Northern New Mexico College is an equal opportunity employer, and does not discriminate on the basis of age, race, color, sex, sexual orientation, religion, handicap, national origin, ancestry, or medical condition in its educational programs, activities, employment, or admission policies.
NORTHERN New Mexico College
2018–2019 Catalog

This catalog describes the curriculum, programs, and academic regulations of Northern New Mexico College. 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 ensure 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.

The most updated version of this catalog is available online at www.nnmc.edu

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 Españolá Campus
P.O. Box 160 921 Paseo de Oñate
El Rito, NM 87530 Españolá, NM 87532
(505) 581-4100 (505) 747-2100
FAX (505) 581-4130 FAX (505) 747-2180

Hearing impaired applicants should contact the Telecommunications Relay Service, available 7 days a week, 24 hours a day at 1 (800) 659.8331.


Title IX Coordinator: Interim Dean of Student Services, Northern New Mexico College, 921 Paseo de Oñate, Española, NM 87532. (505)747.2269.

Section 504 ADA Coordinator: Accessibility Resources Coordinator, Northern New Mexico College, 921 Paseo de Oñate, Española, NM 87532. (505)747.2152.

Questions concerning any portion of this publication should be addressed to the Registrar’s office at (505)747.2148.
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General Information

HISTORY OF NORTHERN NEW MEXICO COLLEGE

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

In the early 1900s 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, and celebrated its centennial as Northern New Mexico College.

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, mandating that the institution provide training not available in public schools, implemented a secondary school curriculum. Six years later, the Board of Regents renamed the school Northern New Mexico College. NNMC continued to teach grades 7-12 along with the new 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, the Board of Regents again renamed the school the New Mexico Technical-Vocational School to indicate the changes in course offerings.

Operating under its new name, the Technical-Vocational School expanded its curriculum and faculty, and developed a campus in Española, approximately 30 miles from El Rito. The school assumed the Practical Nurse program from St. Vincent’s Hospital in Santa Fe. As educational needs in northern New Mexico evolved, educators and legislators identified a need for a more comprehensive delivery of educational services. In 1976 a task force was created whose membership included representatives from the New Mexico Technical-Vocational School, the University of New Mexico, and local school boards and citizens to assess the feasibility of establishing a community college. The task force recommended that the University of New Mexico-Northern Branch (at Santa Cruz) be dissolved and their academic course offerings be combined with those of the New Mexico Technical-Vocational School. The Legislature accepted this recommendation and provided for the expansion of the institution’s mission.

The Board of Regents soon accepted the new mission of the institution, renamed the institution Northern New Mexico Community College, and began combining existing programs, philosophies, and procedures in order 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 (CEUs), 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 permitted the college to offer four-year degrees in any programs deemed necessary and appropriate. Northern New Mexico Community College was renamed Northern New Mexico College.

Currently, Northern offers bachelor’s degree programs in Early Childhood and Elementary Education, Business Administration, Biology, Environmental Science, Electromechanical Engineering Technology and Information Engineering Technology, Integrated Studies in the Humanities and Social Sciences, Mathematics, and Nursing (RN-BSN).

MISSION STATEMENT

The mission of Northern New Mexico College is to ensure student success by providing access to affordable community-based learning opportunities that meet the educational, cultural, and economic needs of the region.

VISION STATEMENT

Northern New Mexico College is a Hispanic- and Native American-serving comprehensive institution that will be recognized nationally for cultural sustainability, quality student learning, and developing economically strong communities among diverse populations.

ACCREDITATION

Northern New Mexico College is accredited by the Higher Learning Commission (HLC). Northern gained candidacy status in 1975, full accreditation status in 1982, and achieved the highest HLC accreditation in 2016. Northern’s reaffirmation of accreditation was granted for ten years (2016-2026). Moving forward, Northern has selected Open Pathways program.

In addition to regional accreditation, Northern’s educational offerings are accredited or approved by other agencies, including:

The Bachelor of Engineering in Information Engineering Technology Program is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, www.abet.org. Accreditation is proof that the quality of an academic program meets the standards of the profession.

The Baccalaureate Degree in Nursing at Northern New Mexico College was recently re-accredited by the Commission on Collegiate Nursing Education for 10 years (One Dupont Circle NW, Suite 530, Washington, DC 20036, (202.887.6791).

The Associate Degree Nursing (ADN) program is nationally accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, www.acenursing.org/commission-actions-spring-2017/ (404) 975-5000.

The College of Business Administration's bachelor's and associate degree programs are accredited by the Accreditation Council for Business Schools and Programs (ACBSP, www.acbsp.org).

Northern's occupational courses are approved by the New Mexico State Department of Public Education and the Barbering, Cosmetology programs are approved by their respective state licensing boards.

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 Office of Institutional Research at 505.747.2118.

