credit. (2, 1T+1S)

202 SPINNING II Selection of fibers, and processing and spinning techniques appropriate for the end use of yarn. Emphasizes controlling yarn size and twist; fibers such as silk, cotton, and alpaca will be introduced and you will practice various plying techniques. Pre-requisite: FA 103 or permission of instructor.(Fall only) (2, 1T+1S)

208 MARKETING OF WOVEN GOODS You will create a marketing plan for selling to the occasional retail customer or for running a full-time retail or wholesale business with employees; emphasis on pricing, consignment, and mail order. Pre-requisite: MATH 100N with a grade of "C" or better. (2, 2T+0S)

210 WEAVING II Introduces you to basic tapestry techniques, including vertical and diagonal designs. Co-requisite: FA 210L. (1, 1T+0S)

210L WEAVING II LAB Practical application of vertical and diagonal designs. Weaving of samplers incorporating all geometric shapes. You will design and weave your own textile. Co-requisite: FA 210; Pre-requisites: FA 101 and 101L with grades of "C" or better, or instructor permission. (6, 0T+6S)

213 WEAVING III Study of color gradation with applied skills. Co-requisite: FA 213L. (1, 1T+0S)

213L WEAVING III LAB You will design and weave a free form or pictorial tapestry. Co-requisite: FA 213. Prerequisites: FA 101 and 101L, FA 210 and 210L, or permission of instructor. (6, 0T+6S)

216 RUG RESTORATION Covers the basic materials and techniques employed in the restoration of hand-woven textiles, including Navajo, Mexican, Rio Grande, Chimayo, and Oriental Kilns; evaluation of damage, warp replacement, weft reweaving, design study, and color matching through dyeing with natural and annaline dyes. You will work on your own textiles or on those provided by the instructor. (2, 1T+1S)

218 RAG RUG WEAVING History of rag rugs in the United States and the Southwest; emphasizes using a variety of cloth materials (rags) and the process of preparing materials. You will incorporate your own design and weave a rug or pictorial tapestry for display. (2, 0T+2S)

225 FOUR HARNESS WEAVE Application of four harness weaves which include twills, double weaves, and overshot, as well as a comprehensive understanding of reading drafts and treading. Pre-requisite: FA 101, or permission of instructor. (4, 1T+3S)

227 SYNTHETIC DYES You will learn to create a color rotation atlas which is defined by three attributes: hue, value, and chroma, which respectively represents the color family (lightness, darkness, and color strength) by the mixing of dyes. Color theory arranges the color points on a huge triangle based on the four variable physical qualities of the color family, and the rotation system gives the dye formula for each color point. You will work on special projects and will also create your own color atlas from which the dye formula for any desired color can be determined. Prerequisite: MATH 100N. (3, 1T+2S)

228L SPECIAL PROJECTS You will work on individual special projects, with minimal assistance, with permission of the instructor. Pre-requisite: FA 101 and 101L. (3, 0T+3S)

230 WEAVING PRACTICUM You will have hands-on experience in a weaving studio, gallery, workshop, or classroom setting following individualized learning objectives prearranged between yourself and the program director. The director and gallery/workshop staff will work closely together on your work and/or activities. Forty-eight work hours are required to earn one semester hour of credit. Graded on a CR/NC basis. Pre-requisite: Permission of program advisor. (4, 0T+4S)

231 BASKETRY: COILING, TWINING, AND PLAITING Covers the techniques of coiling pine needles, sumac, and grasses to make small baskets; twining round, reed, willow, and man-made materials to make woven baskets; and plaiting flat reed cane and splints to make traditional woven baskets. (Spring only) (3, 0T+3S)

234 FUNDAMENTALS OF IKAT You will design and create a geometric weft IKAT; history of IKAT weaving. (1, 0T+1S)

235 PICTORIAL WITH IKAT You will design and create a weft IKAT weaving with simple pictorial designs as seen in historical textiles of the American Southwest and Central America. (1, 0T+1S)

236 ADVANCED IKAT Creation of warp and weft IKAT weaving through applied knowledge and skills; exploration of more advanced techniques for freer expression. (Spring only) (1, 0T+1S)

FORESTRY (FOR)

101 INTRODUCTION TO FORESTRY You will study forest resources and their management, including a history of forestry in America; introduction to forest growth and development; the multi-use concept of forest management control of damaging agents, forest measurement, and wildlife. (3, 3T+0S)

113 DENDROLOGY You will focus on the identification of forest tree and shrub species, with emphasis on identification of trees by cone, bark, needle, and wood. Teaches use of keys with emphasis on species found in the southern Rocky Mountain region. Involves some field work. (3, 3T+0S)

123 FOREST ECOLOGY You will study forest ecosystems, assemblages of trees and their communities and the environments in which they live; introduction to silvics and the study of silviculture. (3, 3T+0S)

GEOGRAPHY (GEOG)

111 WORLD GEOGRAPHY Geography of the major land forms, environments, ethnic cultures, population and resources of the world, and the inter-relationships among them. (3, 3T+0S)

GEOLOGY (GEOL)

101 PHYSICAL GEOLOGY Materials composing the earth and the work of agencies modifying its surface. Co-requisite: GEOL 101L. (3, 3T+0L)

101L PHYSICAL GEOLOGY LAB Chemical and physical characteristics of rocks, gems, and minerals. Includes field trips to discuss local area geomorphologic, stratigraphic, and sedimentation sites and geologic process involved in their creation. Co-requisite: GEOL 101. (1, 0T+1L)

102 HISTORICAL GEOLOGY History and evolution of the earth; rise and succession of various forms of life. Prerequisite: GEOL 101; Co-requisite: GEOL 102L. (3, 3T+0L)

102L HISTORICAL GEOLOGY LAB Detailed Study of sedimentary rocks and fossils. Interpretation of geologic maps and cross-sections. Field trips to areas of sedimentary geology. Co-requisite: GEOL 102. (1, 0T+1L)

HEALTH, PHYSICAL EDUCATION, AND RECREATION (HPER)

101 CONDITIONING EXERCISES Various exercises designed to promote endurance, strength, flexibility, and general physical fitness. May be repeated once for credit. (1, 0T+1S)

102 AEROBICS I Exercise and movements for general physical fitness. May be repeated once for credit. (1, 0T+1S)

103 TENNIS Instruction and participation in the basic skills, rules, and equipment of the game of tennis. Both singles and doubles games will be taught. May be repeated once for credit. (1, 0T+1S)

104 STEP AEROBICS I Exercise and movements for developing strength, endurance, and flexibility, with a combination of general physical fitness. May be repeated once for credit. (1, 0T+1S)

105 BASKETBALL Instruction and participation in the game of basketball, including rules, skills, shots, and strategies. May be repeated once for credit. (1, 0T+1S)

106 GOLF Focuses on the development of knowledge and skill competencies necessary to play golf; emphasis is placed on skill progressions, practice opportunities, and error diagnosis and correction. May be repeated once for credit. (1, 0T+1S)

107 WALKING/RUNNING FOR FITNESS Designed for all levels, including walkers, joggers, race walkers, and competitive marathon runners. May be repeated once for credit. (1, 0T+1S)

110 SWIMMING A course for those who can swim, not for those who want to learn the basics. It involves supervises lap swimming, including some instruction in swimming for fitness. May be repeated once for credit. (1, 0T+1S)

111 WATER AEROBICS Exercises and movements in waist-high water, and usually performed to music, to promote general fitness and health. This course is self-paced and non-competitive, and the ability to swim is not required but preferred. May be repeated once for credit. (1, 0T+1S)

112 WEIGHT TRAINING Skill training for developing strength and endurance with free weights and machines, emphasizing knowledge of equipment, lifting safety, and theories of training. May be repeated once for credit. (1, 0T+1S)

113 RACQUETBALL Through actual play, you will learn the basic skills, rule, and strategies of racquetball. May be repeated once for credit. (1, 0T+1S)

114 BEGINNING VOLLEYBALL Teaches you the basic skills and rules of volleyball, emphasizing learning basic bump, set, and spike which are the fundamentals of volleyball skills. (1, 0T+1S)

115 SOFTBALL Instructs you in the basic skills, strategies, and rules of softball. May be repeated once for credit. (1, 0T+1S)

116 AIKIDO I Basic philosophy, history, and movements of the martial art AIKIDO. May be repeated once for credit. (1, 0T+1S)

117 INTRODUCTION TO KUNDALINI YOGA Introduces you to Kundalini Yoga techniques and postures, emphasizing meditation and breathing. May be repeated twice for credit. (1, 0T+1S)

118 COUNTRY WESTERN DANCE Introduces you to Country and Western two-step and line dance. May be repeated twice for credit. (1, 0T+1S)

119 HATHA YOGA An integrative approach to Hatha Yoga, exploring philosophy, physical and energetic systems, asanas, pranayama, and yoga therapy. May be repeated once for credit. (1, 0T+1S)

120 DOWNHILL SKIING Designed for all levels of downhill skiing. May be repeated once for credit. (1, 0T+1S)

121 CROSS-COUNTRY SKIING Designed for all levels of downhill skiing. May be repeated once for credit. (1, 0T+1S)

122 BOWLING Introduction to and practice in the basic skills of bowling. May be repeated for credit. (1, 0T+1S)

124 KICKBOXING AEROBICS An intense aerobic workout using the moves of kickboxing to achieve better coordination and balance. May be repeated for credit. (1, 0T+1S)

125 POWER CONDITIONING I A conditioning course emphasizing aerobics, weight training and cardiovascular conditioning. (1, 0T+1S)

127 TAI CHI CHUAN I Includes an introduction to the basic principles and background of Tai Chi, the practice of Qigong exercises, and the study of the Yang style long form. Graded on a Credit/No Credit basis. May be repeated once for credit. (1,0T+1S)

128 TAI CHI CHUAN II Continuation of the study of the Yang style long form began in HPER 127; further develops an understanding and practice of the basic principles of Tai Chi and Qigong. Graded on a Credit/No Credit basis. May be repeated once for credit. (1,0T+1S)

129 PILATES You will learn the basic concepts and skills in the Pilates method of non-impact mat conditioning designed to increase core strength and stabilization, muscle tone, balance, coordination, and flexibility which develop whole body awareness and control, and which can be modified to various fitness levels. (1, 0T+1S)

130 INTERMEDIATE SWIMMING Designed for individuals with a swimming background, this course begins with a review of beginning techniques and continues onto five swimming

strokes, with an introduction to the butterfly. Emphasis is on building endurance in preparation for Lifeguard Training course. May be repeated once for credit. Prerequisite: Must have swimming background and familiarity with basic swimming strokes. (1,0T+1S)

132 LIFE-GUARDING TODAY You will learn to recognize hazardous situations and prevent injury, with an emphasis is on supervising swimmers, minimizing dangers, preparation of facility records and reports. You will learn rescue skills with a concentration on preventive life-guarding. When you successfully complete this course, you will acquire certification in Life-guarding Training, which includes Professional CPR. Prerequisite: You must know all strokes (free style, breaststroke, sidestroke, and back-crawl) and be able to swim 500 yards of each stroke. (2, .5T+1.5S)

134 WOMEN'S SELF DEFENSE You will learn to use your strength against a perpetrator's weaknesses to end physical threat by using your mind and body as defensive measures against an attacker. (1, 0T+1S)

202 AEROBICS II Continuation of Aerobics I, with emphasis on greater endurance. Prerequisites: HPER 102 and permission of instructor. (1, 0T+1S)

204 STEP AEROBICS II You will learn exercise and movements for developing strength, endurance, and flexibility, with a combination of general physical fitness. May be repeated once for credit. (1, 0T+1S)

216 AIKIDO II Continuation of Aikido I, with emphasis on greater skills. Prerequisite: HPER 116 or permission of instructor. May be repeated once for credit. (2, 0T+2S)

223 INTERMEDIATE VOLLEYBALL Volleyball competition and play. Focus will be on using skills to learn and develop strategies for competitive play. May be repeated once for credit. (1, 0T+1S)

225 POWER CONDITIONING II This is an advanced cardiovascular conditioning course, utilizing weight training, aerobics, and exercise equipment. Prerequisite: HPER 125 with a grade of "C" or better. (1, 0T+1S)

250 TECHNIQUES OF COACHING BASKETBALL You will develop the knowledge and skill competencies you need for coaching, with an emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Prerequisite: basic basketball skills. This course does not satisfy HPER requirements for graduation. (2, 1T+1S)

HEALTH SCIENCE (HSCI)

102 CARDIOPULMONARY RESUSCITATION The gross anatomy and physiology of the heart, electrical pathway, and respiratory system are discussed in preparation for CPR. Includes primary assessment and evaluation of ABCs. Successful completion of this course will result in American Heart Association CPR certification. (0.5, 0.5T+0L)

105 NURSE AIDE You will acquire the knowledge and skills essential for delivery of safe and effective care in acute care, long term, and home health settings. Specific skills will be demonstrated in the classroom setting with practice and return demonstration in the simulated lab. Application of skills will take place in a clinical setting under the direct supervision of a Registered Nurse. Completion of the course meets the training requirements set forth by the Department of Health and Human Services for Nurse Aid and Home Health Aide and prepares you to take the New Mexico Certification Exam for Nurse Aide. Pre-requisite: ENG 108N and PD 108N and PD 108L; Co-requisite: HSCI 102 and 105L. (4, 4T+0L)

105L NURSE AIDE LAB Practical application of skills in simulated lab and clinical settings for HSCI 105. Graded on a CR/NC basis. Co-requisite: HSCI 105. (1, 0T+1L)

109 CARDIOPULMONARY RESUSCITATION/FIRST AID Covers basic emergency/first aid procedures which include shock, bleeding, poisoning, burns, musculoskeletal injuries and other medical emergencies. Includes proper basic life-saving techniques used in aiding victims of heart attack, suffocation, drowning, electrocution, and airway obstruction. Successful completion of this course will result in CPR and First Aid certification according to the American Red Cross Standards. (0.5, 0.5T+0S)

110 INTRODUCTION TO ANATOMY & PHYSIOLOGY You will cover the gross anatomical structures of the human body and the normal physiological functions of the nine body systems, and their interrelationships, with a focus on the musculoskeletal system. If you are tracking into the Nursing Program or intending to transfer, do not take this course: take instead BIOL 237 and 237L, and BIOL 238 and 238L. Prerequisites: ENG 109N and MATH 100N. (Fall only) (4, 4T+0L)

112 PATHOLOGY FOR MASSAGE THERAPISTS In order to practice safely, as a massage therapist you will need a basic understanding of pathological processes. This course, therefore, will introduce you to the types of disorders that occur in each body system and provide you with more specific knowledge of the signs and symptoms of selected disorders and the ability to recognize if massage is indicated or contraindicated. Prerequisites: HSCI 110 or BIOL 237 and 237L, and BIOL 238 and 238L. (3, 3T+0L)

114 KINESIOLOGY FOR MASSAGE THERAPISTS Introduces you to methods of evaluation and bodywork that use a specialized type of muscle testing and various forms of massage and bodywork for corrective procedures. Prerequisites: HSCI 110 or BIOL 237 and 237L, and BIOL 238 and 238L. (2, 2T+0L)

115 INTRODUCTION TO CHINESE MEDICINE You will study the basic theories that underlie Chinese Medicine as a means of understanding the etiology of energetic imbalance, including the Eight Principles and Five Elements Theory. You will learn basic meridian pathways, concepts of Qi, Yin and Yang, and the Six Eternal Pathogens and the Seven Emotions, as well as being introduced to the Ayurvedic Chakra System and its relevance to Chinese Medicine. (Spring only). (2, 2T+0S)

116 ESSENTIALS OF ESSENTIAL OILS You will explore Egyptian, German, French, and English traditional knowledge combined with modern concepts of chemistry and physics concerning the influences of essential oils on Body, Mind, and Spirit. You will also explore how oils are made, how they work, and what constitutes good quality oils. (2, 2T+0S)

118 INTRODUCTION TO INTEGRATIVE HEALING Provides a general introduction to the diversity in health care belief systems, including an overview of the history, development, and use of the health care approaches available today: Western medicine, Native American healing traditions, traditional Chinese medicine, Ayurvedic philosophy and methods, Homeopathy, Herbology, Nutrition, and osteopathic and chiropractic medicine. Through these approaches, you will gain an understanding of the mind-body-spirit connection. (2, 2T+0S)

125 MEDICAL TERMINOLOGY Covers medical terminology used by health care professionals, including medical word construction and use; spelling, pronunciation of terms, common medical abbreviations, and the use of a medical dictionary. Pre- or Co-requisite: ENG 109N. (2, 2T+0L)

150 PERSONAL GROWTH AND SELF-HEALING Personal development of one's mental, emotional, and physical state. Introduces and discusses therapeutic interventions such as nutrition, stress management, problem solving, exercise, and life-style analysis. Pre- or Co-requisite: ENG 109N. (3, 3T+0S)

152 LEGAL AND ETHICAL ISSUES IN MASSAGE THERAPY Presents the legal and ethical standards currently existing in the field of Massage Therapy. Topics include the professional codes of ethics, informed consent, confidentiality, ethical principles of autonomy, justice, and truth telling, and the ethics of touch therapies. (Fall only) Prerequisite: ENG 109N. (2, 2T+0S)

160 EMERGENCY MEDICAL TECHNICIAN - BASIC (EMT-B) A U.S. D.O.T. EMT-B course designed for individuals who have an interest in working in the pre-hospital setting. Trains ambulance and rescue personnel to recognize and stabilize patients with life-threatening emergencies at the scene and to transport using specialized items of equipment. When you complete this course you will be eligible to take the state licensing exam which is required to become an EMT in New Mexico. Co-requisite: HSCI 160L; Prerequisite: HSCI 102, or current American Heart Association CPR certification. You must be at least 18 years of age to register for the state board exam; however, high school students are eligible for concurrent enrollment with permission from the department. In general, those 17 years of age may take the course and apply for licensure; however, such applicants must meet special criteria (check with Northern's Health Science department). In order to register to take the state board exam to become a licensed EMT-B, you must earn 80% or better in this course and also pass HSCI 160L. Pre-requisite: permission of instructor or department chair. (5, 5T+0L)

160L EMERGENCY MEDICAL TECHNICIAN - BASIC (EMT-B) LAB Skills lab for HSCI 160 utilizing specialized items of equipment necessary for pre-hospital care and transport of the ill or injured. Co-requisite: HSCI 160. (2, 0T+2L)

161 EMERGENCY MEDICAL TECHNICIAN - COMBO REFRESHER Provides you with an update in new protocols, skills, and medical information to already-licensed first responders, EMT-B's & EMT-I's. Required every two years to maintain state or national certification. Prerequisite: Certification as First Responder, EMT-B or EMT-I. (2, 2T+0L)

162L FIRST RESPONDER Trains you to perform a basic primary assessment and maintain the individual until help arrives. Appropriate for law enforcement officers, members of fire or rescue services, or company employers. Prerequisite: Current American Heart Association BLS CPR certification or HSCI 102. (2, 1T+1L)