PHYSICAL SETTING

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

The Española 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. Española is the center of commerce for the area which has a growing population of approximately 35,000. The Española campus is located 25 miles north of Santa Fe and 40 miles south of Taos. The Española campus consists of eleven buildings dedicated to classrooms and labs, plus a gymnasium.

The El Rito campus is 32 miles north of Española 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 Lake, which is a prime water recreation area.

Undergraduate Admissions

ADMISSIONS

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

Detailed information concerning deadlines for submitting applications for admission appear in each semester’s Schedule of Classes and at www.nnmc.edu.
USE OF SOCIAL SECURITY NUMBERS

Northern does not use individual Social Security Numbers as a means of identification; the College issues student ID numbers generated by its administrative software as its primary identification system. The College requires that Social Security Numbers be supplied in order to comply with various state and federal reporting requirements (e.g. financial aid). In no instance will an individual’s Social Security Number be disclosed to other parties for any purpose without the written consent of the student.

GENERAL POLICIES

If you wish to obtain a degree or certificate from Northern, you may apply for regular admission status* 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).

   Note: a Certificate of Completion or Attendance from a high school is not a diploma. If you present a Certificate of Completion/Attendance, you will be classified in Non-Degree status until such time as you earn a High School Equivalency (HSE) credential.

2. have received a High School Equivalency (HSE) credential; or

3. are a transfer student in good standing from another accredited college, university, or other post-secondary institution. If you are on academic probation or suspension at another institution Northern New Mexico College will also place you on probation until you have met satisfactory academic standards.

* Admission in regular status amounts to “matriculation,” which is a formal acceptance by the college of your qualifications to pursue a 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 to Northern in Non-Degree status.

Until all required transcripts are received at the Office of Admissions, your application will remain in “incomplete” status.

DECLARING A MAJOR AND CHANGING A MAJOR

If you are declaring a major for a certificate or associate degree, you will achieve matriculation (final admission status) when we have received official transcripts from every institution you have previously attended. If you have never attended college before, a copy of your high school or HSE credential will suffice. If you will be seeking financial assistance, you will have to supply an official transcript showing HS graduation or HSE credential. The fact that one or more colleges consolidate courses from other colleges onto their transcripts does not mean that you can choose which transcripts to have sent to Northern—official transcripts from all post-secondary institutions/schools are required must be submitted to NNMC’s Office of Admissions.

Some programs have their own special admission standards (e.g., Nursing, Education, Engineering); when you apply to the college for those majors, you will be considered a “tracking” student until such time as the department/college informs the Office of Admissions that you have applied to and been accepted to that specific program.

If, once you have started classes, you decide to change your major it will be your responsibility to inform the Office of the Registrar in writing by submitting a properly completed Change of Major form with the appropriate signatures. Again, if the new
department or college has its own application process, you will revert to a “tracking” status until your application has been accepted by that entity.

*This is a very important process when it comes to graduating.* At Northern, you are eligible to graduate under the terms of the catalog which you began your major or under any subsequent catalog under which you may be eligible, given that you haven’t “stopped out.” Your eligibility does not begin when you decide you have chosen the major; it begins only after the proper form has been approved and input to the student information system.

If you have “stopped out” (not attended for more than one academic year), you will have to submit an application for readmission when you return to Northern. At that time, no matter what major you declare, your eligibility status starts with the current catalog. You would no longer be eligible to follow any catalog for which you had previously been eligible.

**FIRST–TIME–ANY–COLLEGE (FTAC) STUDENTS**

If you have demonstrated eligibility through HS graduation or High School Equivalency (HSE) credential, your application will be processed as incomplete until you present a copy of your official transcript (for high school graduates) or an official HSE credential, plus ACT or SAT scores or Course Placement Evaluations.

**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, depending on your interests and needs. Good standing means that you are not on an academic or disciplinary suspension.

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

If, before you register, analysis of your transcript(s) does not show either that you have completed or that you qualify for college-level English or math, your application will be considered as incomplete, pending receipt of adequate Course Placement scores.

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 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. To facilitate your appeal, attach a copy of the transcript on which the Suspension is recorded. Your appeal will be processed and you will be notified of acceptance or denial. If your appeal is granted you will be placed on Academic Probation until you meet satisfactory academic standards.

*Until all transcripts have been received at the Office of Admissions, you will not be able to qualify for financial aid or be able to graduate: your admission status will remain Incomplete.*

**INTERNATIONAL STUDENTS**

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

If you are a non-immigrant alien who wishes to apply to Northern, please contact the Director of Admissions (forona@nnmc.edu) for the necessary forms, or download the special application form from our web site at www.nnmc.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 packet for details/choices of test instruments. This packet is available online at www.nnmc.edu.

The Designated Service Officer at Northern is the Director of Admissions (admissions@nnmc.edu or 505.747.2111).

READMISSION

If you have previously been a student at Northern other than as a high school student, and if it has been at least one academic year 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 each such college. When all required documentation has been received, the Office of Admissions will determine if you will need to provide Course Placement Evaluation scores before granting regular status. Until everything is in order, your admission status will be classified as Incomplete.

If you re-apply in Non-degree status, you only need to complete the Non-degree Application Form.

NON–DEGREE

This status is for those over the age of 18 who do not meet or 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 when you can demonstrate that you have met the requirements. If you have attended any college other than NNMC you must have all transcripts sent from those schools if you are moving from non-degree status to degree seeking status. Please note that no type of financial assistance is extended to students in non-degree status.

CONCURRENT ENROLLMENT

Concurrent enrollment is a term used to define a relationship existing between public or private school districts and/or other high school students who do not place into college level courses but would otherwise like to enroll in a class, and public colleges and universities in New Mexico. If you are in grades 9-12, carry a 2.00 minimum cumulative high school GPA, and have tested into at least ENG 108N, MATH 100N, and RDG 108N, you may apply for admission.

If you are still in high school, you must use the Application for Admission for Students Still in High School.

In case you should disagree with either your high school or Northern concerning your selection and/or admittance, each entity has set up a formal appellate process. To appeal at the college level, contact the Director of Admissions; at the high school level, contact your counselor.
DUAL CREDIT

Student eligibility and enrollment in dual credit courses is based on your high school counselor’s approval and placement scores, or other test instruments approved by Northern or by completion of course prerequisites.

If you are enrolled in a public school district (or one of its charter schools), or a BIA school and if you qualify for college-level courses after being admitted to the college, you will be eligible for Dual Credit enrollment, which means that the college will cover your tuition and general fees, your public school district or BIA school will buy and loan you the required textbooks, and you and your parents will be responsible for transportation and any non-general fees (e.g., lab, course, or media fees). In order for you to participate in the Dual Credit program your high school counselor must sign off on a special form (Dual Credit Request Form), which you will bring to Northern’s Office of Admissions in order to enroll. Completion of that form guarantees credit both toward high school graduation and toward a college degree at Northern.

If you wish to enroll in any course which is not approved by your school district (including remedial courses), you and your parents will be responsible for all costs associated with such enrollment.

If you are enrolled in a private high school (including home school), after admission to the college you may enroll in those courses for which you meet the prerequisites. If you fall into this category, you and your parents will be responsible for all costs associated with such enrollment.

EARLY ADMISSION OF PUBLIC HIGH SCHOOL STUDENTS FOR FULL–TIME ATTENDANCE

If you are a high school senior with a 3.00 cumulative grade point average (based on 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 (if public) or high school (if private).

In other words, there must be general agreement among the school, 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. That will be a decision made by your district.

To accomplish this, you will need to have your high school send Northern an official transcript showing your coursework from grades 9 through 11. If you are admitted under this special status but your high school will not use Northern credits toward graduation, we encourage you to work toward earning an HSE credential 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 an HSE credential while attending college classes.

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 policies to the Director of Admissions, providing such evidence as may be required by that official. If the Director of Admissions does not grant your appeal, you would then have the right to appeal to Northern’s Academic Standards Committee, a Faculty Committee. If the committee hears your appeal, you must be present at the hearing. A favorable recommendation from that committee
could permit admission in an appropriate status, with enrollment in appropriate courses, as determined by Course Placement Evaluation scores.

SPECIAL PROGRAM REQUIREMENTS

Admission to the college does not carry with it admission to all certificate or associate degree programs of study. You should check with the department chairpersons or program directors of specific programs for admission criteria to their programs.

BACCALAUREATE PROGRAM ADMISSION STANDARDS

In addition to the minimum standards established for admission to its certificate-granting and associate degree-granting programs, Northern has set additional standards for those desiring to enter its four-year baccalaureate degree programs.

See the standards for matriculation to each program as shown in the degree section of this catalog. In general, you must have completed at least the 38-39 credits of the College’s General Education Common Core, and have at least a 2.50 cumulative grade point average (excluding any remedial courses) before being eligible to apply for acceptance to these programs.