163 EMT - INTERMEDIATE This course, in combination with EMT-Intermediate Lab and Practicum, consists of 200 hours of instruction (lecture, lab, and practicum), covering the EMT-B review and intermediate curriculum, which consists of assessment of trauma and medical patients, airway management, shock, respiratory emergencies, fluids and electrolytes, adult and pediatric IV therapy, intraosseous therapy, inhalation therapy, obstetrical emergencies, pediatric emergencies, IV and subcutaneous medication administration, cardiovascular emergencies, toxicological emergencies, diabetes management, and medico-legal issues. You must earn 80% or better in HSCI 163, receive "credit" for both HSCI 163L and 164L to be eligible to register to take the state board exam to become an EMT-Intermediate. Prerequisites: EMT-Basic licensure with current CPR card. Co-requisites: HSCI 163L and HSCI 164L. (4, 4T+0L)

163L EMT - INTERMEDIATE LAB You will learn under direct supervision, to initiate IV therapy, inhalation therapy, IV administration, and subcutaneous injections on fellow students. You will also learn, in a supervised environment, medical assessment, trauma assessment, and medication administration. You must successfully complete HSCI 163, 163L, and 164L to be eligible to register to take the state board exam to become an EMT-Intermediate. Prerequisites: EMT-Basic licensure with current CPR card. Co-requisite: HSCI 163 and 164L. (2, 0T+2L)

164L EMT - INTERMEDIATE PRACTICUM You will complete a minimum of 72 hours of on-site clinical experience with documented, supervised assessment, IV initiation, and medication therapy. Optional skills may include subcutaneous injections and other skills under the EMT-I scope of practice. You must successfully complete HSCI 163, 163L, and 164L to be eligible to register to take the state board exam to become an EMT-Intermediate. Prerequisites: EMT-Basic licensure with current AHA CPR card. Co-requisite: HSCI 163 and 163L. (2, 0T+2L)

165 EMT - INTERMEDIATE REFRESHER Provides you with an update in new protocols, skills, and medical information to already licensed EMT's. Required every two years to main-

tain state or national certification. Prerequisites: HSCI 163 and 163L. (2, 2T+0S)

166 WILDERNESS FIRST RESPONDER You will learn to deal with medical emergencies when help is miles away and dialing 911 is not an option. You will be taught to deal with emergency situations involving prolonged patient care, severe environments and improvised equipment. If you successfully complete this course, you will receive a certificate valid for three years from Wilderness Medical Association and also a two-year American Heart CPR card when you complete this course. (4, 3T+1S)

190 DOSAGE CALCULATIONS Practical approach to dosage calculation and preparation of drugs and solutions. Includes information related to systems of measurements and conversion. Provides useful information for any health care professional responsible for medication administration. Prerequisite: MATH 100N. (2, 2T+0L)

204 NUTRITION Introduces you to the basic concepts of nutrition with an emphasis on health promotion and disease prevention and/or control. You will study nutrition across the life cycle including special needs of individuals, families, and cultures; concepts of diet care planning, including diet assessment, planning, implementation, and evaluation. This course will encourage you to practice sound nutritional practices in your daily life. Prerequisite: BIOL 110/L or CHEM 110/L. (3, 3T+0L)

255 INTRODUCTION TO HERBAL MEDICINE Introduces health personnel to basics of herbal medicine in order to gain a greater understanding of this form of alternative medicine, Specific indications, physiological action, dosage, possible side effects, contraindications, and practical usage or herbs are discussed addressing nine body systems. Co-requisite: HSCI 257. (2, 2T+0L)

257 HERBAL PHARMACY In this course you will build on the information learned in HSCI 255, including hands-on practice in making salves, tinctures, liniments, teas, etc. Co-requisite: HSCI 255. (2, 2T+0L)

264 THERAPEUTIC TOUCH TECHNIQUES This is a beginning course which covers theory, research, and clinical application with on-going integration of theory and practice, including imagery and meditation, the chakras, and energy balance using therapeutic touch. Focus will be on one's own pain relief, relaxation, and on health restoration and promotion. (3, 3T+0S)

280 RN FIRST ASSIST Provides the experienced perioperative nurse with the advanced preparation necessary to assume the role of the first assistant. The nursing process is used as the basis for providing nursing care to clients requiring surgical intervention. This course is based on the Core Curriculum for the RNFA. You must complete both theory and clinical to be eligible to take the RN First Assist certification exam. Prerequisite: Permission of the instructor. (Fall and Summer only) (3, 3T+0L)

280L RN FIRST ASSIST CLINICAL Provides you with the clinical learning experiences for the perioperative nurse who will function in the expanded role of the RNFA. The clinical experience will be supervised and mutually planned by a physician preceptor and RNFA students. Your physician preceptor will assist you in learning the interdependent, intra-operative behavior necessary for the RNFA role, including tissue healing, suturing and knot tying, providing hemostasis and exposure, and use of surgical instruments. The internship consists of 120 hours specific to the role of the RNFA. You must complete both theory and clinical with a grade of "C" or better to be eligible to take the RN First Assist certification exam. Prerequisite: Permission of the instructor; Co-requisite: HSCI 280. (Fall and Summer only) (3, 0T+3L)

HISTORY (HIST)

Note: Each course in this department bears a Pre- requisite of ENG 109N.

101 WESTERN CIVILIZATION I Social, political, and economic development from ancient times to 1648. (3, 3T+0S)

102 WESTERN CIVILIZATION II Social, political, and economic development from 1648 to the present. (3, 3T+0S)

161 HISTORY OF THE UNITED STATES TO 1877 Economic, political, social, and intellectual development to 1877. (3, 3T+0S)

162 HISTORY OF THE UNITED STATES FROM 1877 Economic, political, social, and intellectual development from 1877. (3, 3T+0S)

200 HISTORY OF WORLD RELIGIONS You will explore the history of major religions of the world: where they came from and how they evolved into their present forms; examines the similarities and differences between them. [Cross-listed as HUM 200] (3, 3T+0S)

220 SOUTHWESTERN WOMEN'S HISTORY You will explore the women's involvement in Southwestern history, including politics, economics, and culture. (3, 3T+0S)

230 CHICANO EXPERIENCE IN THE U.S. You will analyze and examine historical, cultural, political, and economic conditions of Chicanos in the U.S. (3, 3T+0S)

250 AMERICAN INDIAN HISTORY You will study the history of Indians of North America, both pre-Colombian and post-Colombian: social and political structures, cultural patterns, and the sequence of relationships both with other Indian groups and with the U.S. government. (3, 3T+0S)

260 HISTORY OF NEW MEXICO Survey from the explorations of Cabeza de Vaca to the present: the borderlands, Spanish, Indian, and Anglo contributions. (3, 3T+0S)

310 INDIGENOUS PERSPECTIVES OF NEW MEXICO HISTORY AND CULTURE Who and what is New Mexico? Inhabited for thousands of years, New Mexico and its peoples

have a complex and wondrous history. From the earliest native inhabitants a steady stream of peoples and cultures, from the Anasasi, Pueblo, Spanish, and the United States to the National Laboratories, have shaped New Mexico and its environs. The student will thoughtfully engage in who and what is New Mexico, its arts, politics, economics, history, and, and society through various readings. [Cross-listed as HUM 310] Pre-requisites: ENG 112. (4, 4T+0S)

421 HISTORY, LITERATURE, ART, AND PHILOSOPHY

Who are you? Who are we? How did we become what and who we are? What role did we play in shaping the world and ourselves? Different cultures and different interpretations of who we are and what we value and how we represent them. How does the study of the "Humanities" guide us in these explorations? Using the 'tools' of the humanities including expression, beliefs and traditions, you will be challenged to reflect deeply on these questions, which will be discussed through the integrated readings in history, literature, arts and philosophy. [Cross-listed as HUM 421, HSS 421, and PHIL 421] Pre-requisite: ENG 112. (6, 6T+0S)

HONORS (HON)

200 HONORS TOPIC This is an interdisciplinary exploration of specific topics designed to demonstrate the inter-connectedness of academic disciplines. May be repeated 4 times for credit. With permission of department chairperson, you may use this course to satisfy graduation requirements in the humanities or social/behavioral science general education core requirements, depending on the topic direction. Pre-requisite: ENG 112 and a minimum 3.2 cumulative GPA. (3, 3T+0S)

HUMANITIES (HUM)

101 HUMANITIES I Comparative study of religion, philosophy, art, metaphysics, ethics, and aesthetics (?B.C.E. to 1500 C.E.). Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

102 HUMANITIES II Comparative study of religion, philosophy, art, metaphysics, ethics, and aesthetics (1500 C.E. to present.). Pre-requisite: ENG 109N, or adequate score. (3, 3T+0S)

105 HUMANITIES AND THE SOUTHWEST This course emphasizes local and regional history, anthropology, ecology, art and folklore as a familiar, verifiable bridge into the universe of human experience; local solutions of universal human problems; the human place in the natural and cultural environment of the Southwest; the human capacity for expression, creativity, and the nature and transmission of knowledge. Involvement is primarily based on personal investigative assignments. Pre-requisite: ENG 109N. (3, 3T+0S)

200 HISTORY OF WORLD RELIGIONS You will explore the history of major religions of the world: where they came from and how they evolved into their present forms; examines the similarities and differences between them. [Cross-listed as HIST 200] (3, 3T+0S)

202 LEADERSHIP DEVELOPMENT This course is taught by instructors certified by Phi Theta Kappa, the International Honor Society for Two-Year Colleges, which own the course. The course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their leadership skills. You will integrate readings from the humanities, experiential exercises, films, and contemporary reading on leadership to gain a basic understanding of the concept of leadership theory while developing a personal philosophy of leadership and an awareness of the moral and ethical responsibilities of leadership. Pre-requisite: ENG 109N. (3, 3T+0s)

310 INDIGENOUS PERSPECTIVES OF NEW MEXICO HISTORY AND CULTURE Who and what is New Mexico? Inhabited for thousands of years, New Mexico and its peoples have a complex and wondrous history. From the earliest native inhabitants a steady stream of peoples and cultures, from the Anasasi, Pueblo, Spanish, and the United States to the National Laboratories, have shaped New Mexico and its environs. The student will thoughtfully engage in who and what is New Mexico, its arts, politics, economics, history, and, and society through various readings. [Cross-listed as HIST 310 and HSS 310] Pre-requisites: ENG 112. (4, 4T+OS).

311 WHY SOCIAL SCIENCES MATTER Who are we? How are we connected? Humans have been asking these questions throughout history, but the social sciences offer a more contemporary approach to these ideas. Our culture can define our humanness, and power and politics may influence our beliefs and define our social structures. We are separate but bound together by different groupings including but not limited to culture, family, religion and government. Human behavior may be seen on an individual basis, but must be understood in the context of many structures. You, the student, will reflect and contemplate these ideas through the integrated readings in anthropology, political science, sociology and psychology. [Cross-listed as HSS 311, PSY 311, and SOC 311] Pre-requisite: ENG 112. (6, 6T+OS).

414 HUMANITY AND CREATIVITY Petroglyphs on a rock wall, a Bach Sonata, Hip Hop, Our Lady of Guadalupe retablo, Gone With the Wind, a Laura Gilpin photograph, the Egyptian Pyramids, Sherman Alexis poetry, a beautiful carved tool, a Navajo weaving, a Michelangelo statue, a Georgia O'Keefe painting are contributions of art to humanity. Since the beginning of time humans have been creating art and enriching civilization. This course will explore human creativity through the arts and challenge students to explore creativity and the effect it has on our lives. [Cross-listed as ART 414 and HSS 414] Pre-requisite: ENG 112. (4,4T+OS)

421 HISTORY, LITERATURE, ART, AND PHILOSOPHY Who are you? Who are we? How did we become what and who we are? What role did we play in shaping the world and ourselves? Different cultures and different interpretations of who we are and what we value and how we represent them. How does the study of the "Humanities" guide us in these explorations? Using the 'tools' of the humanities including expression, beliefs and traditions, you will be challenged to reflect deeply on these questions, which will be discussed

through the integrated readings in history, literature, arts and philosophy. [Cross-listed as HIST 421, HSS 421, and PHIL 421] Pre-requisite: ENG 112. (6, 6T+OS).

422 SENIOR SEMINAR: THESIS AND DEFENSE Are you thinking critically? Are you thinking about problems that resist easy solutions and problems that call for combining your intellect and personal resources? Are you developing thoughtful ideas and pursuing creative alternatives? Contemplating and reflecting about these questions in yourself and within community is the central feature of the senior seminar. This seminar focuses on helping you to integrate the different aspects of the liberal arts education to begin developing a lifetime of learning and exploring. Readings, reflections, and communication will help you bring together the explored, diverse knowledge of the previous courses. [Cross-listed as HUM 422] Pre-requisites: HUM 222, 310, 311, 320, 414, and 421. (3, 3T+OS)

HUMANITIES & SOCIAL SCIENCES (HSS)

222 TEACHING IN DIVERSE COMMUNITIES In today's world, teaching only those students who share a teacher's or a community's background is neither desirable nor likely to happen. Diversity in an educational setting requires teachers to develop a framework for understanding how issues of culture, class and language impact the educational institution and relevant socio-cultural and to practice socioeconomic pedagogy that affirms and legitimizes the diversity of students. Our hope is to prepare "transformative teachers" by not only critically examining self and education, but implementing classroom practices that promote equity and justice and rigorous academic achievement for all students. (3, 3T+OS)

310 INDIGENOUS PERSPECTIVES OF NEW MEXICO HISTORY AND CULTURE Who and what is New Mexico? Inhabited for thousands of years, New Mexico and its peoples have a complex and wondrous history. From the earliest native inhabitants a steady stream of peoples and cultures, from the Anasasi, Pueblo, Spanish, and the United States to the National Laboratories, have shaped New Mexico and its environs. The student will thoughtfully engage in who and what is New Mexico, its arts, politics, economics, history, and, and society through various readings. [Cross-listed as HIST 310 and HUM 310] Pre-requisites: ENG 112. (4, 4T+OS).

311 WHY SOCIAL SCIENCES MATTER Who are we? How are we connected? Humans have been asking these questions throughout history, but the social sciences offer a more contemporary approach to these ideas. Our culture can define our humanness, and power and politics may influence our beliefs and define our social structures. We are separate but bound together by different groupings including but not limited to culture, family, religion and government. Human behavior may be seen on an individual basis, but must be understood in the context of many structures. You, the student, will reflect and contemplate these ideas through the integrated readings in anthropology, political science, sociology and psychology. [Cross-listed as HUM 311, PSY 311, and SOC 311] Pre-requisite: ENG 112. (4, 4T+OS).

320 GENESIS OF MATH AND SCIENCE Why is a petal on a rose pink? Why is the light so beautiful in New Mexico? How do I arrange my garden to maximize its beauty? Who am I? If you have ever “wondered” then you have studied math and science. Through your curiosity, questioning, and thoughtful exploration, the student will seek to understand as well as find the beauty in math and science. On your own terms and in reflection with others, you will challenge and question your own beliefs and feelings about math and science. You will also explore the relationships between math, science, and humanity. This seminar will allow you to struggle as well as find the “magic” in why? [Cross-listed as HUM 320] Pre-requisites: ENG 112. (4, 4T+0S)

410 SENIOR SEMINAR: TEACHING THE HUMANITIES You will focus on integrating the different aspects of the humanities education by teaching the humanities in an educational setting. Pre-requisites: HUM or HSS 222, 310, 311, 320, 414, and 421. (1, 0T+1S)

414 HUMANITY AND CREATIVITY Petroglyphs on a rock wall, a Bach Sonata, Hip Hop, Our Lady of Guadalupe retablo, Gone With the Wind, a Laura Gilpin photograph, the Egyptian Pyramids, Sherman Alexis poetry, a beautiful carved tool, a Navajo weaving, a Michelangelo statue, a Georgia O’Keefe painting are contributions of art to humanity. Since the beginning of time humans have been creating art and enriching civilization. This course will explore human creativity through the arts and challenge students to explore creativity and the effect it has on our lives. [Cross-listed as ART 414 and HUM 414] Pre-requisite: ENG 112. (4,4T+0S)

421 HISTORY, LITERATURE, ART, AND PHILOSOPHY Who are you? Who are we? How did we become what and who we are? What role did we play in shaping the world and ourselves? Different cultures and different interpretations of who we are and what we value and how we represent them. How does the study of the “Humanities” guide us in these explorations? Using the ‘tools’ of the humanities including expression, beliefs and traditions, you will be challenged to reflect deeply on these questions, which will be discussed through the integrated readings in history, literature, arts and philosophy. [Cross-listed as ART 421, HIST 421, HUM 421, and PHIL 421] Pre-requisite: ENG 112. (4, 4T+0S).

422 SENIOR SEMINAR: THESIS AND DEFENSE Are you thinking critically? Are you thinking about problems that resist easy solutions and problems that call for combining your intellect and personal resources? Are you developing thoughtful ideas and pursuing creative alternatives? Contemplating and reflecting about these questions in yourself and within community is the central feature of the senior seminar. This seminar focuses on helping you to integrate the different aspects of the liberal arts education to begin developing a lifetime of learning and exploring. Readings, reflections, and communication will help you bring together the explored, diverse knowledge of the previous courses. [Cross-listed as HUM 422] Pre-requisites: HUM 222, 310, 311, 320, 414, and 421 . (3, 3T+0S)

LIBRARY TECHNOLOGY (LT)

Note: Unless otherwise noted, each course in this department bears a co-requisite of ENG 109N. Classes are normally scheduled for Saturdays only.