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 Higher Education Department website at www.hed.state.nm.us 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 you 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 your 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 CR**

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

**AREA II: MATHEMATICS / SELECT 3 SEM CR**

(a) College Algebra 3 cr  
(b) Other math course at/above level of College Algebra

**AREA III: LABORATORY SCIENCE / SELECT 8 SEM CR**

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

**AREA IV: SOCIAL & BEHAVIORAL SCIENCES / SELECT 6–9 SEM CR**

(a) Economics (Macro- or Microeconomics) 3 cr  
(b) Introduction to Political Science 3 cr  
(c) Introduction to Psychology 3 cr  
(d) Introduction to Sociology 3 cr  
(e) Introduction to Anthropology 3 cr

**AREA V: HUMANITIES AND FINE ARTS / SELECT 6–9 SEM CR**

(a) Introduction to History Survey 3 cr  
(b) Introduction to Philosophy 3 cr  
(c) Introduction to courses in history, theory, or aesthetics of the arts or literature *3 cr

**Total to be selected = 35 semester hours**

**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 to take courses outlined in one of the Lower-Division 64-hour Transfer Modules during their freshman and sophomore years. 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**
- **Social/Behavioral Sciences**
- **Biological Sciences**
- **Physical Sciences**
- **Engineering**
- **Early Childhood Education**
- **Teacher Education**
- **Criminal Justice**

Modules for additional areas of study are being developed. Copies of Transfer Modules listed above may be obtained at Northern’s Student Advisement Center or from the web site for the institution to which you 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

**TRANSFER OF CREDIT AND AWARDING OF CREDIT THROUGH EXAMINATION**

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. Academic credit in this context refers to credit accepted against courses required for graduation in your declared major.

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. Grades from other institutions are not accepted; grades of TR are posted. At the time your admission status has been finalized with the receipt of all required college transcripts, your transcripts will be sent from the Office of Admissions to the Office of the Registrar to be evaluated and appropriate credit posted to your official Northern record.

**Note:** Northern does not accept every course in transfer. We consider only those courses required for graduation in your declared major or to establish prerequisites.

3. receipt at Northern of official AP/CIE/CLEP/DSST scores which meet minimum cut-off scores as listed on the following page.

**Advanced Placement (AP): minimum score = 3, English = 4**

**AP exam title and credit allowable:**

- **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)
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 145 (3)
Studio Art = ART 110 (3)*
  *Additional 3 credits available upon portfolio evaluation
US History = HIST 161 (3) & HIST 162 (3)

University of Cambridge International Examinations (CIE): Northern will grant credit for grades of A-C on A & AS level examinations, as appropriate to degree requirements.

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 $72.00 per test (payable to CLEP), plus a $15.00 administrative fee (payable to Northern). Call 505.747.2164 for details. These examinations are computer-based.

CLEP Subject Exams:

Principles of Management (46)         BA 240 (3)
Introduction to Marketing (50)         BA 251 (3)
Introduction to Business Law (50)      BA 300 (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 & Interp. 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)
  *(A score of 50-62 will earn 6 cr)
College Spanish I and II (63) SPAN 201/202 (6)
(A score of 63 or better will earn 12 cr.)

** DSST (DANTES) SUBJECT EXAMS:**

The following DSST exams are made available at the Testing Center in Student Services. The cost per test is $80 (payable to The Chauncey Group), plus a $15.00 administrative fee (payable to Northern). Call 505.747.2164 for details.

- Business Mathematics (48) BA 205 (3)
- Criminal Justice (49) CJ 111 or CJ 132 (3)
- Here’s to Your Health (48) HPER El. (3)
- Resource Management (46) BA 360 (3)
- Introduction to Business (46) BA 220 (3)
- Int. to Law Enforcement (45) CJ 211 or CJ 221 (3)
- Lifespan Develop. Psychology (46) PSY 290 (3)
- Mgmt. Information Systems (46) BA 242 (3)
- Organizational Behavior (48) BA 313 (3)
- Principles of Finance (46) BA 310 (3)
- Principles of Statistics (48) MATH 145 (3)
- Principles of Supervision (46) BA 240 (3)

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 during military service against Northern’s degree requirements. American Council on Education (ACE) guidebooks are used for the evaluation of such credit. Credit is subject to departmental approval against major requirements.

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 (31 cr)*
   - BIA Law Enforcement Academy (27 cr)*
      * 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 Registrar for further details]. *Note: This type of examination does not extend to college-level courses which fall into the category of being part of the General Education Common Core.

8. receipt of an acceptable transcript showing courses taught at non-U.S. colleges or universities for which an adequate determination can be made by the Registrar as to the equivalency of the course content and satisfactory progress based on Northern’s standards.

9. receipt of a current CRT card. Credit will apply in substitution for PHYS 121/L in the AAS in Radiation Protection only.
10. Credit for non-required courses or for Community Service/Continuing Education (CEU) courses is not granted.

B. In general, Northern imposes no maximum limitation 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 in the past. This is to ensure that the course competencies that you possess are not out of date. Baccalaureate programs may impose limitations on how many credits can be accepted in transfer against upper-division requirements. Any such restrictions are clearly defined in Northern’s catalog and/or in the individual programs’ handbooks.

C. Any student may at any time submit official scores based on such nationally standardized tests as CLEP /DSST without respect to the student’s status of matriculation or the number of terms completed at Northern. Credit will be posted only if the student is in degree-seeking status.

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 College’s complaint policy may be accessed online on Northern’s website at www.nnmc.edu. If you have not received satisfaction from internal college processes, you may contact the New Mexico Higher Education Department, 2048 Galisteo Street, Santa Fe, NM 87505-2100, 505.476.8400 (http://hed.state.nm.us).

CLASSIFICATION OF STUDENTS

As a student, you are classified as a freshman, sophomore, junior, or senior based on the number of credit hours you have earned toward your declared degree, whether in residence at Northern, through standardized testing, or in transfer from other colleges. For all practical purposes, these credits include any remediation you may have taken. The breakdowns on these classifications are:

- Freshman 1.00 to 32.9 cr
- Sophomore 33.0 to 67.9 cr
- Junior 68.0 to 100.9 cr
- Senior 101.0 to 999.9 cr

These classifications are used for reporting to state and federal agencies, as well as for financial aid purposes.

STUDENT EMAIL ACCESS REQUIRED FOR ALL NNMC STUDENTS

All students who have completed the application process and have been assigned a Student ID number will, at the same time, receive a student email account which is accessible by clicking on myNNMC on Northern’s home page, www.nnmc.edu. You must do a one-time activation of your Eagles email, and then you can participate in the payment plan and receive all broadcast messages concerning course cancellations, closings or delays because of bad weather, etc. Your nnmc.edu email account is the college’s official means of communication. All college-related information will be
sent to you via this email account. It is your responsibility to check your nnmc.edu email account regularly for information being sent out from various departments at the college. If you have forgotten your nnmc email password, please contact IT Services at 505-747-2259

ADMISSION / RE-ADMISSION OR RESIDENCY CLASSIFICATION APPEAL

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

1. Providing the Director of Admissions & Recruitment with a letter of appeal, stating in detail what you believe to be inappropriate or incorrect about the decision. If the Director upholds your appeal, you will be admitted or re-admitted, as appropriate.

2. If, after your residency classification has been assigned, you feel that the admissions office has made a wrongful determination, contact the Classification Officer (the Registrar) to appeal. 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 Higher Education Department, Northern’s appellate process is your last recourse prior to the courts (citation: HED Rule 910.10, effective 6/19/92).

Enrollment

STUDENT ADVISEMENT CENTER

The Student Advisement Center (SAC) serves all freshmen students, provides new student orientation information (required), assistance for all non-degree declared students, and individuals needing academic advisement. Mandatory advisement is required for all FTAC’s (first time any college) students during their first three semesters. Northern offers a variety of advising resources such as Accessibility Resource Center (ARC), Veteran’s Resource Center Advisor, Native American Student Advisor and Faculty Advising.

COURSE PLACEMENT

In order to be placed into the appropriate Math and/or English courses students must either take a course placement exam or provide ACT/SAT test scores that are no more than two years old. Northern currently offers course placement testing through the Student Success Center. Please contact us at (505) 747-2164 for more information or to schedule an appointment.

You are not required to provide course placement evaluation scores if:

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 higher; or
2. You apply in non-degree status; or
3. You can provide appropriate-level ACT, SAT, or ACCUPLACER evaluation scores which are no more than 2 years old.
Northern uses the following ACCUPLACER, ACT and SAT scores for course placement.

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>ACCUPLACER</th>
<th>ACT</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writeplacer</td>
<td>Sentence Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 108 &amp; RDG 108</td>
<td>0 - 3</td>
<td>0 - 13</td>
<td>0 - 350</td>
</tr>
<tr>
<td>ENG 109</td>
<td>4</td>
<td>14 - 17</td>
<td>360 - 420</td>
</tr>
<tr>
<td>ENG 109</td>
<td>5 &lt;75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 111</td>
<td>5 75+</td>
<td>18+</td>
<td>430+</td>
</tr>
<tr>
<td>ENG 111</td>
<td>6+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATH</th>
<th>Arithmetic</th>
<th>Elementary Algebra</th>
<th>College Algebra</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 100NL*</td>
<td>0 - 49</td>
<td>0 - 12</td>
<td>0 - 330</td>
</tr>
<tr>
<td>MATH 100</td>
<td>50+</td>
<td>0 - 40</td>
<td>13 - 14</td>
</tr>
<tr>
<td>MATH 130L</td>
<td>50+</td>
<td>41 - 67</td>
<td>14 - 16</td>
</tr>
<tr>
<td>MATH 130</td>
<td>68 - 84</td>
<td>17 - 21</td>
<td>420 - 530</td>
</tr>
<tr>
<td>MATH 145/150</td>
<td>85+</td>
<td>0 - 44</td>
<td>22 - 24</td>
</tr>
<tr>
<td>MATH 155</td>
<td>45 - 79</td>
<td>25 - 26</td>
<td>600 - 650</td>
</tr>
<tr>
<td>MATH 162</td>
<td>80+</td>
<td>27 - 36</td>
<td>660 - 800</td>
</tr>
</tbody>
</table>

* These courses are below the threshold set for financial aid eligibility.