201 CATALOGING Current practices in cataloging, classification, and processing of print and non-print material. You will become familiar with AACR2, Library of Congress and Dewey Decimal classification systems, and Sears and LC subject headings. You will be introduced to MARC tagging and automated cataloging techniques, including copy cataloging and ALA filing rules . (3, 3T+0S)

202 TECHNICAL SERVICES - ACQUISITIONS Techniques of selecting, ordering, and receiving library materials; collection development policies, intellectual freedom, copyright and automated acquisitions programs. (3, 3T+0S)

205 PUBLIC SERVICES Public services in all types of libraries, the role of the library technician, and the place of libraries in society; circulation, reference services, ILL, programming, and public relations; includes an introduction to automated library programs related to public services. (3, 3T+0S)

207 BASIC REFERENCE Evaluation and use of about 100 basic reference sources used in libraries as well as electronic resources. (3, 3T+0S)

209 MEDIA SERVICES Survey of processes necessary for the acquisition, use, and maintenance of the equipment common to media centers; includes some production work. (3, 3T+0S)

213 SPECIAL LIBRARIES Philosophy and organization of a special library, covering all aspects of operation; includes an introduction to automated library systems relative to special libraries. Prerequisites: LT 201, 202, 205, and 207. (3, 3T+0S)

215 PUBLIC LIBRARIES Philosophy and organization of a public library, including all aspects of operation; includes an introduction to automated library systems relative to public libraries. Prerequisites: LT 201, 202, 205, and 207. (3, 3T+0S)

217 SCHOOL LIBRARIES Philosophy and organization of a school library, covering all aspects of operation; includes. an introduction to automated library systems relative to school libraries. Prerequisites: LT 201, 202, 205, 209, and ENG 270. (3, 3T+0S)

219 ACADEMIC LIBRARIES Philosophy and organization of a college/university library, covering all aspects of operation; includes an introduction to automated library systems relative to academic libraries. Prerequisites: LT 201, 202, 205, and 207. (3, 3T+0S)

220 ADVANCED REFERENCE MATERIALS Evaluation and use of specialized reference materials (print and electronic) for libraries in business, science, fine arts, and social sciences. (3, 3T+0S)

221 MEDIA PRODUCTION Student production of media projects in video, computer programs, film, slides, or audio tapes. (3, 3T+0S)

223 LIBRARY INFORMATION FOR EDUCATORS As a future teacher, you will be introduced to the basic concepts for locating, accessing, and evaluating library information. You will learn how resources in print and electronic format can be used in a classroom setting. Pre-requisite: ENG 111. (1, 1T+0S)

MACHINIST APPRENTICESHIP (MT)

110 BASIC MACHINING OPERATIONS I Introduction to machine tool safety and operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

120 BASIC MACHINING OPERATIONS II Continuation of MT 110's introduction to machine tool operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

130 BASIC PRINT READING Introduction to reading and interpreting prints used by machinists. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

140 BASIC MATH FOR MACHINISTS Introduction to the mathematics used by machinists, including basic arithmetic and algebra. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

155 MATERIALS SELECTION Overview and selection of materials used in machining processes. Pre-requisite: acceptance into the Machinist Apprenticeship Program. (1, 1T+0S)

190A MACHINIST APPRENTICESHIP TRAINING This course provides the first semester of 600 hours of required training for the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

191B MACHINIST APPRENTICESHIP TRAINING This course provides the second semester of 600 hours of required training for the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

192C MACHINIST APPRENTICESHIP TRAINING This course provides the first summer session of 300 hours of required training for the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (6, 0T+6L)

210 ADVANCED MATH FOR MACHINISTS Advanced mathematics used by machinists, including geometry and trigonometry. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

220 ADVANCED MACHINING OPERATIONS I Advanced machine tool safety and operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

230 ADVANCED PRINT READING AND MEASUREMENT Advanced print reading and interpretation, an introduction to geometric dimensioning and tolerancing, and basic measurement/ inspection of parts. Prerequisite: acceptance into the Machinist Apprenticeship Program. (3, 3T+0S)

235 ADVANCED GEOMETRIC DIMENSIONING AND TOLERANCING Advanced geometric dimensioning and tolerancing for 3rd year Machinist Apprentices. Pre-requisite: MT 230. ((1, 1T+0S)

240 ADVANCED MACHINING OPERATIONS II Continuation of MT 220's advanced machine tool safety and operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (1, 1T+0S)

260 3RD YEAR MACHINING I Advanced machining operations for 3rd year Machinist Apprenticeship Program. Pre-requisite: acceptance into the Machinist Apprenticeship Program. (4, 4T+0S)

280 3RD YEAR MACHINING II Continuation of MT 260, machining operations for 3rd year Machinist Apprenticeship Program. Pre-requisite: MT 260 and acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

290D MACHINIST APPRENTICESHIP TRAINING This course provides the first semester of 600 hours of required training for the second year of the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

291E MACHINIST APPRENTICESHIP TRAINING This course provides the second semester of 600 hours of required training for the second year of the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

292F MACHINIST APPRENTICESHIP TRAINING This course provides the second summer session of 300 hours of required training for the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (6, 0T+6L)

MASSAGE THERAPY (MAS)

100L INTRODUCTION TO PROFESSIONAL MASSAGE Provides an overview of massage therapy as a career; presents theory of massage and hands-on experience, including the basics of Swedish massage; teaches techniques for stress management, relaxation, and wellness. Your abilities and aptitude will be evaluated to assist you in deciding whether a career in massage therapy is appropriate. This course will apply as an elective toward the credit needed for the massage certification program. (3, 2T+1L)

101L MASSAGE THERAPY I Provides a basic understanding and application of Swedish massage strokes, plus joint movements. You will discuss the benefits, common pathology, and contraindications inherent in massage therapy. You

will work on each other in a safe supportive professional environment, learning to give a therapeutic, stress-reducing professional massage treatment. You will address issues of personal growth and awareness, and you will explore many of the healing mechanisms of the body which are accessible to the massage therapist. Pre-requisites: ENG 109N and MATH 100N; Co-requisite: HSCI 110 or BIOL 237 and 237L, and BIOL 238 and 238L. (Fall only) (4, 3T+1L)

103L MASSAGE THERAPY II You will refine your massage skills, bringing fluidity and deeper awareness into your work; acquiring mastery of various bodywork techniques; cultivating a deeper understanding of the client/therapist relationship; discussing and applying energy flow theory; introduce and apply deep tissue work and specific injury techniques. You will work on each other under close supervision of a Registered Massage Therapy Instructor in a safe, supportive, and professional environment. Pre-requisite: MAS 101L; Co-requisites: HSCI 112 and 114. (Spring only) (4, 3T+1L)

104L MASSAGE THERAPY INTERNSHIP You will give one-hour massage treatments to volunteers, under the supervision of a Registered Massage Therapy Instructor in a professional, safe environment. Emphasis will be on Swedish massage, but you will be encouraged to incorporate learning from all other classes into your internship program. You will conduct interviews, take medical histories, use SOAP notes, and 10 hours of Hydrotherapy. Pre-requisite: MAS 101L; Co-requisite: MAS 103L. (Spring only) (3, 0T+3L)

108L MASSAGE THERAPY PRACTICE LAB You will have time to practice the basic massage therapy techniques that you are learning in MAS 101L, under the supervision of a Licensed Massage Therapy instructor. Co-requisites: MAS 101L and HSCI 110 or BIOL 237/L. (Spring only) (1, 0T+1S)

110 IMPROVING YOUR BODY MECHANICS This course is designed to teach registered Massage Therapists and Massage Therapy students appropriate body mechanic techniques to increase effectiveness and client satisfaction. Emphasis will be on learning techniques to decrease the possibility of therapist injury, pain, and tension. (1, 1T+0L)

113 INTRODUCTION TO FOOT REFLEXOLOGY You will learn to incorporate Foot Reflexology into your massage therapy treatment. You will cover the material needed to create a 60-minute treatment routine. Time will be devoted to theory, review, and to questions followed by demonstration and treatment practice. Pre- or Co-requisite: MAS 101L. (Spring only) (2, 2T+0S)

115 INTRODUCTION TO CRANIAL SACRAL TECHNIQUE You will be introduced to the basic anatomy, principles, palpation, and application techniques of cranial sacral. You will learn the first of three levels in Cranial Sacral techniques. Theory, review, and questions will be followed by a demonstration and treatment practice. Pre-or Co-requisite: MAS 101L or Department permission. (Spring only) (1, 1T+0S)

150 MASSAGE THERAPY NATIONAL EXAM REVIEW You will review pertinent subjects and curriculum needed to be able

to take and pass the National Certification Examination for Therapeutic Massage and Bodywork. Permission of Department. (Summer only) (1, 1T+0S)

MATERIALS SCIENCE (MATE)

101 MATERIALS SCIENCE AND PROPERTIES Descriptive introduction to the properties and structures of materials. Pre-requisites: MATH 102N and ENG 109N. (2,2T+0S)

290 INTRODUCTION TO MATERIALS SCIENCE An interdisciplinary survey covering tools and techniques used in the study of the structure and mechanical properties of engineering materials (e.g., semiconductors, polymers, metals). Includes discussion and demonstrations of materials strengthening, materials failure, and non-destructive evaluation methodology. Pre-requisite: CHEM 121 and 121L. (Spring only) (3, 3T+0L)

MATHEMATICS (MATH)

100N FUNDAMENTALS OF MATHEMATICS Introduction to the mathematical method and its use in practical applications, with a focus on developing concepts of symbolic notation, operational hierarchy, positive integers, prime factorization, decimal representation, and metric geometry; stresses using mathematical concepts as tools in problem solving. Pre-requisite: adequate score on Course Placement Evaluation. (6, 6T+0S)

102N BASIC ALGEBRA First complete course in algebra for those not prepared for college-level algebra: fundamental operations with signed values, fractions, ratio and proportion, linear equations, graphs, factoring, quadratic equations, polynomials, inequalities and sets. Pre-requisite: MATH 100N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

130 INTERMEDIATE ALGEBRA Elementary functions with emphasis on graphical representations of linear functions, quadratic functions, exponential and logarithmic functions, inverse functions, polynomial functions, systems of equations, inequalities, and complex numbers. Pre-requisite: MATH 102N. (3, 3T+0S)

145 INTRODUCTION TO PROBABILITY & STATISTICS Basic probability and statistics, including analysis of numerical data, basic probability models, sampling inference, applications of the computer in statistics, and related topics. Pre-requisite: MATH 130. (3, 3T+0S)

150 COLLEGE ALGEBRA College algebra as preparation for trigonometry: functions, graphs, equations, inequalities, exponentials, logarithms, quadratics, matrices, and determinants, imaginary and complex equations and their graphs, sequences, series, mathematical induction, and an introduction to probability. Pre-requisite: MATH 130. (3, 3T+0S)

155 TRIGONOMETRY Review of relations and functions, imaginary and complex numbers, and exponential and logarithmic functions: stresses circular functions, rotations, iden-

ities, inverses, triangles, and vectors. Pre-requisite: MATH 150. (3, 3T+0S)

162 CALCULUS I Cartesian plane and functions, limits and continuity, differentiation, the derivative as the slope of curve, rules and applications of differentiation, increasing and decreasing functions, the indefinite and definite integral. Pre-requisite: MATH 155. (4, 4T+0S)

163 CALCULUS II The indefinite integral, the fundamental theorem of calculus; applications of the definite integral; volumes of solids; revolution, logarithmic, and exponential functions, techniques of integration conic and sections polar coordinates. Pre-requisite: MATH 162. (4, 4T+0S)

210 MATH FOR ELEMENTARY TEACHERS This course will prepare you as a prospective elementary school teacher with problem solving techniques related to topics taught at the K-8 level. You will strengthen your understanding of mathematical topics through the study of problem solving, number theory, set theory, geometry, practical measurement, and the use of technology. Pre-requisite: MATH 102N. (3, 3T+0S)

264 CALCULUS III Parametric equations and vectors in the plane and in three-dimensional space, functions of several variables, extreme of functions in two variables, directional derivatives and gradients, tangent planes, multiple integrals and iterated integrals as applied to volumes, surface areas, centers of mass and moments of inertia, triple integrals, infinite series and test for convergence and divergence, and differential equations. Pre-requisite: MATH 163. (4, 4T+0S)

290 UNDERGRADUATE RESEARCH EXPERIENCE IN MATHEMATICS This is a computer-based experience in mathematical research, supported by laboratory work. You will learn computational modeling, experimental design, library and Internet information searches and research methodology, while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on nonlinear dynamics, differential equations, and mathematical physics. Pre-requisite: Minimum grade average of 3.50 in MATH 130 and MATH 150., or permission of instructor. (May be repeated for credit) (3, 3T+0L)

MECHANICAL ENGINEERING (ME)

234 DYNAMICS Principles of dynamics. Kinematics and kinetics of particles, systems of particles, and rigid bodies. Prerequisite: CE 233. (3, 3T+0S)

MUSIC (MUS)

102 MUSIC THEORY I Concentrated course in written music structure, musical notation, and fundamentals. This course is strongly recommended for all those pursuing musical studies. Prerequisite: ENG 109N. (3, 3T+0S)

103 MUSIC HISTORY AND LITERATURE I You will study the history of musical instruments, oral traditions, and music of Western civilization from antiquity to the year 1750. Pre-

requisite: ENG 109N. (3, 3T+0S)

105 MUSIC APPRECIATION Develops a foundation in the enjoyment and understanding of Western civilization's music through the use of recorded music and song literature; analysis of music styles and periods of development and of their relation to other subjects and activities. Prerequisite: ENG 109N. (3, 3T+0S)

107 INTRODUCTION TO STRINGS, PERCUSSION, WOODWIND, AND BRASS INSTRUMENTS Fundamentals of string, percussion, woodwind, and brass instruments. Provides a strong background in techniques and styles. (3, 3T+0S)

109 APPLIED MUSIC: FOLK GUITAR I Basic instruction in folk guitar. May be repeated once for credit. (2, 1T+1S)

110 APPLIED MUSIC: PIANO I Basic instruction in piano from beginning to intermediate level. May be repeated once for credit. (2, 1T+1S)

111 APPLIED MUSIC: GUITAR I Basic instruction in classical guitar from beginning to intermediate level. May be repeated once for credit. (2, 1T+1S)

112 APPLIED MUSIC: VOICE I Basic instruction in voice from beginning to intermediate levels. May be repeated twice for credit. (2, 1T+1S)

113 APPLIED MUSIC: VIOLIN Basic principles of playing violin: finger patterns, bowing and vibrato techniques. May be repeated twice for credit. (2, 1T+1S)

114 APPLIED MUSIC: FLAMENCO GUITAR I Basic rhythm patterns and strums for the "Cante Chico" and an introduction to "Soleares and Bulerias of the Cante Hondo." (2, 1T+1S)

115 APPLIED MUSIC: SAXOPHONE Basic instruction in saxophone from beginning to intermediate level. May be repeated twice for credit. (2, 1T+1S)

116 APPLIED MUSIC: MARIACHI Beginning to intermediate instruction in Mariachi music ensemble. Maybe be repeated once for credit. Pre-requisite: MUS 102 and one year experience playing an instrument. (Var, 0T+1-3S)

117 APPLIED MUSIC: BASS Basic instruction in bass from beginning to intermediate level. May be repeated twice for credit. (2, 1T+1S)

119 HISTORY OF FLAMENCO Overview of Spanish music history; and introduction to the elements of the Flamenco Tablao; and the history of Flamenco music. Includes readings from Flamenco historian D.B. Pohren and a layman of "Aficionados." (3, 3T+0S)

211 DANCE ACCOMPANIMENT I Teaches rhythmic patterns and styles for dance accompaniment at the beginning level, with the use of the guitar. Prerequisite: MUS 114. (2, 1T+1S)

124 DRUMMING I: WEST AFRICAN A beginning class in basic rhythmic patterns and techniques of West African drumming, including the history and culture of drumming throughout all of West Africa. May be repeated once for credit. (2, 1T+1S)

211 APPLIED MUSIC: GUITAR II Continuation of MUS 111. Instruction in guitar from intermediate to advanced level. May be repeated twice for credit. (2, 1T+1S)

212 APPLIED MUSIC: VOICE II In this continuation of MUS 112, you will be presented with more advanced development of singing techniques. Pre-requisite: MUS 112. May be repeated for credit. (2, 1T+1S)

214 APPLIED MUSIC: CHORUS You will be provided an opportunity for vocal participation through study of singing techniques and song literature. May be repeated twice for credit. Prerequisite: MUS 112. (2, 1T+1S)

216 MUSIC THEORY II Continuation of MUS 102, with studies in harmony, texture, structure, tone-color, rhythm, and melody. Recommended for music majors. Prerequisite: MUS 102. (3, 3T+0S)

218 MUSIC HISTORY & LITERATURE II Continuation of MUS 103, from the Viennese Classic period of 1750 to modern music of the present. Prerequisite: MUS 103 and ENG 109N. (3, 3T+0S)

219 APPLIED MUSIC: FOLK GUITAR II Intermediate-level instruction in folk music for guitar. You will study different styles of folk music, advanced chordal progressions, and musical notation requirements. Pre-requisite: MUS 111. (Fall only) (2, 1T+1S)

220 APPLIED MUSIC: MUSICA FOLKLORICA VOCAL AND INSTRUMENTAL ENSEMBLE Studies song literature and performance of traditional and modern Hispanic folk songs. Membership is open and you will be selected by audition by the instructor. Includes performance for special occasions on and off campus. (2, .5T+1.5S)

221 APPLIED MUSIC: PIANO II Continuation of MUS 110. Instruction from intermediate to advanced level. May be repeated twice for credit. (2, 1T+1S)

222 DANCE ACCOMPANIMENT II Rhythmic patterns and styles for Flamenco dance accompaniment at the intermediate level with the use of the guitar. Prerequisite: MUS 121. (2, 1T+1S)

223 APPLIED MUSIC: FLAMENCO GUITAR II You will study the higher Flamenco forms such as the "Soleares, Bulerias, and Alegias." Prerequisite: MUS 114. (2, 1T+1S)

224 DRUMMING II: WEST AFRICAN A continuation of MUS 124, covering more complex West African drumming rhythms and techniques, as well as history and culture. Provides more emphasis on group drumming and drumming with other music. May be repeated once for credit. (2, 1T+1S)

225 MUSICA FOLKLORICA LA NUEVA CANCION You will become familiar with the history, vocabulary, origin, and developments of traditional instruments, songs, and traditional Spanish folkloric music. The music will be in Spanish. Prerequisite: MUS 105 and ENG 109N. (3, 3T+0S)

226 MUSIC COMPOSITION You will study the basic principles of composing including techniques in melodic contour, organization, form, rhythm and meter, and modal melodic. Prerequisite: MUS 102; Co-requisite: MUS 216. (3, 3T+0S)

227 TRADITIONS IN FLAMENCO You will study the traditions of Flamenco music and dance from Spain, beginning with early styles to present day techniques. Prerequisite: MUS 119. (3, 3T+0S)

231 STRUCTURAL STUDY OF FLAMENCO MUSIC You will study the Tablao, Palmas, and Rhythmic patterns of Flamenco music. Prerequisites: MUS 121, MUS 223, and MUS 227. (2, 2T+0S)

NATURAL RESOURCES (NR)

101 SOILS Study of soil composition and classification; relationship of soil to plant growth and animal health; use of fertilizers, soil erosion and its control; world population growth and soil resources. Co-requisite: NR 101L. (3, 3T+0L)

101L SOILS LABORATORY Soil morphology and development. Field analysis and characterization of soil profiles. Impact of weather, drainage, agricultural, industrial, and man-made factors on edaphic characterization. Co-requisite: NR 101. (1, 0T+1L)

102 WATER MANAGEMENT New Mexico and federal water laws, various methods of irrigation; livestock watering methods, water diversion, and soil erosion control. (3, 3T+0L)

103 BOTANY OF FOREST AND RANGE Study of botany relationships involved when any tract of land is managed for both forage and timber crops. (3, 3T+0L)

NURSING (NURS)

When participation is required at a clinical setting, students are responsible for their own transportation. Clinical lab courses are graded on a "credit/no credit" basis.