Note that testing above a required course into the next higher level does not relieve you of the necessity to take the lower course if it is itself required for graduation.

Visit the Student Services Area or call 747-2164 for inquiries. We strongly suggest that you take advantage of test-prep materials available in Student Services before you test.

If you are not satisfied with your scores, you may re-test, but you will need to wait a minimum of one day and will be charged $12.00 for the re-take of the exam.

REGISTRATION

Registration for Summer and Fall begins in the middle of April; for Spring, in late October/early November. We encourage you to register as early as you can—and to do so online. Dates for registration activity appear in each session’s Schedule of Classes. First-time-any-college students must attend New Student Orientation in order to register. All registration holds (academic advisement, financial, incomplete admissions) must be addressed by the student and cleared by the appropriate NNMC office before a student can register.

If you wish to register for short courses, you must do so by midnight of the Sunday before the course starts.

Deadlines for course enrollment and changes in enrollment (i.e., dropping and withdrawing) vary based on the length of an individual course’s Part of Term (POT). Detailed
information on each different POT appears in each term’s Schedule of Classes. It is important to review this information before you attempt to enroll. You must meet the deadlines.

**Enrollment Limitations**

**GRADUATING IN A REASONABLE TIME**

In order to complete a program within the norm (2 years for an associate degree or 4 years for a bachelor degree), you need to enroll for 16-18 credits per semester (not including summer sessions and not including any remediation courses which may be required).

**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 dropping from one class and enrolling in another; however, you may wish to drop only one class or drop all classes.

You should always discuss dropping or withdrawing from a course with your academic advisor as well as your financial aid advisor. To drop your last class for the semester you must see your academic advisor; check with financial aid and complete the withdrawal with the Office of the Registrar.

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

**VERTICAL TRANSFER**

Northern recognizes that no diagnostic test (such as its ACCUPLACER, ACT, etc.) 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, or Spanish 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.

**ENROLLMENT VERIFICATION**

Northern New Mexico College has authorized the National Student Clearinghouse to provide enrollment verifications. The National Student Clearinghouse can be contacted at:
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 by providing them with a copy of the course syllabus.

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.

Important: Certain departments (e.g., Nursing, Engineering) and certain courses have special policies on attendance which can be found in the handbooks for those departments and in their course syllabi.

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 that prevent the proper exercise of that responsibility. When it is evident that such circumstances exist, 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 Registrar will exercise the responsibility for the student as soon as the situation becomes known.

Northern’s policy concerning military activation and deployment permits the Registrar, upon receipt of a copy of the student’s orders, to drop the student from all courses or, if requested by the student, arrange for Incomplete grades to be entered to the record (if appropriate). Our policy is to protect the GPA of such individuals who have been called to active military duty. This same policy covers firefighters activated in the exercise of their profession.

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, the failure to reveal previous attendance at other colleges/universities, or a serious violation of the Student Code of Conduct.
Center for Distance Education

Northern New Mexico College offers online courses as an alternative to the traditional campus experience. Individuals who have scheduling problems, work full-time, or live at a distance from campus may want to consider taking an online class. Online and blended or hybrid courses are taught on a semester basis for college credit, and follow the regular Northern course schedule. All Northern admissions and registration deadlines, policies, tuition and procedures apply. Consult the College’s course catalog to determine what format best suits your learning style.

HOW TO BECOME A SUCCESSFUL ONLINE COLLEGE STUDENT

First Day of the Semester

Log into the NNMC Blackboard© web site on the first day of class making sure you have an Eagles Email Address, Eagle ID and required password plus purchase or rent any course related materials such as a textbook or E-Book. Please note: unless indicated otherwise by your instructor access to online courses will not be available until the first day of the semester.

Blackboard Orientation

It is expected that all online students who need Blackboard assistance enroll in NNMC’s Blackboard Student Orientation (http://nnmc.blackboard.com) located on your My Courses Welcome Page. This brief tutorial provides an overview of Blackboard and contains short “how to” instructional film clips designed to help you navigate your Blackboard student account.

Student Commitment

NNMC students taking online courses are expected to spend two hours of study per credit hour enrolled. They are also expected to participate in class, keep up with coursework, keep track of assignments and due dates, connect with instructors, and interact with classmates. Self-direction, time management, and a dedicated study space are highly recommended.

Student Participation

Active interaction with your fellow online students and instructor is very important especially when you have questions. Make sure you have your instructors contact information and most important download a copy of the course syllabus and semester course calendar.

What does a student need to know to take an online course?

- Working knowledge of Windows or Mac OS
- Experience with copying, saving computer files and understanding how to upload completed assignments to Blackboard using either a Windows or MAC OS tablet/chrome book or smart phone
- A computer with all current software updates for running web browsers such as Firefox, Google Chrome, or Safari with the ability to stream video and audio.
- Your course may also require hardware such as a headset with a microphone.
For course-specific computer requirements make sure you read the course syllabus found in your Blackboard course site.

**Internet Access**

Online courses perform best on a high speed Internet connection. Cable and DSL connections improve the user's experience with the course. NNMC's Ben Lujan Library offers an excellent study venue for completing online assignments with its array of computers, wireless Internet access, private study rooms and flexible hours of operation.

The Center for Distance Education provides technical/training assistance for students using Blackboard. Please email distanceed@nnmc.edu, or phone our Distance Education Support Line 505.747.5428 to set up an appointment, or visit the Center for Distance Education at www.nnmc.edu (Academics menu).

**Undergraduate General Curriculum Requirements and Academic Policies**

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. Program course requirements

2. **Degree requirements**

The following General Education spread are minimum requirements throughout all Associate of Applied Science and Associate of Engineering degree majors shown in this catalog. The standards for Associates of Art or Science are much more detailed.

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications, including ENG 111</td>
<td>6*</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Math/Computer Science and/or Lab Science</td>
<td>6-7**</td>
</tr>
<tr>
<td>Social/Behavioral</td>
<td>3</td>
</tr>
<tr>
<td>First Year Experience</td>
<td>3</td>
</tr>
</tbody>
</table>

Total = 21-22

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

3. **Health, Physical Education, or Recreation courses**

Some 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 and Associate in Engineering degrees. Only courses from these breakdowns may be used to satisfy the discipline requirement for General Education electives in an applied science degree or Engineering (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.

<table>
<thead>
<tr>
<th>COMMUNICATIONS</th>
<th>HUMANITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>English *</td>
<td>Art (theory only)</td>
</tr>
<tr>
<td>Speech</td>
<td>History</td>
</tr>
<tr>
<td>* Excludes Literature &amp; Creative Writing</td>
<td>Humanities</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
</tr>
<tr>
<td></td>
<td>Music (theory only)</td>
</tr>
<tr>
<td></td>
<td>Philosophy</td>
</tr>
<tr>
<td></td>
<td>Theatre (theory only)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATHEMATICS</th>
<th>SOCIAL/BEHAVIORAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 130 or higher</td>
<td>Anthropology</td>
</tr>
<tr>
<td></td>
<td>Economics</td>
</tr>
<tr>
<td></td>
<td>Geography</td>
</tr>
<tr>
<td></td>
<td>Political Science</td>
</tr>
<tr>
<td></td>
<td>Psychology</td>
</tr>
<tr>
<td></td>
<td>Sociology</td>
</tr>
</tbody>
</table>

** In an AAS degree not requiring a specific 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 and Northern’s baccalaureate degree requirements for the General Education Common Core, you will select courses from each area shown.

Northern New Mexico College’s general education requirements reflect the values of the college and its faculty. The purpose of these courses is to help you achieve a foundation of knowledge that broadens and enriches your abilities to communicate, to think critically, to problem solve, and to broaden your world view regarding global awareness, human values, and social consciousness.

These selections call for you to develop written and oral communication skills, problem solving skills, scientific, historical, cultural, and ethical thinking. Northern
has added courses to the state-wide transfer common core which present you with a greater choice of electives. If you will be transferring these courses to another college/university, you may be required to verify acceptance of such courses at the transferring institutions.

In 2014, Northern completed a review of the total credit hours required to earn an associate and bachelor’s degree. For most associate and bachelor’s degrees, the review led to a reduction of required hours to 60 and 120 respectively. Due to accreditation requirements and other industry regulations, some degrees may require additional hours.

FYE 101 (First-Year Experience) is a course required to be taken within your first 30 credit hours at Northern. Students transferring into Northern’s associate and baccalaureate degree programs who have completed a minimum 30 credit hours of college level courses elsewhere are encouraged to take this course but are not required to do so. If you choose not to take these courses, you must meet the credit-hour requirements with appropriate electives. If you have taken a three-credit-hour First Year Experience course at another college, it will transfer to Northern as FYE 101.

**AREA I: COMMUNICATIONS (9 CR)**

**Required**
- ENG 111 Composition I
- SPCH 130 Public Speaking

**Elective**
- ENG 112 Composition II
- ENG 116 Professional and Technical Communication

**AREA II: MATHEMATICS (3 CR)**

**Elective**
- MATH 145 Introduction to Probability & Statistics
- MATH 150 College Algebra
- MATH 151 Conceptual Mathematics *
- MATH 155 Trigonometry
- MATH 162 Calculus I
- MATH 163 Calculus II
- MATH 264 Calculus III

* Conceptual Mathematics will satisfy the mathematics requirement for all AA/BA/BBA/BM degrees.