102 STRATEGIES FOR NURSING SUCCESS Provides you with useful strategies that will increase your potential for success in college and after college in the workplace. Covers nursing opportunities, self-awareness, time management, and skills for enhanced learning and retention. (1, 1T+0L)

105 PHARMACOLOGY Introduces you to the concepts necessary for safe basic medication administration, with an emphasis on major drug groups, prototypes, therapeutic use, adverse effects, side effects, toxicity, nursing implications, and client education. Prerequisites: BIOL 237 and 237L, BIOL 238 and 238L, and HSCI 190; Co-requisites: BIOL 210 and 210L. (3, 3T+0L)

113 NURSING FUNDAMENTALS Introduces you to the concepts basic to the professional nursing role, with an emphasis on the care of adults in the application of the nursing process. You will learn to integrate holistic knowledge, holism, caring, communication, and teaching into the planning, implementation, and evaluation of effective nursing skills. Prerequisites: BIOL 237 and 237L, BIOL 238 and 238L; Co-requisites: NURS 105, BIOL 210 and 210L, and HSCI 204. (4, 4T+0L)

113L NURSING FUNDAMENTALS CLINICAL Combines simulated lab and clinical experience with hands-on practice of concepts from NURS 113. Co-requisite: NURS 113. (2, 0T+2L)

115 MEDICAL-SURGICAL NURSING I Presents theoretical and practical aspects in the nursing care of adults with common, basic medical/surgical disorders, with an emphasis on assessment, goal setting, and intervention for selected nursing diagnoses. Integrates concepts of aging, nutritional therapy, and pharmacology. Prerequisites: NURS 113 and 113L, BIOL 210 and 210L; Co-requisites: NURS 115L, PSY 290, and CS 102. (4, 4T+0L)

115L MEDICAL-SURGICAL NURSING I CLINICAL Combines simulated lab and clinical experience with hands-on practice of concepts from NURS 115. Co-requisite: NURS 115. (2, 0T+2L)

116 INTRODUCTION TO MATERNAL-CHILD NURSING Introduces you to the nursing care of mothers, infants, and children, using the nursing process with an emphasis on client needs related to normal physiological and developmental processes and common health problems. Integrates concepts of aging, nutritional therapy, and pharmacology. Prerequisites: NURS 105, NURS 113 and 113L, and HSCI 204 with grades of ?C? or better; Co-requisites: NURS 116L and PSY 290. (2, 2T+0L)

116L INTRODUCTION TO MATERNAL-CHILD NURSING CLINICAL Combines simulated lab and clinical experience with hands-on practice of concepts from NURS 116; Co-requisite: NURS 116. (1, 0T+1L)

119 ROLE TRANSITION — PRACTICAL NURSE Provides you with information specific to the discipline of nursing appropriate to the practical nurse, including the role of the PN related to the nursing process, management of patient care, and legal responsibility and accountability. Prerequisites: NURS 105, NURS 113 and 113L, BIOL 210 and 210L, and HSCI 204; Co-requisites: NURS 115 and 115L, 116 and 116L, PSY 290, and CS 102. (2, 2T+0L)

200 ROLE TRANSITION — REGISTERED NURSE You will explore the role of the RN in comparison to that of the PN. Provides a framework for a successful transition to the RN role. Topics include holism, nursing process, health assessment, patient education, and the process of adjustment to change. Prerequisites: Completion of course requirements for LPN/LVN program or current licensure as LPN/LVN. (Fall only) (2, 2T+0L)

214 PSYCHIATRIC/MENTAL HEALTH NURSING Introduces you to the basic concepts for nursing care of clients with psychiatric/mental health needs. You will learn to use the nursing process in caring for clients across the life span. Integrates concepts of nutritional therapy and pharmacology. Prerequisites: All Level-I courses; Co-requisite: NURS 214L. (2, 2T+0L)

214L PSYCHIATRIC/MENTAL HEALTH NURSING CLINICAL Uses a variety of clinical settings in the application of the concepts from NURS 214. Co-requisite: NURS 214. (1, 0T+1L)

215 MEDICAL-SURGICAL NURSING II Presents theoretical and practical aspects in the nursing care of adults with common, complex medical/surgical disorders. Emphasis is on assessment, goal setting, and intervention for selected nursing diagnoses. Integrates concepts of aging, nutritional theory, and pharmacology. Prerequisites: All Level-I courses; Co-requisite: NURS 215L (4, 4T+0L)

215L MEDICAL-SURGICAL NURSING II CLINICAL Combines a simulated lab and clinical experiences in the application of concepts from NURS 215. Co-requisite: NURS 215. (2, 0T+2L)

216 MATERNAL-CHILD NURSING II Emphasis is on the care of women across the life span, children from birth to age eighteen, and childbearing and child rearing families with complex health care problems. Integrates concepts of growth and development, nutritional theory, and pharmacology. Prerequisites: All Level-I courses; Co-requisite: NURS 216L. (4, 4T+0L)

216L MATERNAL-CHILD NURSING II CLINICAL Combines a simulated lab and clinical experiences in the application of concepts from NURS 216. Co-requisite: NURS 216. (2, 0T+2L)

228 INTEGRATED NURSING Introduces you to the roles and activities of the professional nurse, including concepts of nursing leadership and management. Emphasizes use of critical thinking skills in integrating complex concepts in the care of groups of clients. Prerequisite: NURS 215 and 215L, and NURS 216 and 216L; Co-requisites: NURS 228L. (Spring only) (4, 4T+0L)

228L INTEGRATED NURSING CLINICAL Provides clinical experiences in a variety of settings with emphasis on application of concepts from NURS 228. Co-requisite: NURS 228. (2, 0T+2L)

243 PATHOPHYSIOLOGY I In this course, which is organized by body systems, you will discuss alterations in human physiological function.. NURS 243 and 244 cover different body systems and do not need to be taken in sequence. Prerequisite, BIOL 237 and 237L, BIOL 238 and 238L. (3, 3T+0L)

244 PATHOPHYSIOLOGY II In this course, which is organized by body systems, you will discuss alterations in human physiological function.. NURS 243 and 244 cover different

body systems and do not need to be taken in sequence. Prerequisite, BIOL 237 and 237L, BIOL 238 and 238L (3, 3T+0L)

OFFICE ADMINISTRATION (OA)

100 WINDOWS An overview of computer hardware and software, with an in-depth study of a graphical user interface by using Microsoft Windows. (3, 3T+0S)

101 BUSINESS EDITING SKILLS You will learn proofreading techniques, reviewing spelling, punctuation, grammar, and word processing formats on various types of business documents and worksheets. (Spring only) (3, 3T+0S)

103 INTRODUCTION TO KEYBOARDING Introduction to basic keyboarding skills on the letters of the alphabet, numbers, and symbols. Emphasizes speed and accuracy. This course is for students with NO previous instruction in keyboarding. (1, 1T+0S)

104 PRINCIPLES OF KEYBOARDING Recommended for students with no previous instruction in typing. Instruction includes alphabetic and numeric keyboard fingering. You will receive practice in speed building exercises, getting acquainted with computer special function keys, and basic business formats for personal typing. (3, 3T+0S)

111 MICROCOMPUTER APPLICATIONS IN BUSINESS You will study the owner/manager approach to the use of microcomputers: systems design, software, business applications, and the Windows environment. [Cross-listed as BA 111] (3, 3T+0S)

113 NOTEHAND Introduces an abbreviated writing system based primarily on longhand and secondarily on phonetics. (3, 3T+0S)

115 FILES MANAGEMENT Introduces the principles, procedures, and new technology of records management. Covers alphabetic, subject, numeric, geographic, and computer storage methods. (3, 3T+0S)

117 TIME MANAGEMENT You will learn information management applications which provide tools to send and receive e-mail, organize schedules and maintain contact lists, to-do lists, and notes. (Spring only) (3, 3T+0S)

118 PROFESSIONAL DEVELOPMENT Promotes self-understanding, self-management, personal and professional communication and appearance, leadership, personal and interpersonal relationships, positive attitudes, and goal setting. (3, 3T+0S)

132 MEDICAL TRANSCRIPTION You will correctly identify terminology, spell and define terms, and prepare appropriate forms and reports through the simulation of a medical office environment using audio cassettes. Prerequisite: OA 103. (3, 3T+0S)

134 LEGAL TRANSCRIPTION Introduces legal terminology

through spelling and defining terms, and preparing appropriate letters, memos, and forms through the simulation of a legal office environment using audio cassettes. Prerequisite: OA 103. (3, 3T+0S)

135 INTRODUCTION TO ACCOUNTING Studies basic accounting principles and conceptual framework. Places heavy emphasis on the accounting model. (3, 3T+0S)

139 INTRODUCTION TO MS WORD A brief overview of the word processing application package, Microsoft Word. You will learn to create basic documents, such as letters and memos. You will be provided with the basic knowledge as well as hands-on experience to allow you to become computer literate in Word. (1, 1T+0S)

151 INTRODUCTION TO MS PUBLISHER Introduction to the electronic desktop publication ? specifically how to use, design, and edit publications for use in a variety of personal and business applications. Microsoft Publisher will be the specific software to which you will be exposed. (1, 1T+0S)

155 INTRODUCTION TO MS ACCESS Introduction to the electronic database ? specifically, how to use, design, and edit databases for use in a variety of personal and business applications. Microsoft Access will be the specific software to which you will be exposed. (1, 1T+0S)

204 ADVANCED KEYBOARDING Focuses on developing speed and accuracy through the use of skill-building software. Emphasis is placed on the touch typing of numerals in relation to the preparation of business documents. Prerequisite: OA 104, or keyboarding speed of correct words a minute. (3,3T+0S)

215 BUSINESS COMMUNICATIONS Development of a positive, supportive communication system effectively applied to written transactions within the business organization. Develops skills in business writing with emphasis on the preparation of letters and reports, and on presenting information in a logical, forceful, and acceptable form. Prerequisites: For BA majors — ENG 111; For OA majors — OA 103 and 116. (3, 3T+0S)

220 OFFICE PROCEDURES Reinforces knowledge and skills necessary to perform office tasks effectively through such activities as business communications, transmittal services, administrative support services, employment and placement procedures, career promotion, and supervision. Prerequisites: OA 108 , OA 130, OA 215, and approved word processing software with grades of "C" or better. (3, 3T+0S)

249 MICROSOFT WORD Covers the commands of Microsoft Word by using step-by-step applications; provides a working knowledge of the basic and intermediate capabilities of Microsoft Word on an IBM compatible. Prerequisite: OA 103 with a grade of "C" or better, or 25 correct words a minute. (3, 3T+0S)

251 ADVANCED WORD You will gain a working knowledge of the advanced applications of Microsoft Word, including

merging documents, adding special features, adding visual elements, formatting with macros and styles, sharing data, and creating specialized tables. This course is required for Microsoft User Certification Specialist (MOS). Pre-requisite: OA 249. (3, 3T+0S)

260 ADOBE PAGEMAKER Introduces desktop publishing concepts using step-by-step applications to create flyers, newsletters, reports, brochures, resumes, and other publications using page-layout software. Prerequisites: OA 103, or 25 correct words a minute. (3, 3T+0S)

261 DESKTOP PUBLISHING MS PUBLISHER Introduction and application of desktop publishing concepts using Microsoft Publisher in the Windows environment to create flyers, newsletters, reports, brochures, resumes, and other publications using page-layout software. Prerequisites: OA 100 and OA 103, or 25 correct words a minute. (3, 3T+0S)

265 ACCESS A Windows database course teaching basic through intermediate features: creating and editing databases by using step-by-step activities; formatting fields and entering calculated fields, as well as creating forms and using queries to extract information. Prerequisite: OA 103, or 25 correct words a minute. (3, 3T+0S)

267 ADVANCED ACCESS You will gain a working knowledge of the advanced applications of Microsoft Access, including advanced tables, forms, queries, and reports; automating, securing, and integrating databases. This course is required for Microsoft User Certification Specialist (MOS). Pre-requisite: OA 265. (3, 3T+0S)

PERSONAL DEVELOPMENT (PD)

All Personal Development courses are graded on a "credit/no credit" basis, with the exception of PD 120.

090 INDEPENDENT LIVING I You will learn functional approaches to acquiring daily living skills needed to live independently, including money management, shopping, meal preparation, finding housing, leisure, and transportation. Co-requisite: PD 090L. (Fall) (2, 2T+0S)

090L INDEPENDENT LIVING I LAB You will have the opportunity to apply the skills you learned in PD 090 in a practical manner. Co-requisite: PD 090. (Fall) (1, 0T+1S)

091 INDEPENDENT LIVING II By building on the skills you have learned in PD 090, you will learn to develop daily living skills in such areas as budgeting, comparison shopping, meal preparation, diet and nutrition, maintaining housing, health, and transportation. Pre-requisite: PD 090; Co-requisite: PD 091L. (Spring) (2, 2T+0S)

091L INDEPENDENT LIVING II LAB You will have the opportunity to apply the skills you learned in PD 091 in a practical manner, on campus and in the community. Pre-requisite: PD 090; Co-requisite: PD 091. (Spring) (1, 0T+1S)

093 SOCIAL SKILLS I You will go through an interactive

approach to gaining personal and social skills appropriate to your age in order to develop beginning competency for relational problem solving. (Fall) (1, 1T+0S)

094 SOCIAL SKILLS II You will go through an interactive approach to gaining personal and social skills appropriate to your age, building on the skills you have acquired in PD 093. Pre-requisite: PD 093. (Spring) (1, 1T+0S)

095 JOB SKILLS I You will study the skills you will need to get and keep a job through studying such topics as job attitudes, employer expectations, job search activities, basic resume writing, job interview skills, and gaining assistance from job placement agencies. (Fall) (1T+0S)

096 JOB SKILLS II Building on the skills you have learned in PD 095, you will study in more depth those skills needed to get and keep a job, including career planning, job search activities, job attitudes, advanced resume writing, job interview skills, meeting employee expectations, job satisfaction, changing jobs, and understanding the workplace culture. Pre-requisite: PD 095. (Spring) (1, 1T+0S)

101N BASIC READING Designed to teach reading, speaking, and spelling from the beginning. Class content enables you to have a functional knowledge of necessary skills that are reliable and useful for reading. Emphasis is placed on increased reading, writing, and real-life situations. Supplementary materials include workbooks and computer programs. (6, 6T+0S)

105 READING AND STUDY SKILLS Introduces strategies and techniques necessary for developing college study skills. Includes methods and practice in increasing reading speed and comprehension; techniques for improving skills in listening, taking reading and lecture notes; studying for objective and essay examinations; developing vocabulary and basic sentence skills, and mastering spelling; and using the library and Student Success Center. (3, 3T+0S)

108N BASIC COMPUTATIONAL SKILLS Focus on mathematics for those who have serious deficiencies in basic skills, for those students with unique needs, and for students who may have some degree of anxiety about learning math. Presents math in a simple, logical, and applied way. Co-requisite: PD 108L. (3, 3T+0S)

108L BASIC COMPUTATIONAL SKILLS LAB Reinforcement of skills learned in PD 108N, with hands-on learning and application. Emphasis is on multi-sensory methods through computer and manipulatives. Co-requisite: PD 108N. (1, 0T+1L)

120 BECOMING A MASTER STUDENT Through concentrating on study skills, learning styles, goal setting, and developing critical thinking and writing skills you will be given an opportunity to develop strategies which you can adopt and modify for lifelong learning and academic, personal, and professional success. (3, 3T+0S)

PHILOSOPHY (PHIL)

Note: each course in this department bears a Pre-requisite of ENG 109N.

110 INTRODUCTION TO PHILOSOPHICAL PROBLEMS

Analysis of problems in values, knowledge, and reality in relationship to social, political, and religious philosophies. (3, 3T+0S)

111 HISTORY OF PHILOSOPHY Surveys the history of philosophical thought from the ancient Greeks to the present. (3, 3T+0S)

220 ETHICS Survey of the development of morality, principles of individual and social behavior, and past and present ethical issues. (3, 3T+0S)

421 HISTORY, LITERATURE, ART, AND PHILOSOPHY

Who are you? Who are we? How did we become what and who we are? What role did we play in shaping the world and ourselves? Different cultures and different interpretations of who we are and what we value and how we represent them. How does the study of the "Humanities" guide us in these explorations? Using the 'tools' of the humanities including expression, beliefs and traditions, you will be challenged to reflect deeply on these questions, which will be discussed through the integrated readings in history, literature, arts and philosophy. [Cross-listed as ART 421, HIST 421, HUM 421, and HSS 421] Pre-requisite: ENG 112. (6, 6T+0S).

PHYSICS (PHYS)

110 INTRODUCTION TO PHYSICS Introduction to the fundamental laws of classical and modern physics. Co-requisite: PHYS 110L. (3, 3T+0L)

110L INTRODUCTION TO PHYSICS LAB Co-requisite: PHYS 110. (1, 0T+1L)

121 APPLIED PHYSICS I Study of the physics of mechanics, heat, and sound with applications in modern technology; for students in technological fields. Prerequisite: MATH 130; Co-requisite: PHYS 121L. (3, 3T+0L)

121L APPLIED PHYSICS I LAB Co-requisite: PHYS 121. (1, 0T+1L)

122 APPLIED PHYSICS II Continuation of PHYS 121. Prerequisite: PHYS 121/L; Co-requisite: PHYS 122L. (3, 3T+0L)

122L APPLIED PHYSICS II LAB Co-requisite: PHYS 122. (1, 0T+1L)

215 ENGINEERING PHYSICS I Mechanics, fluids, vibrations, and sounds; problem solving and demonstrations. Prerequisite: MATH 162; Co-requisite: PHYS 215L. (3, 3T+0L)

215L ENGINEERING PHYSICS I LAB Co-requisite: PHYS 215. (1, 0T+1S)

216 ENGINEERING PHYSICS II Heat, electricity, magnetism, problem solving, and demonstrations. Prerequisite: PHYS 161/L; Prerequisite: MATH 162 Co-requisite: PHYS 216L. (3, 3T+0L)

216L ENGINEERING PHYSICS II LAB Co-requisite: PHYS 216. (1, 0T+1L)

290 UNDERGRADUATE RESEARCH EXPERIENCE IN PHYSICS

A math-based experience in physics research, combining computational and experimental techniques through which you will learn computational modeling, experimental design, library and Internet information searches and research methodology while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on nonlinear dynamics, chemical physics, and particle physics. (May be repeated for credit). Prerequisite: Grade average of at least 3.50 in MATH 130 and MATH 150, or permission of instructor. (3, 3T+0L)

PLUMBING (PLB)

130 PLUMBING I Theoretical training in job safety; plumbing tools and materials; joining of pipe, sizing, and installing drain, waste vent piping; sizing and installing water supply piping; system testing. (3, 3T+0S)

130L PLUMBING LAB I Practical application in using tools; installing pipe for drain, waste, and vent systems; installing pipe for water supply systems; system testing. (5, 0T+5S)

131 PLUMBING CODE I Application and interpretation of the Uniform Plumbing Code relating to definition, materials, general regulations, drainage and venting systems, joint and connections, and plumbing fixtures. (2, 2T+0S)

132 BLUEPRINT READING Interpreting and drawing orthographic and isometric drawings involving a variety of floor plans requiring different pipe layouts. (2, 2T+0S)

140 PLUMBING SYSTEMS II Expands on process of installing sanitary drainage and vent piping, sizing water supply piping, plumbing fixtures and appliances, fuel gas sizing, and piping and system testing. (3, 3T+0S)

140L PLUMBING SYSTEMS II LAB Practical application of PLB 140. (5, 0T+5S)

141 PLUMBING CODE II Application and interpretation of the Uniform Plumbing Code relating to water distribution, building sewers, fuel gas piping and water heaters & vents. (2, 2T+0S)

142 BLUEPRINT READING AND DRAWING Interpretation of residential and commercial blueprints involving different layouts used in the rough-in of sanitary drainage and vent piping, water distribution, and fuel gas piping. (2, 2T+0S)

150L PLUMBING PRACTICUM You will gain hands-on experience as a plumber's assistant. Prerequisite: PLB 140. (Summer only) (4, 0T+4S)

POLITICAL SCIENCE (PSCI)

Note: each course in this department bears a Pre-requisite of ENG 109N.

110 THE POLITICAL WORLD Introduces you to political science with emphasis on the evolution of political thought and the realities of politics today. (3, 3T+0S)

120 CONTEMPORARY POLITICAL ISSUES You will study political issues confronting the individual in modern society at local, national, and international levels. (3, 3T+0S)

200 AMERICAN POLITICS Survey of American politics, theory of democracy, political institutions, the electorate, American governmental branches and their bureaucracies. (3, 3T+0S)

210 STATE AND LOCAL GOVERNMENT You will explore the nature of state and local governments and the relationships which those governments have with the federal government; functions of state and local governments with emphasis on New Mexico municipal, county, and state governments; study of New Mexico politics and its role in political parties. (3, 3T+0S)

212 THE AMERICAN PRESIDENCY You will study the Presidency as an institution of power and of leadership, and its relation to other political institutions. (3, 3T+0S)

PSYCHOLOGY (PSY)

105 GENERAL PSYCHOLOGY Introduces you to the traditional areas of psychology including psychobiology, learning, motivation, personality, psychopathology, psychotherapy and social problems. You will examine factors which determine and affect behavior, with emphasis on psychological principles applied to the human experience. (3, 3T+0S)

110 ISSUES OF DEATH AND DYING You will study the issues of death and dying from both a personal and social perspective, including the stages of dying and grief, developmental understanding of death, the impact of death and grief on family systems; legal and ethical issues regarding death and dying. (3, 3T+0S)

210 THEORIES OF PERSONALITY AND COUNSELING APPLICATIONS Survey of theory and application of both classical and contemporary approaches to the study of personality, with emphasis on an application of theory to counseling; consideration of legal and ethical issues within the profession of counseling. (3, 3T+0S)

211 APPLIED PSYCHOLOGY Application of psychological theory to topics with applications to everyday life, law, behavior modification, biofeedback, counseling, consumer psychology, and environmental problems. (3, 3T+0S)

212 CHILD PSYCHOLOGY AND DEVELOPMENT You will study of the development and behavior of the child from conception to adolescence, with emphasis on physical, emotional, social, and intellectual development through an understand-

ing of the major theorists including Erikson and Piaget. Practical applications of theory into practice for preschool-elementary classroom will be incorporated. (3, 3T+0S)

215 BASIC COUNSELING TECHNIQUES You will become acquainted students with basic counseling skills, including active listening techniques such as paraphrasing, summarization, attending behaviors, and focusing; emphasis is on rehearsal of skills.. (3, 3T+0S)

216 ADVANCED COUNSELING TECHNIQUES Emphasizes therapeutic interventions, conceptualization of problems, setting goals, selecting strategies, and treatment planning. (Pre-requisite: PSY 215 with a grade of "C" or better. (Spring) (3, 3T+0S)

217 INTERVIEWING AND ASSESSMENT Covers basic counseling skills which include active listening techniques such as reflection of content and feelings. Also includes therapeutic interventions, assessment of clients, setting goals, selecting strategies with clients, and treatment planning. Emphasis is on rehearsal of skills. (3, 3T+0S)

225 CREATIVE DRAMA TECHNIQUES FOR THE CLASSROOM K-12 Designed for Education and Human Services majors, this course will assist you to focus on techniques of creative dramatics for use in the classroom and/or counseling situations You will be exposed to the study of psychodrama and the therapeutic uses of role-play, as well as being exposed to theatre games, exercises and improvisation, as adapted to various curricula for K-12 (science, social studies, math, language arts, etc.). You will participate in creative drama activities and have the opportunity to lead a group using the learned techniques in that group's curriculum field. [Cross-listed as THE 225] (3, 3T+0S)

230 PSYCHOLOGY OF ADJUSTMENT Psychological health, mental illness, adjustment problems (divorce, death, illness, etc.) and the adjustment process. (3, 3T+0S)

232 ABNORMAL PSYCHOLOGY Review of the historical, scientific, and ethical issues in the field of psychopathology; theories of abnormal behavior development, systems of therapy, and relevant research. (3, 3T+0S)

240 ALCOHOL & SUBSTANCE ABUSE EVALUATION AND ASSESSMENT You will study five of the twelve core functions and global criteria of the alcohol and other substance abuse, including screening, intake, orientation, assessment, and crisis intervention. In this course you will devote 8 clock hours to ethics of the substance abuse counselor. (3, 3T+0S)

241 ALCOHOL & SUBSTANCE ABUSE TREATMENT AND REFERRAL You will study seven of the twelve core functions and global criteria of the alcohol and other substance abuse, including treatment planning, counseling, case management, client education, referral, report and record keeping, and consultation with other professionals in regard to client treatment/services. Completion of PSY 240 and PSY 241s meets the criteria for education in the twelve core function which is part

of the licensure process for Alcohol and Drug Abuse Counseling. (3, 3T+0S)

256 GRIEF THEORY AND PROCESS Theories of grief counseling and the grief process; identification of both normal and unhealthy grief reaction, discussion of referral procedures and basic grief interventions. (3, 3T+0S)

260 FAMILY SYSTEMS THEORY AND COUNSELING APPLICATIONS You will study the major theories in family systems with emphasis on the counseling applications and practice in counseling interventions with dysfunctional family structures. (3, 3T+0S)

261 THERAPEUTIC INTERVENTIONS WITH CHILDREN & ADOLESCENTS You will focus on therapeutic interventions for children, including play therapy and filial therapy; therapeutic interventions with adolescents, experiential treatments, family involvement, and in-patient and out-patient counseling. (3, 3T+0S)

270 SOCIAL PSYCHOLOGY You will explore factors that affect individual behavior in group situations; individual behavior with the family, at work, and in extreme situations such as combat; prejudice, sexuality, aggression, conformity, altruism, instinct, attitude formation and change; review major contributions to the field as well as current research. (3, 3T+0S)

271 HUMAN SEXUALITY You will go through a thorough analysis of physiological, behavioral, experiential, social, and cultural aspects of human sexuality; learning, role behavior, development, mental health, aesthetics, imagery, and social deviance as related to sexuality. (3, 3T+0S)

275 GROUP PROCESS Introduces you to basic issues and stages of development in the group counseling process; overview of types of counseling groups, group theory, leadership ethical guidelines, group formation and termination. (3, 3T+0S)

277 PSYCHOLOGY OF GENDER AND SEXUALITY You will explore issues in the behavior of men and women, including theoretical perspectives, stereotyping, gender differences, development, sexuality, and social and cultural problems. (3, 3T+0S)

280 PRACTICUM FOR HUMAN SERVICES Field or practical experience for individuals in the Human Services degree program: supervision by faculty member and a professional worker in a situation involving practical application of skills learned in the classroom. With the instructor's guidance and permission, you will arrange for the experience which requires at least 50 clock hours of supervised experience for each credit hour granted. Prerequisite: permission of the program director. (3, 3T+0S)

281 PRACTICUM FOR SUBSTANCE ABUSE COUNSELORS Field or practical experience for individuals in the Substance Abuse Counselor degree program: supervision by faculty member and a professional worker in a situation involving practical application of skills learned in the classroom. With the

instructor's guidance and permission, you will arrange for the experience which requires at least 50 clock hours of supervised experience for each credit hour granted. Prerequisite: permission of the program director. (3, 3T+0S)

283 MENTORING PRACTICUM You will initially take part in a four-hour training which will cover leadership, community relations, self esteem, and communication skills. Thereafter, you will participate individually or in small groups of mentors, in a community or college project, activity, or club. You may also participate with the program in an area related to your degree major. You will put in a total of 48 hours, including lecture time, required for this course. May be repeated once for credit. (1, 0T+1L)

285 CRISIS INTERVENTION Advanced techniques for intervention in crisis situations, including skills of assessment, active listening, focused exploration, action planning, termination and treatment of planning; reviews major situations that create crisis. Prerequisite: PSY 215 with a grade of "C" or better. (Offered in Fall) (3, 3T+0S)

286 GRIEF COUNSELING SKILLS Introduces you to the specific skills of grief counseling dealing with loss, death, and crisis. Prerequisite: PSY 215. (3, 3T+0S)

290 DEVELOPMENTAL PSYCHOLOGY Description of the more salient aspects of the behavior and development of children and adolescents; emphasis on pertinent psychological research and practical applications to life situations. Prerequisite: PSY 105. (3, 3T+0S)

311 WHY SOCIAL SCIENCES MATTER Who are we? How are we connected? Humans have been asking these questions throughout history, but the social sciences offer a more contemporary approach to these ideas. Our culture can define our humanness, and power and politics may influence our beliefs and define our social structures. We are separate but bound together by different groupings including but not limited to culture, family, religion and government. Human behavior may be seen on an individual basis, but must be understood in the context of many structures. You, the student, will reflect and contemplate these ideas through the integrated readings in anthropology, political science, sociology and psychology. [Cross-listed as HUM 311, HSS 311, and SOC 311] Pre-requisite: ENG 112. (6, 6T+0S).

RADIATION PROTECTION (RAD)

233 RADIATION BIOLOGY Survey of radiobiology: effects of differing types of radiation on matter, different radiations and their properties; detailed modes of action of radiation on biochemical and biophysical systems with emphasis on the large macromolecules of living tissue; nature of radiation damage to long-chain nucleic acid molecules; potential problems from indiscriminate use of radiation therapy and diagnostic x-rays, and nuclear facility accidents; effects of low-level radiation exposure. Prerequisite: permission of instructor. (Fall only) (3, 3T+0L)

234L INTRODUCTION TO RADIOSCIENCE AND TECHNOLOGY Production, properties, interactions, dosimetry, detection and instrumentation of radiations from radioisotopes, radiation producing equipment, and nuclear reactors; phenomenon of radioactive materials from the viewpoint of nuclear stability, decay processes, and interaction with matter; devices and instrumentation for detection of radiation sources; applications of radiation and radioisotope techniques; radiation safety. Prerequisite: permission of instructor. (Fall only) (4, 0T+4L)

238L INTRODUCTION TO RADIATION PROTECTION Theory and practice of radiation protection: health physics programs for area, site, and personnel monitoring for various types of facilities including nuclear materials production and processing, nuclear reactors, accelerators, radioisotope handling, and x-ray production facilities; interaction of radiation with material; devices and instrumentation for the detection of radiation with emphasis on health physics applications; safe handling procedures and survey methods; translation of guides and regulations to working procedures. Prerequisite: RAD 234L, or permission of instructor. (Spring only) (4, 0T+4L)

242 PROBLEMS IN RADIATION PROTECTION Considers current topics of concern in radiation protection, such as natural radiations, radiations peculiar to industrial and manufacturing processes, low-level radiation exposure, and ALARA principles. Prerequisite: RAD 234L, or permission of instructor. (Spring only) (4, 4T+0L)

243 PRACTICAL RADIOLOGICAL PROGRAMS AND SAMPLING METHODS Practical methods of handling Health Physics problems in the field. Includes techniques for environmental monitoring, sampling, and contamination control. Environments covered: uranium, plutonium, and tritium facilities, and accelerators, reactors, and general hospitals. (4, 4T+0L)

244 RADIOLOGICAL CONTROL TECHNICIAN. QUALIFICATION The RCT qualification process focuses on types of jobs that RCTs actually perform (conduct of radiological work). Includes training procedures on planning radiological work and radiological work controls, radiological monitoring and surveys, managing radioactive waste and contamination, radioactive material identification, storage, and control, releasing items and transporting radioactive material, instrumentation and calibration, controlling radioactive liquids and airborne radioactivity, construction and restoration projects, and activities involving energetic materials; radiological standards dealing with 1) administrative controls levels and dose limits, and 2) posting requirements; handling radiologically contaminated personnel; respiratory protection program; and managing radiological records. *Those Radiation Protection majors who present current RCT certification to the Registrar will receive credit for this course, which may be substituted for PHYS 121 and 121L within the Radiation Protection degree major only.* (4, 3T+1L)

RADIOLOGIC SCIENCES (RAD)

Note: When participation is required at a clinical site, you are responsible for your own transportation.

108 BASIC PATIENT CARE Provides skills in safety, body mechanics, patient assessment, infection control, medication administration, pharmacology, and life-threatening emergencies. (Fall only) (3, 3T+0L)

135L PRINCIPLES OF RADIOGRAPHIC TECHNIQUES I Lecture and laboratory course: elementary radiation safety, principles of x-ray production, interaction of x-ray with matter, basic physical concepts, and imaging techniques. Prerequisite: admission to program. (Fall only) (3, 0T+3L)

136L PRINCIPLES OF RADIOGRAPHIC TECHNIQUES II Theoretical aspects of medical radiology quality assurance (i.e., radiographic film processing, evaluation, and image receptors), radiation exposure standards, and monitoring equipment. Prerequisite: RAD 135L, or permission of instructor. (Spring only) (3, 0T+3L)

140L RADIOGRAPHIC PROCEDURES I Positioning nomenclature and terminology; positioning and producing radiographs of chest, abdomen, upper and lower extremities; professional ethics. Prerequisite: admission to program, and Co-requisite of BIOL 237/L or BIOL 238/L with grades of "C" or better. (Fall only) (4, 0T+4L)

141L RADIOGRAPHIC PROCEDURES II Radiographic anatomy and positioning of the pelvis and upper femora, vertebral column, skull, sinuses, mastoids, and facial bones. Prerequisite: RAD 140L. (Spring only) (4, 0T+4L)

142 RADIOLOGIC PROCEDURES III Classification of reaction signs and symptoms of contrast media; radiographic anatomy and positioning of common contrast media procedures. Pre-requisite: RAD 140. (Summer only) (2, 2T+0L)

145L CLINICAL EXPERIENCE I Clinical experience (two days per week/256 hours) at a hospital radiology department under the supervision of a clinical instructor: competencies in chest, abdomen, and six upper extremities. Co-requisite: RAD 140L. (Fall only) (4, 0T+4L)

146L CLINICAL EXPERIENCE II Clinical experience (two days per week/256 hours) at a hospital radiology department under the supervision of a clinical instructor: basic level practice; radiographic film processing procedures; competencies in lower extremities, hip, pelvis, vertebral column and skull. Co-requisite: RAD 141L. (Spring only) (4, 0T+4L)

149L CLINICAL EXPERIENCE III Clinical experience (four and one-half days per week/8 weeks or 288 hours) at a hospital radiology department under the supervision of a clinical instructor: competencies in 8 common contrast x-ray procedures (gastrointestinal, urinary, biliary); two procedures with mobile unit; study of mammography and pelvimetry; completion of required upper extremities. Prerequisite: RAD 146L. (Summer only) (4, 0T+4L)

235 RADIOLOGICAL PHYSICS Electrodynamics, rectification, properties of x-rays, fluoroscopy, image intensifications, and circuitry; physical and chemical principles of radioactivity. Prerequisites: RAD 136L, or permission of instructor. (Fall only) (4, 4T+0L)

236 PRINCIPLES OF RADIOGRAPHIC TECHNIQUES IV Advanced radiation protection and radiation biology including specifications of the x-ray beam and radiation interaction with cellular matter (e.g., DNA and RNA synthesis). Prerequisite: permission of instructor. (Spring only) (2, 2T+0L)

240 RADIOGRAPHIC PROCEDURES IV Positioning and procedures of the cardiovascular, renal, cerebral, reproductive, and lymphangiographic systems. Includes advanced imaging systems and other special procedures. Prerequisite: RAD 141L. (Fall only) (3, 3T+0L)

241 RADIOGRAPHIC PROCEDURES V Advanced imaging topics: Ultrasound, Nuclear Medicine, Oncology, computerized imaging, and recent advances. Prerequisite: RAD 240. (Spring only) (3, 3T+0L)

245L CLINICAL EXPERIENCE IV Clinical experience (three days per week/384 hours) at a hospital radiology department under the supervision of a clinical instructor: intermediate level practice, special procedures, tomographic procedures, trauma case management, and critique of radiographs; competencies in sinuses, mastoids, and facial bones. Prerequisite: RAD 240. (Fall only) (5, 0T+5L)

246L CLINICAL EXPERIENCE V Clinical experience (384 hours) at a hospital radiology department under the supervision of a clinical instructor: intermediate level practice, orientation to administration, quality control, computed tomography, radiation therapy, nuclear medicine, and ultrasound. Requires evening experience and weekend rotation. Co-requisite: RAD 241. (Spring only) (5, 0T+5L)

248L CLINICAL EXPERIENCE VI You will participate in an advanced clinical experience (280 hours) at a hospital radiology department, under the supervision of a clinical instructor. This course requires evening and weekend rotations. Prerequisite: RAD 246. (Summer only) (6, 0T+6L)

250 RADIOGRAPHY PATHOLOGY Various diseases and conditions correlated with radiographic diagnostic procedures. Prerequisite: permission of instructor. (Spring only) (1, 1T+0L)

251 REGISTRY REVIEW Complete medical radiography review to prepare for American Registry Radiologic Technologist Examination. This course will also include terminal competency testing. (3, 3T+0L)

252 RADIATION SAFETY Certification course for on-the-job technicians: imaging procedures and techniques, radiography anatomy and positioning, radiation protection and safety. (4, 4T+0L)

254L REFRESHER FOR RADIOGRAPHERS Upgrades the clinical and theoretical skills of Registered Technologists pre-

paring to re-enter the work force. Covers image quality, radiation safety, trauma, common contrast studies, and an option of mammography or special contrast studies. Prerequisite: ARRT. (4, 0T+4L)

260 RADIOGRAPHIC PROCEDURES OF THE FOOT & ANKLE Study of the anatomy and positioning of the foot and ankle; interactions with matter, radiation protection of the patient and the radiographer, exposure monitoring, and image quality topics (exposure factors, film, cassettes, processing, and geometric factors). Basic x-ray equipment is studied. (2, 2T+0L)

260L CLINICAL EXPERIENCE OF THE FOOT & ANKLE Basic, intermediate, and advanced experience in radiography of the foot and ankle. A competency-based course, it is scheduled for a minimum of four months. Study of the practical application of the x-ray tube, radiation protection, and image quality. Co-requisite: RAD 260. (4, 0T+4L)

262 RADIOGRAPHIC PROCEDURES OF THE THORAX Study of the anatomy and positioning of the thorax.; interactions with matter, radiation protection of the patient and the radiographer, exposure monitoring, and image quality topics (exposure factors, film, cassettes, processing, and geometric factors). Basic x-ray equipment is studied. Co-requisite: RAD 262L. (2, 2T+0L)

262L CLINICAL EXPERIENCE OF THE THORAX Basic, intermediate, and advanced experience in radiography of the viscera of the thorax. A competency-based course, it is scheduled for a minimum of three months. Study of the practical application of the x-ray tube, radiation protection, and image quality. Co-requisite: RAD 262. (4, 0T+4L)

264 RADIOGRAPHIC PROCEDURES OF THE EXTREMITIES Study of the anatomy and positioning of the extremities; interactions with matter, radiation protection of the patient and the radiographer, exposure monitoring, and image quality topics (exposure factors, film, cassettes, processing, and geometric factors). Basic x-ray equipment is studied. Co-requisite: RAD 264L. (4, 4T+0L)

264L CLINICAL EXPERIENCE OF THE EXTREMITIES Basic, intermediate, and advanced experience in radiography of the extremities. A competency-based course scheduled for a minimum of four months. Study of the practical application of the x-ray tube, radiation protection, and image quality. Co-requisite: RAD 264. (5, 0T+5L)

266 RADIOGRAPHIC PROCEDURES OF THE AXIAL SKELETON Study of the anatomy and positioning of the hips, pelvis, spine and skull, sinuses, mastoids, and facial bones. Co-requisite: RAD 266L. (4, 4T+0L)

266L CLINICAL EXPERIENCE OF AXIAL SKELETON Basic and intermediate experience in radiography of the axial skeleton. A competency-based course scheduled for a minimum of four months. Study of the practical application of the x-ray tube, radiation protection, and image quality. Co-requisite: RAD 266. (4, 0T+4L)

267L CLINICAL EXPERIENCE OF AXIAL SKELETON Advanced level experience in radiography of the pelvis, hips, spine, and skull. A competency-based course scheduled for a minimum of six months. Prerequisite: RAD 266L. (4, 0T+4L)

RANGE AND LIVESTOCK MANAGEMENT (RLM)

123 RANGE ECOLOGY Identification of native southwestern range plants, ecosystems and their relation to associated ecosystems, soil types and moisture zones as they affect the range; studies grazing by both wild and domestic animals and its effect on plant communities, and man and his effect on the range. (3, 3T+0S)

READING IMPROVEMENT (RDG)

108N READING IMPROVEMENT Introduces you to reading required for vocational programs and the workplace. Comprehension and critical thinking are stressed. Prerequisite: ENG 106N or adequate score on Course Placement Evaluation. (3,3T+0S)

109N READING AND CRITICAL THINKING Introduces you to reading required for college success. You will work on comprehension, problem solving, note taking, summarizing, and computer assisted research. Prerequisite: RDG 108N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

SCIENCE, MATH AND ENGINEERING TECHNOLOGY GENERAL (SMET)

101 INTRODUCTION TO SCIENCE, MATH, ENGINEERING, AND TECHNICAL CAREERS This course is designed to ease the transition between two-year programs to four-year universities. Through active collaborative participation, you will learn about careers in science, mathematics, engineering, and technology; review and reinforce basic study and academic success skills; and learn additional methods for increasing learning and retention of material. You will also gain a strong working knowledge of collaborative learning environments and learn to effectively use study groups to increase academic success. Flexible learning strategies and creative problem-solving techniques will be emphasized through hands-on activities and exercises. (Spring only) (1-3, 1-3T+0S)

SEMICONDUCTOR MANUFACTURING (SMT)

100 SEMICONDUCTOR MANUFACTURING TECHNOLOGY I Study of the processes used in semiconductor manufacturing. Includes semiconductor materials, wafer preparation, contamination control, oxidation, diffusion, etch, ion implant, lithography, and thin films. Prerequisite: CHEM 121 and ECET 150. Co-requisite: SMT 100L. (2, 2T+0S)

100L SEMICONDUCTOR MANUFACTURING TECHNOLOGY I LAB You will gain practical experience by using

semiconductor materials, wafer preparation, contamination control, oxidation, diffusion, etch, ion implant, lithography, and thin films. Co-requisite: SMT 100. (1, 0T+1S)

200 SEMICONDUCTOR MANUFACTURING TECHNOLOGY II Continues study of processes used in semiconductor manufacturing. Includes materials, wafer preparation, contamination control, oxidation, diffusion (including RTD), etch, ion implant, lithography, and thin films. Prerequisite: SMT 100. Co-requisite: SMT 200L. (2, 2T+0S)

200L SEMICONDUCTOR MANUFACTURING TECHNOLOGY II LAB Continues use of processes and equipment used in semiconductor manufacturing. Manufacturing processes include materials, wafer preparation, contamination control, oxidation, diffusion, etch, ion implant, lithography, and thin films. Co-requisite: SMT 200. (1, 0T+1S)

SOCIOLOGY (SOC)

Note: Each course in this department bears a pre-requisite of ENG 109N, or adequate score on the Course Placement Evaluation.

101 INTRODUCTION TO SOCIOLOGY Introduces you to the principles, concepts, methods, theorists and theories of human group behavior. (3, 3T+0S)

105 INTRODUCTION TO HUMAN SERVICES Introduces you to the structure, nature, purpose, and procedures of the private and public human services systems; i.e., health, welfare, education, employment, religion, and criminal justice. During this course, you will be required to perform two hours per week of field or practical experience in the community. (3, 3T+0S)

140 SOCIOLOGY OF ALCOHOL AND SUBSTANCE ABUSE You will survey the history, law, economics, and social problems regarding alcohol and drug use and abuse, including prevention and treatment efforts. (3, 3T+0S)

141 EFFECTS OF ALCOHOL AND DRUG ABUSE Covers the physiological and behavioral effects of alcohol and other drugs. Major categories of drugs (stimulants, depressants, hallucinogenics, etc.) are studied separately. (3, 3T+0S)

211 SMALL GROUP COMMUNICATIONS STUDIES You will learn the theory and skills involved in small group processes through participation, including attention to group types, characteristics, dynamics, conflicts, norms, leadership, problem solving, and decision making. (3, 3T+0S)

213 DEVIANT BEHAVIOR Analysis of deviation from societal norms including history, theory, and research on individual and group norm violations and societal responses to the violations. (3, 3T+0S)

216 ETHNIC/INTERCULTURAL RELATIONS You will study the patterns of race, ethnicity, minority, class, and gender interactions from individual, group, and institutional perspectives with a focus on the dynamics of ethnocentrism, prejudice, and discrimination. (3, 3T+0S)

220 SOCIAL PROBLEMS You will examine various social problems, proposed solutions, and probably repercussions of those solutions; racism and prejudice, crime, sex roles, social stratification, ecology, drug abuse, and alcoholism. (3, 3T+0S)

225 MARRIAGE AND THE FAMILY You will study the history, current state and future of courtship, marriage, family, parenthood, divorce, remarriage, and sex roles. (3, 3T+0S)

250 PSYCHOSOCIAL GERONTOLOGY You will examine the aging process and the aging person from social and psychological perspectives, including inter-generational interaction, age grading, family responsibilities, social attitudes and perspectives of the aged person; examines social institutions designed to support the aging person from the standpoint of their service to the aging persons and their families. (3, 3T+0S)

311 WHY SOCIAL SCIENCES MATTER Who are we? How are we connected? Humans have been asking these questions throughout history, but the social sciences offer a more contemporary approach to these ideas. Our culture can define our humanness, and power and politics may influence our beliefs and define our social structures. We are separate but bound together by different groupings including but not limited to culture, family, religion and government. Human behavior may be seen on an individual basis, but must be understood in the context of many structures. You, the student, will reflect and contemplate these ideas through the integrated readings in anthropology, political science, sociology and psychology. [Cross-listed as HUM 311, HSS 311, and PSY 311] Pre-requisite: ENG 112. (6, 6T+0S).

SPANISH (SPAN)

100 CONVERSATIONAL SPANISH Limited grammar, vocabulary and pronunciation skills will be developed. May be repeated for credit. (1-3, 1-3T+0S)

101 SPANISH I Introductory course for those who are not native Spanish speakers and who have had little or no previous exposure to Spanish. (3, 3T+0S)

102 SPANISH II Continuation of SPAN 101. Prerequisite: SPAN 101. (4, 4T+0S)

105 SPANISH IMMERSION I Designed to prepare teachers to pass the Four-Skills Spanish Exam. The main goal is to bring you to the level of proficiency necessary to speak, write, read and comprehend in Spanish. Prerequisites: SPAN 101 and 102. (3, 3T+0S)

111 SPANISH FOR NATIVE SPEAKERS I Introductory course for native speakers of Spanish: standard Spanish, grammar, vocabulary and cultural readings. Intensive conversational practice in a situation structured for participation: includes dialogue, role-playing, games and presentations. (3, 3T+0S)

112 SPANISH FOR NATIVE SPEAKERS II A continuation of SPAN 111. Prerequisite: SPAN 111. (3, 3T+0S)

201 INTERMEDIATE SPANISH I Vocabulary building, oral

and written expression; thorough review of grammar and usage. Prerequisite: SPAN 101 and SPAN 102. (3, 3T+0S)

202 INTERMEDIATE SPANISH II A continuation of SPAN 201. Prerequisite: SPAN 201. (3, 3T+0S)

205 SPANISH IMMERSION II This course is designed to reinforce your listening, speaking, reading, and writing skills in Spanish. You will concentrate on practicing the rule for accents, grammar, orthography, reading for meaning and interpretation, conversation, and articulation in Spanish. Prerequisite: SPAN 105. (3, 3T+0S)

221 CREATIVE WRITING IN SPANISH You will study Spanish and bilingual creative literary expression, including poetry, fiction, and drama. Prerequisite: SPAN 102, or permission of instructor. (3, 3T+0S)

230 SPANISH FOR HEALTH PROFESSIONS This is an introductory course for health professionals and persons interested in health care who must communicate with Spanish-speaking patients: basic concepts of grammar; develops vocabulary and communicative competencies appropriate to a health care setting. (3, 3T+0S)

260 SURVEY OF SPANISH LITERATURE I You will study Spanish Peninsular literature including the Medieval, Renaissance, and Baroque periods through the 18th century. Prerequisites: SPAN 101 and 102 or SPAN 111 and 112. (3, 3T+0S)

261 SURVEY OF SPANISH LITERATURE II You will study Spanish Peninsular literature of the 19th & 20th centuries. Prerequisites: SPAN 101 & 102 or SPAN 111 & 112. (3, 3T+0S)

270 SURVEY OF LATIN AMERICAN LITERATURE I You will study Latin American literature from the pre-Columbian through the Colonial period. Prerequisites: SPAN 101 and 102 or SPAN 111 and 112. (3, 3T+0S)

271 SURVEY OF LATIN AMERICAN LITERATURE II You will study Latin American Literature of the 19th and 20th centuries. Prerequisites: SPAN 101 and 102 or SPAN 111 and 112. (3, 3T+0S)

280 INTRODUCTION TO HISPANIC LITERATURE Introduces you to the novel, poetry, short fiction, and drama of Spain and Latin America, with emphasis on interpretation rather than literary history; lectures, discussion, and composition in Spanish. Prerequisite: reading and writing proficiency in Spanish. (3, 3T+0S)

285 SPANISH FOR WRITTEN COMMUNICATIONS You will develop writing proficiency and critical thinking through reading and discussion of a variety of texts from Spain and Spanish-speaking America. You will be guided in your understanding of the reading selections at the textual and cultural level with an ample analysis of vocabulary words that may have multiple meanings in Spanish. You will focus on strategies in composing different pieces of writing. Prerequisites: SPAN 101 and 102, or SPAN 201 and 202 (3, 3T+0S)

288 LINGUISTICS AND PHONETICS FOR THE BILINGUAL TEACHER You will apply linguistics and phonetics to the knowledge and use of Spanish and English in order to provide future teachers with the ability to help children develop in their primary language. Prerequisites: SPAN 101 and 102, or SPAN 201 and 202. (3, 3T+0S)

290 READINGS IN HISPANIC LITERATURE You will study selected topics, genres, periods, and movements in Latin American or Peninsular literature; lectures, discussions, and composition in Spanish; occasionally offered in translation. Prerequisite: reading and writing proficiency in Spanish. (3, 3T+0S)

295 CIVILIZATION AND CULTURE Presents the Spanish, Latin American, and southwestern U.S. Spanish experience of yesterday and today through the social, historical, political, and literary aspects that this experience encompasses. Prerequisite: reading and writing proficiency in Spanish. (3, 3T+0S)

SPANISH-COLONIAL FURNITURE MAKING (SCFM)

110L BASIC SPANISH COLONIAL FURNITURE LAB Fundamentals such as hand/power tools usage and safety, carving techniques, selection of materials; introduces historical themes; repeatable; offered in evenings only. (4, 0T+4S)

150 INTRODUCTION TO SPANISH COLONIAL FURNITURE Basic concepts of woodworking; selection and preparation of stock; adhesives, abrasives, and layout of stock; tools and machines, portable and stationary; basic joinery techniques common to furniture making trade. Co-requisite: SCFM 150L. (3, 3T+0S)

150L INTRODUCTION TO SPANISH COLONIAL FURNITURE LAB Application of basic concepts of woodworking in shop. Selection and preparation of stock for joinery assembly and finishing. Employment of hand and power tools, adhesives, fasteners, and hardware; demonstration of basic joinery techniques. Co-requisite: SCFM 150. (9, 0T+9S)

160L SPANISH COLONIAL FURNITURE MAKING LAB Actual design construction and finishing of furniture particular to the average home. Pre-requisite: SCFM 150L or SCFM 110L. (12, 0T+12S)

170L ADVANCED SPANISH COLONIAL FURNITURE MAKING LAB I Concepts of furniture construction by the actual designing, construction, and finishing of one or more pieces of furniture. Pre-requisite: SCFM 160L. (12, 0T+12S)

175L ADVANCED SPANISH COLONIAL FURNITURE MAKING LAB II This course continues SCFM 170L and is designed for entrepreneurial students planning to develop a business in Spanish Colonial furniture making. Topics include customized contract work, pricing items for selling, developing a marketing plan and portfolio, working with galleries, and advanced tool maintenance. Pre-requisite: SCFM. (12, 3T+9S)

180L SPECIAL PROJECTS Students work on special projects with minimal assistance; repeatable; permission of instructor. (6, 0T+4S)

190L ADVANCED PROJECTS You will learn more advanced techniques of carving, hand tool, and power tool usage. You will produce one intricate project, applying the techniques learned in class. Pre-requisite: SCFM 110L. (2, 0T+2S)

SPECIAL EDUCATION (SPED) ALTERNATIVE LICENSURE PROGRAM

201 FOUNDATIONS OF EDUCATION This course addresses competencies for entry-level teachers from a theoretical and historical perspective of models and theories that provide the basis of special education practice. It also addresses current and historical state and national rules and regulations relating to special education. The course provides a basis for procedural safeguards relating to educational services and state and federal mandates for students with disabilities. Based on principles of brain-based learning and diversity and multiculturalism, the course provides defensible choices in your apprenticeship and professional practice. (3, 3T+0S)

455 THE SPECIAL EDUCATION PROGRAM This course addresses the planning and implementation of effective program for exceptionalities, least restrictive environments, classroom management, human growth and development, and transition. Major components include assessment and evaluation, diagnostics, placement and the Individual Education Plan (IEP). Explores curriculum development, instructional strategies, and materials. Basic computer technology operations for professional use are emphasized, particularly in parent/professional communication skills. Diversity and multiculturalism are integrated throughout the course. (4, 4T+0S)

465 READING FOR SPECIAL LEARNERS Provides you with learning experiences in the diagnosis and analysis of reading difficulties and how to adapt materials for various disabilities of the exceptional learner. You will focus on experiences in developing and implementing appropriate instructional strategies in teaching reading across the curriculum. Selection and adaptability of instructional materials are highlighted with the use of technological products for specific populations. (3, 3T+0S)

475 CURRICULUM METHODS AND MATERIALS FOR SPECIAL EDUCATION You will focus on teacher knowledge and application skills in teaching curricula aligned with state content standards and benchmarks. You will explore areas of individualized modifications and/or accommodations when the general education curriculum is not appropriate. You will address instructional strategies in meeting the needs of the special learner with transition as a major component, with emphasis on the application of technology to support teaching and learning. You will address and integrate the Individual Education Plan (IEP) throughout the learning process. This course is also a requirement for those pursuing the BA

in Elementary Education. Pre-requisite: ED 201 and ENG 112. (Spring) (3, 3T+0S).

485 TEACHING READING IN SPECIAL EDUCATION Provides you with a conceptual framework for teachers in the development of competencies in the diagnosis and teaching of reading for the exceptional learner. This course will also provide experiences to understand and incorporate evidence-based research into the teaching of reading. You will acquire an understanding of reading assessments, including informal reading inventories, running records, miscue analysis and standardized reading assessments. You will also address skills in adaptive instructional strategies with an integrative approach across the curriculum. (3, 3T+0S)

497 SUPERVISED FIELD EXPERIENCE Provides you with experience in portfolio preparation and interaction with students in exploring and discussing professional ethics and issues in Special Education. You will prepare and complete a portfolio representing experiences in the 20-credit-hour program. (1, 1T+0S)

497L SUPERVISED FIELD EXPERIENCE LAB Provides you with 120 hours of supervised field experience in an educational setting under the supervision of a certified Special Education teacher and resource specialists. Your experiences will encompass the special education program addressing Special Education level competencies in parent/professional communication skills, planning and implementing effective programs, least restrictive environment, individual educational planning, assessment and evaluation, curriculum development and implementation, technology, classroom management, and accommodating strategies to meet the diversity of the exceptional learner. You will be provided comprehensive experience to enhance the preparatory stages of certification through observations and interaction with the exceptional learner and supportive staff. (3, 3T+0S)

SPEECH (SPCH)

105 PARLIAMENTARY PROCEDURES Principles of parliamentary procedures with emphasis on the motions and procedures necessary to properly conduct a meeting. (1, 1T+0S)

130 PUBLIC SPEAKING Principles of rhetorical theory as applied in public speaking situations: audience analysis, content, organization, style, verbal and non-verbal expression, and critical listening. You will deliver various speeches following selected rhetorical modes. Prerequisite: ENG 109N. (3, 3T+0S)

THEATRE (THE)

120 INTRODUCTION TO THEATRE I This course provides an overview of the Theatre Arts from its prehistoric origins through Western and non-Western cultures to the present, and an introduction to the practical applications of theatre. You will explore the physical realities of creating theatre as a living art form, including lighting, set design, costuming, and stage make-up. Co-requisite: THE 150. (3, 3T+0S)

122 ACTING I You will explore acting styles and techniques of major historical periods through individual scene study, using a variety of acting exercises to develop a personal acting theory, style, and method. (3, 1T+2S)

124 ACTING FOR THE CAMERA You will be exposed to specialized acting techniques for the camera in film, TV, and commercials. You will study terminology, lighting, auditioning, cold-reading, scene study and working with a partner, as well as prepare a resume with an 8"x10" headshot. (3, 2T+1S)

126 SPEECH AND MOVEMENT FOR THEATRE This course will help you develop the articulation, clarity and projection of speech for theatre; focuses on movement on stage for dramatic and theatrical performances. (2, 1T+1S)

130 HISTORY OF THEATRE This course provides you with an in-depth study of a theatre topic and its place in theatre history through the reading of plays. May be repeated, as topics vary from term to term. Pre-requisite: ENG 109N. (3, 3T+0S)

132 STAGECRAFT You will learn stage carpentry, foam carving, prop construction, safety in the theatre, paint techniques for the stage, rigging, and hardware. Co-requisite: THE 150. (3, 2T+1S)

134 INTRODUCTION TO COSTUMING Introduces you to basic design principles, color theory, darning machine and handstitching, fabric/light concepts, and play analysis leading to costuming a stage production. Co-requisite: THE 150. (2, 1T+1S)

150 STAGE PRODUCTION A practicum in producing a theatrical performance. You may choose to be involved in any aspect of technical theatre, including lights, sounds, crew, costumes, or you may choose to perform in the production. Laboratory covers the rehearsal period of the show. May be repeated for credit. (2, 0T=2S)

196 INTRODUCTION TO LIGHT AND SOUND FOR THE THEATRE You will be introduced to performance light and sound, including the theory of light and color for stage lighting and to sound support for live performances. You will have hands-on experience in mounting a show from conception to a fully-realized production. Co-requisite: THE 150. (3, 2T+1S)

218 ACTING II You will be involved in an intensive study of the techniques involved in building and developing a characterization, with emphasis on subtextual work and play analysis. Pre-requisite: THE 120 and 126. (3, 1T+2S)

220 INTRODUCTION TO THEATRE II Continuation of background and working knowledge of theatre, acting, dramatic techniques, and production costuming. Pre-requisite: THE 120; Co-requisite: THE 150. (3, 3T+0S)

224 PLAYWRITING You will study of character development, scene structure and narrative theory in the process of developing a stage and/or screen script. Includes reading of published scripts. Pre-requisite: ENG 109N. (3, 2T+1S)

225 CREATIVE DRAMA TECHNIQUES FOR THE CLASSROOM K-12 Designed for Education and Human Services majors, this course will assist you to focus on techniques of creative dramatics for use in the classroom and/or counseling situations. You will be exposed to the study of psychodrama and the therapeutic uses of role-play, as well as being exposed to theatre games, exercises and improvisation, as adapted to various curricula for K-12 (science, social studies, math, language arts, etc.). You will participate in creative drama activities and have the opportunity to lead a group using the learned techniques in that group's curriculum field [Cross-listed as PSY 225]. Pre-requisite: ENG 109N. (3, 3T+0S)

226 DIRECTING AND PLAY PRODUCTION You will learn the fundamental techniques and theories of stage direction. Prerequisite: THE 120 and 122 (2, 1T+1S)

228 PERFORMANCE POETRY You will study reading, writing, and performing poetry, with an emphasis on the personal and political aspects of poetry from the 1960s to the present, including the Poetry Slam movement. (3, 2T+1S)

238 TEATRO CHICANO You will read and discuss contemporary Chicana/o playwrights, with encouragement to explore self-identity through cultural identity. You will develop a definition of Chicanismo and Chicano aesthetic, and write personal pieces expressing cultural heritage and identity. Pre-requisite: ENG 109N. (3, 3T+0S)

250 STAGE MANAGEMENT You will focus on professional stage manager duties, including responsibilities for actors, calling cues during production, all technical production, and compiling the Production Book. Prerequisite: THE 120; Co-requisite: THE 150. (2, 1T+1S)

290 DESIGN FOR THE THEATRE You will explore drafting, model building, rendering, play analysis, styles, ornament, and CAD. Your goal will be to develop a real design onstage through the Stage Production lab and through portfolio development. Co-requisite: THE 150. (3, 2T+1S)

296 ADVANCED LIGHT AND SOUND FOR THE THEATRE Although you will have some practical hands-on crew work in this class, you will primarily focus on design, theory, physics, and concepts of the art of performance lighting and sound. Pre-requisite: THE 196. (3, 2T+1S)

VEHICLE OPERATIONS (VEHO)

100 CDL PERMIT PREPARATION This course prepares you to pass the learner's permit through exposure to facts, terminology, and regulations, and through an acquaintance with the testing procedure. Completion of this course and obtaining the learner's permit will enable you to begin learning to operate a class A or B (and certain class C) vehicles, required before you can apply for a Commercial Driver's License (CDL). (3, 3T+0S)

VISUAL COMMUNICATION (VC)

100 INTRODUCTION TO VIDEO PRODUCTION You will study the composition, lighting techniques, and various script styles. You will work in production teams in the field and studio to produce a video project in consultation with the instructor. This class does not satisfy the pre-requisite for enrollment in VC 160; enrollment is restricted to concurrent students at Espanola Valley High School; may be repeated twice for credit. (Fall and Spring) (3, 1T+2S)

110 FUNDAMENTALS OF VISUALIZATION This is a basic course in which you will explore classical two-dimensional visual elements using methodologies drawn in part from the Bauhaus tradition.. Co-requisite: VC 111. (Fall) (3, 3T+0S)

111 2-D COMPUTER VISUALIZATION You will use basic computer functions in exploring classical two-dimensional visual elements, texture, and pattern. Co-requisite: VC 110. (Fall) (4, 3T+1S)

120 3-D VISUALIZATION This is a basic course in which you will explore classical three-dimensional visual elements using methodologies drawn in part from the Bauhaus tradition. Co-requisite: VC 121. (Spring) (3, 3T+0S)

121 3-D COMPUTER VISUALIZATION. You will use basic computer functions in exploring three-dimensional visual elements and geometric primitives. Co-requisite: VC 120. (Spring) (4, 3T+1S)

135 ELECTRONIC PUBLICATIONS I Introduces you to the fundamentals of digital page layout and electronic publication. (4, 3T+1S)

140 DIGITAL IMAGING I In this course you will become familiar with Photoshop, digital camera, scanner and printer. (4, 3T+1S)

155 COMPUTER ANIMATION I During the first half-semester of this course you will spent gaining a working knowledge of 3ds max. During the second half you will study storyboarding and executing an animated sketch. (4, 3T+1S)

160 DIGITAL PRODUCTION FOR FILM I You will develop literacy in Digital Video Production techniques for broadcast and film, with an objective of your understanding production methods by examining film history and storyboarding, as well as audio, lighting, camera, and editing techniques for digital transfer to film (4, 3T+1S)

165 VISUAL COMMUNICATIONS I You will work in digital video production and post-production involving live footage, animation, text, and sound, with an emphasis on articulation and economy of expression. Classes consist of weekly seminars in which you will work independently on your projects. Pre-requisite: VC 160. (4, 3T+1S)

175 INTERNET PUBLICATION I Introduces you to the production of web page design and publication on the Internet. (Cross-listed as CT 175.) (4, 3T+1S)

235 ELECTRONIC PUBLICATIONS II You will cover the design, lay-out, and execution of a multi-page digital publication. Pre-requisite: VC 135. (4, 3T+1S)

240 DIGITAL IMAGING II You will cover the preparation of images for general output and web publication using Illustrator, Photoshop, and Image Ready software. Pre-requisite: VC 140. (4, 3T+1S)

255 COMPUTER ANIMATION II You will cover the development and execution of an animation clip that will be edited into a class project. Prerequisite: VC 155. (4, 3T+1S)

260 DIGITAL PRODUCTION FOR FILM II You will cover the production and editing of a PSA (Public Service Announcement) for a non-profit or small business organization of your choice. Building on the foundation acquired in VC 160, you will learn advanced editing, paint and compositing techniques, incorporating these into your final project. Pre-requisite: VC 160. (4, 3T+1S)

265 VISUAL COMMUNICATION II You will develop and execute cooperative projects which may be promotional, narrative, or scientific visualization. You will produce a portfolio project in the form of a digital tape, CD, or DVD. Pre-requisite: VC 165. (4, 3T+1S)

275 INTERNET PUBLICATAION II You will study advanced production of web page design and publication on the Internet. Pre-requisite: VC 175. (4, 3T+1S)

280 VISUAL COMMUNICATION HISTORY You will study the historical perspective of visual communication from the evolution of tool-use and language to digital technology.. (3, 3T+0S)

290 MULTIMEDIA Introduces you to multimedia, utilizing electronic imaging, animation, and digital editing. Prerequisites: VC 140 and VC 155. (4, 3T+1S)

WELDING (WELD)

110 INTRODUCTION TO WELDING Shop and personal safety, different welding processes, different metals, and basis of metal identification and analysis. (3, 3T+0S)

111L FUNDAMENTALS OF OXYACETYLENE WELDING Lighting, adjusting, and turning off oxyacetylene cutting outfit, safety precautions, tools and equipment; ninety-degree cuts, level cuts, and cutting holes in mild steel. (3, 0T+3S)

112L FUNDAMENTALS OF ARC WELDING Three types of arc welders, straight and reverse polarity, selection of correct electrode, starting, stopping and restarting of bead; construction of pad in flat position and square groove butt weld.(3, 0T+3S)

120L OXYACETYLENE WELDING Cutting, fusion, and braze; selection of welding tips, and demonstration of ability to carry a puddle; distinction between braze and fusion, and application of flux. (3, 0T+3S)

121L ARC WELDING Different types of arc welders, polarity, beads, and E-6010 and E-7018 electrodes; construction of test plates in all positions. (3, 0T+3S)

122L INERT GAS WELDING GTAW process; identification of applications, advantages of the process, and identification of major parts of equipment; fuller metals and metallurgical properties of base metals; setting up equipment and production of welds on the popular metals in the flat through vertical positions on the common joints. (3, 0T+3S)

130 HANDS-ON WELDING The principles and practice of welding basics, usually offered periodically on a short-term basis. (2, 1T+1S)

210 WELDING BLUEPRINT READING Identification of information contained in a blueprint: the view, size, and dimensions, drawing or pictorial view and three-view sketches of a specified rectangular block. (3, 3T+0S)

211L PRACTICAL ARC LAB Practical use of ARC equipment; projects assigned according to the skill of the welder. (3, 0T+3S)

212L PRACTICAL OXYACETYLENE LAB Practical use of oxyacetylene equipment; projects assigned according to the skill of the welder. (3, 0T+3S)

213L PRACTICAL INERT GAS LAB Practical use of inert gas equipment; projects assigned according to the skill of the welder. (3, 0T+3S)

299 COOPERATIVE EDUCATION FIELD EXPERIENCE Employment in an approved work-related experience following individualized learning objectives. Forty-eight (48) work hours are required to earn one semester hour of credit. Students may earn up to five credit hours. Students are evaluated jointly by program faculty and employer on a CR/NC basis. Prerequisite: permission of instructor. (2-5)

WILDLAND FIRE SCIENCE (WFS)

100 FOREST MANAGEMENT TRAINING Focuses on basic ecological concepts covered in a classroom setting, including the role of natural disturbances, succession, and fire ecology. Students will learn orienteering skills using a map, compass, global position, and study tree and plant identification, forest growth measurements, and measuring slope and aspect. You will also learn how to assess watershed health, sample streams, and evaluate water quality criteria, such as turbidity and invertebrate counts. You will cover basic concepts related to geology and soil in the field experience. (1, .5T+.5S)

110 WILDLAND FIRE TECHNICIAN I Provides an orientation to the philosophy and history of wildland fire history and the loss of life and property by fire, municipal fire defenses, organization and function of federal, state, and private fire protection agencies. You will be introduced to fire fighting tactics and strategy, incident command systems (ICS), and initial fire ground resources. (Applies to CFSTS certification for Fire Officer.) (2, 2T+0S)

112 WILDLAND FIRE FIGHTER TRAINING Provides entry-level firefighting skills, such as safety orientation, firefighter preparedness, tools and equipment, firing devices, use of water, suppression, securing the control line, use of maps, scouting, hazardous materials, and standards for survival. Also includes introducing primary environmental factors that affect the start and spread of wildfire, and the recognition of potentially hazardous situations. (3, 2T+1S)

118 INTERAGENCY INCIDENT BUSINESS Targeted for entry-level logistics and financial/administration positions, helicopter managers and single resource positions in the incident command system. This course meets the general training needs of all positions for which an understanding of interagency incident business management is required. Topics include employee responsibilities and conduct, personnel timekeeping, pay and commissary, correct reporting procedures for traumatic injury occupational disease, procurement and equipment recording, property management, interagency agreements and claims/accident investigation. Pre-requisite: WFS110 (1, 1T+0S)

125 BASIC AIR OPERATIONS Surveys uses of aircraft in fire suppression and instructs trainees on how to conduct themselves in and around aircraft; covers management policy, regulations and procedures that govern aviation operations in fire suppression; familiarizes trainees with tactical and logistical uses of aircraft in fire suppression as well as describes specifications for helicopter landing areas. Pre-requisite: WFS 110 (1, 1T+0S)

127 ADVANCED FIRE FIGHTING TRAINING Designed to meet the training needs of both advanced firefighter/squad boss (FFT1) and incident commander type 5 (ICT5), this course is interactive and contains several exercises that encourage group and class discussion. Individual instructional units cover fire line reference materials, documenting activities, fireline communications, tactics and safety. Pre-requisite: WFS 110 + WFS 112 (2, 2T+0S)

201 WILDLAND FIRE TECHNICIAN II Provides training for initial attack incident commanders and company officers confronting wildfire which presents a threat to life and property. Includes size-up, assessment, public relations, and follow-up. Pre-requisite: WFS 110 and WFS 112 (3, 3T+0S+)

215 INTERAGENCY (IA) HELICOPTER TRAINING Provides the basic knowledge and skills required by those who will be working with crews on contract helicopters for initial attack capacity. This is a combined classroom/field course designed to provide you proficiency in all areas of the tactical and logistical use of helicopters to achieve efficiency and standardization. Includes safety, personal protective equipment, capabilities and limitations, load calculations, helicopter makes and models, landing areas, fueling, contract administration, cargo transport, helibase and helispot organizations and operations. Also, covers missions and organizations, introducing you to subsequent specialized training options. Pre-requisite: WFS 110 (3, 3T+0S)

232 FUNDAMENTALS OF FIRE BEHAVIOR A classroom-based skill course designed to prepare you, as a prospective supervisor, to undertake safe and effective fire management operations. It is the second course in a series which collectively serves to develop fire behavior prediction knowledge and

skills. Provides more detailed information on the treatment of fuels, weather and topography, and a stronger foundation for analyzing variables and their interactive effects on fire behavior. Pre-requisites: WFS 110 & WFS 112 (3, 3T+0S)

235 IGNITION OPERATION You will be trained in the functional role and responsibilities connected with firing operations. You will cover planning, ignition procedures, ignition techniques, and equipment applicable to wildland and prescribed fire, and you will also address the role of the ignition specialist or firing boss as the organization manages escalation from a non-complex to a complex fire situation. Pre-requisites: WFS 110 and WFS 112. (2, 2T+0S)

237 CREW BOSS A classroom skill course designed to produce your proficiency in the performance of all duties associated with the single resource crew boss, from initial dispatch through return to home unit. Includes preparation and mobilization, assignment preparation, tactics and safety, off-line duties, and demobilization/ post-incident activities. Designed for training throughout the United States, and includes examples from all geographic areas. Pre-requisites: WFS 110 and WFS 112. (2, 2T+0S)

281 FIELD TRAINING You will gain practical knowledge and skills with portable pump operations and water hydraulics by operating portable pumps typically used in the local area. Pre-requisites: WFS 110 and 112. (3, 2T+1S)

282 WILDLANDS FIRE CHAINSAWS You will train on the use of power saws and techniques to prepare you to meet the functional role as a power saw operator. You will cover the duties and responsibilities of the power saw operator, and the parts and maintenance of the chain saw, its application, safety, and evaluation. Pre-requisite: WFS 110 and 112. (3, 2T+1S)

SPECIAL COURSES

TOPICS (TP) 147-247 Beginning (147) and advanced level (247) courses in selected subject areas. When available they will be shown in the published Schedule of Classes with a specific descriptive title. No more than 6 credit hours of "TOPICS" courses may be applied toward completion of a degree or certificate. (1-6)

INDEPENDENT STUDY (IS) 248 Reserved for the outstanding student (*) whose educational needs cannot be met within the traditional curriculum offerings. Individual work experience, research projects, or practicum may be used to earn credit through Independent Study. No more than 6 credit hours of Independent Study courses may be applied towards completion of a degree or certificate. (1-6)

Initial approval and assignment of an instructor who will supervise the course must be obtained from the department chairperson who will provide an approved outline of the course content to the Dean of Instruction for approval and submission to the Registrar. All approvals must be documented and on file at the Registrar's office prior to registration for the course.

* For this purpose, an outstanding student is one who has been working toward a specific declared major and who has completed at least fifty percent of that program's requirements and, over that amount of course work, has attained a minimum 3.5 cumulative GPA.

**BOARD OF REGENTS
AND
EXECUTIVE STAFF**

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 Loretto Garcia, MA Asst. Vice President for Finance
 Bernadette Chavira-Merriman, JD Interim-Assoc. Vice
 President for Instruction

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 Julianna Barbee, MA .. Small Business Development Center
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 Gino Brazil, BA Public Information
 Ida Carrillo, AA Asst. Dir. Small Business Development Ctr
 Theresa Castanon, BBA Child Development Center
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 Kim Dickman, MA Special Needs
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 Annette Garcia, MA High School Equivalency Program
 Cecelia Garcia, MS Food Science Technology
 H. Guido Gellis, MA Success, Opportunity & Learning
 LouAnna Hauck, MS Recruitment
 Salomon Maestas, MS Instructional Technology
 Carmella Martinez, MS Institutional Effectiveness
 Drew Mendez, BA Capital Projects
 Alfredo Montoya, MSW Financial Aid
 Isabel Rodarte, MLS Library
 Hilario Romero, MA Educational Opportunity Center
 Richard Tafoya, MS Placement / Student Activities

**ACADEMIC CHAIRPERSONS /
PROGRAM DIRECTORS**

Bernadette Chavira-Merriman, JD ... Developmental Studies
 Mike Costello, MAT Off-Campus Instruction
 Drucilla Duran, MA Business and Office Administration
 Michael Frain, MA Radiologic Science
 Nancy Schlapper, MSN Nursing

Mellis Schmidt, PhD Communications, Humanities, and
 Social Sciences
 Anthony Sena, MS Math and Science
 Bruce Smith, MS Computer Technology & Engineering
 Patrick Tate, EdS Teacher Education
 Ellen Trabka, MSN Health Occupations
 Donna Winchell, MEd Fine Arts

FULL-TIME FACULTY

Albert Amador, PhD Mathematics
 Ray Auckermann, BA Auto Body Repair
 Pamela Bentley, MA English, Literature
 Karen Brooks, JD Nursing
 Candie Castaneda, Lic. Cosm. Barbering/Cosmetology
 Thomas Click, BS Computer Science
 K. Timothy Crone, MA Anthropology and Sociology
 Drucilla Duran, MA Business and Office Administration
 Christina Esquibel, MA Education
 Michael Frain, MA Radiologic Science
 Leonel Gallegos, MBA Business Administration
 Jackie Gerstein, PhD Teacher Education
 Eric Gidney, AAS Radiologic Science
 Gerladine Gonzales, Lic. Cosm. Barbering/Cosmetology
 Lori Gonzales, MA English
 Ric Gonzales, Cert. Spanish Colonial Furniture Making
 Alejandro Gonzales-Aller, PhD Mathematics
 Cappie Hausman, BSN Nursing
 Ajit Hira, PhD Mathematics and Engineering
 Frank Jaramillo, MA High School Equivalency
 Sat Kirpal Khalsa, PhD Biology
 Scott Leheressey, BA Computer Science
 Theresa Lopez, RN Nursing
 Karen Martinez, Cert. Fiber Arts
 Larry Martinez, MA High School Equivalency
 Lynda Martinez, MA High School Equivalency
 Ulrich Niemeyer, BA Visual Communications
 Susan O'Brien, MA Teacher Education
 Orlando Roybal, MBA Business Administration
 Elizabeth Sanchez, MA Office Administration
 Nancy Schlapper, MSN Nursing
 Mellis Schmidt, PhD Psychology
 Anthony Sena, MS Biology
 Gilbert Sena, BA Automotive Technology
 Karen Simpson, MBA Business Administration
 Bruce Smith, MS Electronics/Computer Electronics
 Daniel Tafoya, Cert. Spanish Colonial Furniture Making
 Ernest Larry Tafoya, Cert. Elect. Electric Technology
 Patrick Tate, EdS Teacher Education
 Jeffrey Toomey, BS Computer-Aided Drafting
 Ellen Trabka, MSN Nursing
 Rosalia Triana, MA Theatre
 Jose Eppie Vigil, BA Developmental Studies
 Carolyn Vogel, MA English and Humanities
 Quentin Wilson, BS Adobe/Southwest Construction
 Donna Winchell, MEd Fine Arts

PART-TIME FACULTY

This list represents those part-time faculty who have taught consistently over an extended period of time.

Antoinette Archuleta Business Administration
 Lori Baca Office Administration
 Roger Badash English, Humanities
 Kenneth Baltz Health Sciences
 Mary Lou Bender Nursing
 Catherine Berryhill Education
 Dianemarie Billops Nursing
 Ron Black Computer Science / Mathematics
 Edward Brown Computer Science
 Therese Buche English
 Nancy Buechley Developmental Mathematics
 Jonathan Cartland Computer Science
 Gar Clarke Computer-Aided Drafting
 Robert Cooke Speech
 Arsenio Cordova History / Political Science
 Teresa Cordova History
 Joseph Cortez Electronics
 Mike Costello English, Speech, Literature
 William DeGrande Environmental Science
 George Devis Wildland Fire Science Technology
 Michael Duran Radiation Protection
 Lucas Gallegos Electronics
 Ronald Gallegos HPER
 Anna Marie Garcia Education
 Glenn Gomez Developmental Mathematics
 Lorenzo Gonzales Spanish
 Rita Gugliotta Massage Therapy
 Daniel Gurule Spanish
 Robyn Hayes Chemistry
 Dan Howe Geology/Astronomy
 Jan-Willem Jansens Environmental Science
 Ellen Kaiper English, History, Speech
 Gurumeet K. Khalsa HPER
 Lezlie King Weaving
 John Leib Mathematics
 Amber Leichtle Psychology
 Virginia Leipzig English / Speech
 Orlando Leyba Mathematics
 Jose Arnaldo Lopez Mathematics / Computer Science
 Jose Benjamin Lopez Art
 Leroy Lopez Art
 Tom Lopez HPER
 Sarah Louise English
 Kelly Loy Massage Therapy
 Gus Lujan Computer Science
 Michael Maddex Computer Science
 Bernie Madrid Business Administration
 Johnny Madrid Electronics
 Martha Jane (Juanita) Manzanares Reading,
 Developmental English, and Spanish
 Milnor Manzanares HPER
 Gilbert Martinez Developmental Mathematics
 Joseph Martinez Computer-Aided Drafting
 Juan D. Martinez Art / Welding
 Leroy Martinez Mathematics
 Phillip Martinez Developmental Mathematics
 Richard Martinez Developmental English
 Rita Martinez Art

Rosemary Martinez Office Administration
 Michael McNaughton Environmental Science
 Whabiz Merchant Sociology
 Arlene Mestas Spanish
 Robert Money Developmental Mathematics
 Patrick Montoya HPER
 Terry Mulert Developmental English
 Virginia Myhaver English
 Justin Najaka Economics
 Raul Noches HPER
 Kenneth Norris HPER
 Antonia Ortega Office Administration
 Louise Pasaka Nursing/First Assist
 Brian Pellinen English
 Pam Piccolo Computer Science / Psychology
 Christina Quintana Mathematics
 James Rathjen Astronomy / Geology
 Paula Reid Reading
 Lawrence Renner Criminal Justice / Police Science
 Edward Rieckenberg Mathematics / Engineering
 Dennis Rivera HPER
 Norma Robinson Psychology / Sociology
 Isabel Rodarte Library
 Tommy Rockward Mathematics
 Anthony Romero Computer-Aided Drafting
 Hilario Romero History / Spanish
 Madeline Romero HPER
 Raymond Romero Mathematics
 Robert Romero HPER
 Soccoro Salazar Visual Communications
 Louis Schiano Philosophy
 Marc Steiner Computer-Aided Drafting
 James Tadlock Computer Science
 Richard Tafoya Mathematics
 Patricia Trujillo Education
 Catherine (Kit) Truelove English
 Carmella Trujillo Art
 Charlene Tsoodle-Marcus Criminal Justice
 Laurie Tumer English / visual Communications
 J. Alex Valdez Business Administration
 Jose Valle (Chuscalles) Music / Dance
 Judith Vejvoda Art
 Matthew Velasquez Computer-Aided Drafting
 Gerald Verduga Computer-Aided Drafting
 Sylvia Vergara Dance
 Cipriano Vigil Music / Spanish
 Mark Wahle Criminal Justice
 Robert Warnock Computer Science
 Patricia Weaver English / Education
 William Weeks Chemistry / Environmental Science
 Raymond Wolf Environmental Science
 John Young Geology / Environmental Science

FULL-TIME STAFF

Josephine Aguilar Asst. to the President
 Johanna Aguino Child Care Teacher Assistant
 Raymond Archibeque Educational Advisor
 Rosemarie Archuleta LRC Coordinator
 Priscilla Baldonado Cook I
 Adam Chacon Purchasing Clerk
 Anna Marie Cordova Department Secretary

Ignacio Coronado Carpenter I
 Piedad Crouch Administrative Secretary
 Geraldine Dominguez Accountant IV
 Miriam Foranda Educational Advisor
 Leroy Gallegos Custodian
 Mike Gallegos Custodian
 Rosalie Gallegos Educational Advisor
 Lorraine Garcia Business Office Technician
 Mary Garcia Accounting Technician III
 Glenn Gomez Adult Basic Education Coordinator
 Janelle Gomez Department Secretary
 Pablo Gonzales Academic Advisor
 Ted Griffith Electrician
 Alice Gurule Custodian
 Nerio Gurule Security
 Julia Honaberger Department Secretary
 Sue Ellen Jacobs NPI Coordinator
 Diahann Jacquez Accounting Technician
 Jynelle Jaramillo Dev. Studies Tech. I
 Page Konrad Success, Opportunity, & Learning
 Carmen Lobato Department Secretary
 Tamara Lopez RETA Coordinator
 Betty Lujan Data Processing Coordinator
 Johnny Madrid Tech-Prep/School-to-Work
 Angelina Maestas Financial Technician III
 Dorain Maestas Cook Supervisor
 Ivan Maestas MIS Technician
 Anna Maez Bookstore Clerk
 Bernie Manzanares Custodian
 Connie Manzanares Asst. Director of Financial Aid
 Herman Manzanares Grounds Keeper
 Brenda Martinez Career Services Specialist
 Delmeria Martinez Library Aide
 Dolores Martinez-Salazar Records Specialist
 Donald Martinez Student Activities Coordinator
 Jerry Martiinez Custodian
 Johnny Martinez Security
 Kenneth Martinez Custodian
 Leonard Martinez Accountant Technician III
 Leroy Martinez Custodian
 Karen Martinez Custodian
 Mildred Martinez Accounting Technician II
 Ray David Martinez Educational Coordinator, CAMP
 Renee Martinez Admin. Assist. to Dean of Students
 Rosie Martinez Department Secretary
 Viviane Medina Financial Aid Officer I
 Eloy Montoya Custodian
 Pam Montrose Advisor/GED Examiner/Veterans Benefits
 Tessie Naranjo NPI Coordinator
 Mary Ocana Custodian
 Henry Ocana Carpenter Assistant
 Rita Ortiz Admissions Specialist
 Catherine Pacheco Lab Instructional Assistant
 Jacob Pacheco Educational Advisor
 Tina Marie Pacheco Secretary, Education Dept.
 Amanda Padilla Child Care Teacher Asstistant
 Jeanette Padilla Financial Aid Officer I
 Katrina Padilla Child Development Teacher Assistant
 Lids Przsyllas MIS Technician
 Angelina Read de Alaniz Educational Advisor
 Paula Reid Coordinator of Student Advisement

Lydia Rivera Financial Technician III
 June Rock Switchboard Operator
 Filomeno Rodriguez Maintenance Worker I
 Alfonso Romero Custodian
 Andy Romero Physical Plant Supervisor
 Cecilia Romero Administrative Secretary
 Cindy Romero Custodian
 Ernesto Romero Grounds Keeper I
 Paul Romero ENLACE Coordinator
 Anna Roybal Department Secretary
 Jeannie Roybal Bookstore Manager
 Dolores Salazar Records Technician
 Rita Sandoval Department Secretary
 Richard Sedillo Gym Tech
 Gilberto Siquieros Carpenter
 Chris Smith Educational Advisor
 Arnold Suazo Carpenter
 Danny Suazo Educational Advisor
 Charles Tafoya Educational Advisor
 Debra Trujillo Data Processing Coordinator
 Ernest Trujillo Plumber
 Tessie Trujillo-Lopez Payroll Manager
 Mary Ann Valdez Administrative Secretary
 Michael Valdez Plant Supervisor
 Marlene Valencia Asst. Manager Bookstore

Faculty Emeritus Cora Abeyta, Lic. Cosmetologist

President Emeritus Sigfredo Maestas, PhD

Vice-President Emeritus Priscilla Trujillo, MA

Academic Forgiveness	25	Course Load (Limits on Enrollment)	15	Estimation of Auto Body Repair(Cert.)	53
Academic Support Services	16	Course Placement Evaluation	16	Computer Aided Drafting (AAS)	53
Student Advisement	16	Credit by Examination	7	Architectural Drafting (Cert.)	54
Career Guidance	17	Criminal Justice courses	93	Civil Engineering CAD (Cert.)	54
Access to Records	20	Curriculum Requirements	28	Engineering CAD (Cert.)	54
Accreditation	2	Disciplines Defined	28	Computer Science (AAS)	55
ACT – Credit (English and Math)	7	General Education	28	Network Administration (AAS)	55
Administrative Staff (list)	132	General Ed. Common Core	28	WEB Administration (AAS)	56
Administrative Withdrawal	24	Dance courses	94	WEB Design (AAS)	57
Admission Policies	3	DANTES Equivalencies	7	Electronics/Computer Engr.	
Regular	3	Dean’s List/Semester Honors	24	Technology (AAS)	58
Special Status	4	Degrees and Certificates	30	Electronics Technology (Cert.)	59
Ability to Benefit	3	Art Department	30	Computer Electronics	
Concurrent High School	4	Fine Arts (AA)	30	Technology (Cert.)	59
Early Admission	4	Business & Office Administration	33	Semiconductor Manufacturing	
Home school	3	Business Administration (AA)	33	Technology (Cert.)	59
Readmission	5	Accounting (AAS)	33	Electronics Packaging Design	
Transfer	5	Bookkeeper (Cert.)	33	Technology (AAS)	59
Non-Degree	4	Public School Finance (Cert.)	35	Engineering Technology (AAS)	60
Foreign	5	General Business (AAS)	35	Machining Technology (AAS)	60
Adobe Construction courses	80	Management Information Systems(AAS)	35	Welding Technology (AAS and Cert.)	60
Adult Basic Education	19	Office Administration (AAS)	36	Developmental Studies	62
Advanced Placement (AP)	6	Clerk Receptionist	37	Auto Mechanics (Cert.)	62
Advisement	16	Legal Office Professional (Cert.)	37	Plumbing Technician (Cert.)	62
Amnesty Training	19	Medical Office Professional (Cert.)	37	Education	63
Anthropology courses	81	Administrative Assistant (Cert.)	36	Elementary Education (BA)	63
Appeals	25	Career & Technical Education	38	Elementary Education. (AA)	64
Admission/Residency	26	Adobe Construction (Cert.)	38	Early Childhood Education (AA)	64
Financial Aid	26	Automotive Technology (AAS, Cert.)	38	Special Education (AA)	66
Grades	25	Barbering (Cert.)	39	Alternative Licensure	65
Refunds	26	Barbering Instructor (Cert.)	39	Reading Endorsement	66
Suspension	26	Cosmetology (AAS and Cert.)	41	Health Occupations	67
Art courses	81	Cosmetology Instructor (Cert.)	42	Practical Nurse (Cert.)	70
Assessments Services	16	Service Management (AAS)	44	Nursing (AS)	70
Career Guidance	17	Spanish Colonial Furniture		Nursing (AAS)	69
Course Assessment	16	Making (AAS and Cert.)	44	Nurse Aide (Cert.)	68
Attendance Policy	23	Construction Trades Technly (AAS)	40	Allied Health (AAS)	67
Audit (a course)	22	Electrical Technology (AAS)	42	Massage Therapy (Cert.)	67
Auto Mechanics courses	83	Electrical Technology(Cert.)	42	Radiation Protection (AAS)	71
Barbering courses	85	Plumbing Technology (AAS and Cert)	43	Radiologic Science (AAS)	71
Bilingual Education courses	86	Construction Trades Management(AAS)	40	Math, Science and Engineering	73
Biology courses	86	Fiber Arts (Weaving) (AAS)	42	Biology(AS)	73
Board of Regents (list)	132	Weaving (Cert.)	43	Chemical Technician (AAS)	73
Bookstore	18	Telecommunications Builder I (Cert.)	45	Engineering Technology (AAS)	74
Business Administration courses	87	Wildland Fire Science (AAS)	45	Environmental Mgmt (AAS and Cert.)	74
Calendar	Inside Front Cover	Communications, Humanities and		Environmental Monitoring (Cert.)	75
Campus Security Policy	6	Social Sciences	46	Natural Resources -	
Career Guidance	17	General Studies (AA)	46	Range Ecology Mgmt (AAS)	76
Carpntry courses	89	Southwest Studies (AA)	50	Pre-Forestry (AAS)	77
Chairpersons (list)	132	Criminal Justice (AA)	46	Science(AS)	77
Changes in Enrollment	23	Police Science (AAS)	49	Visual Communication (AAS)	78
Civil Engineering courses	90	Human Services (AAS)	48	Visual Comm. Drafting/Mach.(AAS)	78
CLEP Equivalencies	7	Human Services in		Waste Resources Mgmt (AAS)	79
Chemistry courses	90	the Social Sciences(AA)	47	Laboratory Biotechnology (AAS)	75
Colorado Reciprocity	10	Library Technology (AAS and Cert.)	48	Pre-Engineering (AS)	76
Communications courses	90	Substance Abuse Couns. (AA, AAS)	50	Materials Science Technology (AAS)	75
Community Services/		Computer Science & Engineering Technology		Diplomas	10
Continuing Education	20	Auto Body Repair (AAS)	52	Disciplines (defined)	28
Computer Technology courses	91	Auto Body - Refinishing (Cert.)	52	Distance Education	29
Construction Trades courses	92	Auto Body - Non-Sturctural and		Drafting courses	94
Cosmetology courses	93	Analysis and Damage (Cert.)	53		

<p>Drug Testing 6</p> <p>Early Childhood Education courses 95</p> <p>Economics courses 96</p> <p>Education courses 96</p> <p>Education Opportunity Center (EOC) ... 19</p> <p>Electricity courses 100</p> <p>Electronics courses 100</p> <p>Engineering courses 102</p> <p>English courses 102</p> <p>Environmental Science courses 103</p> <p>Enrollment Services 15</p> <p>Estimate of Expenses 11</p> <p>Executive Officers (list) 132</p> <p>Faculty (list full- and part-time) 132</p> <p>Fiber Arts (Weaving) courses) 104</p> <p>Financial Assistance Policies 12</p> <p style="padding-left: 20px;">Application Process 13</p> <p style="padding-left: 20px;">Grants and Scholarships 13</p> <p style="padding-left: 20px;">Other Types of Assistance 13</p> <p style="padding-left: 20px;">NM Vietnam Veterans Scholarship 14</p> <p style="padding-left: 20px;">Veterans Educ. Benefits 14</p> <p>Food Services 18</p> <p>Forestry courses 106</p> <p>General Curriculum Requirements 28</p> <p>General Education Core courses 28</p> <p>General Education Development (GED) Program 19</p> <p>Geography courses 106</p> <p>Geology courses 106</p> <p>Good Standing 24</p> <p>Grade Changes 23</p> <p>Grade Point Average (GPA) 23</p> <p>Grading System 22</p> <p>Graduation 27</p> <p style="padding-left: 20px;">Fee 10</p> <p style="padding-left: 20px;">Fee Refund 12</p> <p style="padding-left: 20px;">Honors 27</p> <p style="padding-left: 20px;">Policy 27</p> <p>Health, Physical Education and Recreation courses 106</p> <p>Health Requirements 5</p> <p>Health Science courses 107</p> <p>High School Equivalency Program (HEP) 19</p> <p>History courses 110</p> <p>Home School Admission 4</p> <p>Honor Society (PTK) 27</p> <p>Humanities courses 110</p> <p>Incomplete Grade 22</p> <p>Insurance 17</p> <p>International Student Admission 5</p> <p>Library Services 18</p> <p>Library Technology courses 112</p> <p>Massage Therapy courses 113</p> <p>Materials Science courses 114</p> <p>Machine Technology courses 113</p> <p>Mathematics courses 114</p> <p>Meal Charges 11</p> <p>Mechanical Engineering courses 115</p> <p>Media Services 18</p> <p>Music courses 115</p>	<p>Natural Resources courses 116</p> <p>Non-Degree Admission 4</p> <p>Nursing courses 116</p> <p>Office Administration courses 118</p> <p>Parking 18</p> <p>Payment Policy 9</p> <p>Personal Development Courses 119</p> <p>Philosophy courses 120</p> <p>Phi Theta Kappa Honor Society 17</p> <p>Physics courses 120</p> <p>Placement 15</p> <p>Plumbing courses 120</p> <p>Political Science courses 121</p> <p>Pre-registration 15</p> <p>Probation 24</p> <p>Psychology courses 121</p> <p>Public Directory Information 21</p> <p>Radiation Protection courses 122</p> <p>Radiologic Science courses 123</p> <p>Range Management courses 125</p> <p>Reading Improvement and Critical Thinking courses 125</p> <p>Re-admission 5</p> <p>Refund Policy 11</p> <p>Registration (Open and Late) 16</p> <p>Regular Admission (Declared Major) 3</p> <p>Repeating Courses 23</p> <p>Registration Fee 10</p> <p>Residence Halls 18</p> <p>Residency Classification 9</p> <p>Room Charges 11</p> <p>Scholarships 13</p> <p>Scholastic Standards 24</p> <p>Semiconductor Manufacturing Technology courses 125</p> <p>Senior Citizens 10</p> <p>Sociology courses 125</p> <p>Spanish courses 126</p> <p>Spanish Colonial Furniture Making courses 127</p> <p>Special Adult Admission 4</p> <p>Special courses (TP/IS) 131</p> <p>Special Education Licensure courses 127</p> <p>Special Needs 17</p> <p>Special Program Criteria 5</p> <p>Speech courses 128</p> <p>Speed Limits 19</p> <p>Standard of Conduct 26</p> <p>Student Records 20</p> <p>Student Right-to-Know Policy 6</p> <p>Student Support Services 16</p> <p style="padding-left: 20px;">Personal Development Courses 16</p> <p style="padding-left: 20px;">Tutorial 17</p> <p style="padding-left: 20px;">Career Guidance 17</p> <p style="padding-left: 20px;">Special Needs 17</p> <p style="padding-left: 20px;">Student Activities 17</p> <p>Substance Abuse Policy 6</p> <p>Suspension 25</p> <p>Theatre courses 128</p> <p>Transcripts 21</p> <p>Transfer Admission 5</p>	<p>Transfer of Credit 6</p> <p>Transportation 18</p> <p>Tuition and Fees 9</p> <p style="padding-left: 20px;">Payment Policy 9</p> <p style="padding-left: 20px;">Schedule of Charges 10</p> <p>Tutorial Program 17</p> <p>Vertical Transfer 15</p> <p>Veterans Administration 7</p> <p>Visual Communications courses 129</p> <p>Welding courses 130</p> <p>Wildland Fire Science courses 130</p> <p>Withdrawal from College 11</p>
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