**AREA III: LABORATORY SCIENCE (8 CR)**

**Elective**
- ASTR 110/L Introduction to Astronomy with Lab
- BIOL 110/L Current Topics in Biology with Lab
- CHEM 110/L Introduction to Chemistry with Lab
- ES 112/L Intro to Environmental Science I with Lab
- GEOL 101/L Physical Geology with Lab
GEOL 102/L  Historical Geology with Lab

This area can also include courses designed for students pursuing science majors: e.g., BIOL 201/L, CHEM 121/L, PHYS 121/L, etc.

AREA IV: SOCIAL/BEHAVIORAL SCIENCES (6–9 CR)*

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

- ANTH 101/L  Physical Anthropology with Lab
- ANTH 102  Intro to Social/Cultural Anthropology
- ANTH 110  Indian Cultures of the Southwest
- ANTH 207  Cultures of New Mexico
- ECON 200  Macroeconomics
- ECON 201  Microeconomics
- GEOG 111  World Geography
- HSS 311  Readings in the Social Sciences **
- HSS 414  Humanity and Creativity **
- HSS 421  History, Literature, Art & Philosophy **
- PSCI 110  The Political World
- PSCI 120  Contemporary Political Issues
- PSCI 200  American Politics
- PSCI 210  State and Local Government
- PSCI 212  The American Presidency
- PSY 105  General Psychology
- PSY 210  Theories of Personality
- PSY 229  Adolescent Psychology
- PSY 230  Psychology of Adjustment
- PSY 232  Abnormal Behavior
- PSY 290  Developmental Psychology
- PSY 370  Social Psychology
- SOC 101  Introduction to Sociology
- SOC 213  Deviant Behavior
- SOC 216  Ethnic and Intercultural Relations
- SOC 220  Social Problems
- SOC 225  Marriage and the Family

Second Language  Students can use the Second Language Requirement to fulfill the 15 hours required in both Areas IV & V.

The Second Language Requirement will be mandatory for all bachelor degrees and optional for associate degrees. However associate degree students are encouraged to take the Second Language Requirement if they ever intend to pursue a bachelor degree.

* Plus, topic courses with student advisor’s approval

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* If your major is in the area of the Humanities/Fine Arts, unless otherwise regulated by a given department, you should select 6 hrs from Area IV and 9 hrs from Area V; if in the Social/Behavioral Sciences; you should select 9 hrs from Area IV and 6 hrs from Area V. Consult your major advisor. In any case, you must complete a minimum spread of 15 credit hours between areas IV and V.

** Students in associate degree programs are advised that upper-division courses used to satisfy any of these requirements are not covered by financial aid.
### AREA V: HUMANITIES AND FINE ARTS (6–9 CR)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
</tr>
<tr>
<td>ART 208</td>
<td>History of NM Art &amp; Architecture I</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of Art II</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
</tr>
<tr>
<td>DANC 245</td>
<td>Dance History</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children's Literature</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
</tr>
<tr>
<td>ENG/PIS 265</td>
<td>Native American Literature I</td>
</tr>
<tr>
<td>ENG/PIS 266</td>
<td>Native American Literature II</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
</tr>
<tr>
<td>ENG 294</td>
<td>Mythology</td>
</tr>
<tr>
<td>FDMA 280</td>
<td>History of Cinema</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women's History</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
</tr>
<tr>
<td>HUM 100</td>
<td>History and Culture of Northern New Mexico</td>
</tr>
<tr>
<td>HUM 101</td>
<td>Humanities I</td>
</tr>
<tr>
<td>HUM 102</td>
<td>Humanities II</td>
</tr>
<tr>
<td>HUM 103</td>
<td>The Search for Meaning</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
</tr>
<tr>
<td>HUM 200</td>
<td>Comparative Religion</td>
</tr>
<tr>
<td>MUS 103</td>
<td>Music Hist &amp; Lit I</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>MUS 218</td>
<td>Music Hist &amp; Lit II</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Intro to Philosophical Problems</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
</tr>
<tr>
<td>PHIL 250</td>
<td>Critical Thinking</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
</tr>
<tr>
<td>THE 130</td>
<td>History of Theatre</td>
</tr>
</tbody>
</table>

Second Language

Students can use the Second Language Requirement to fulfill the 15 hours required in both Areas IV & V.

The Second Language Requirement will be mandatory for all bachelor degrees and optional for associate degrees. However, associate degree students are encouraged to take the Second Language Requirement if they ever intend to pursue a bachelor degree.

*Plus, topic courses with student advisor’s approval*
AREA VI: FIRST YEAR EXPERIENCE (3 CR)
FYE 101 Freshman Year Experience

This course will be required for all associate and bachelor degrees and should be taken within the first 30 credit hours (preferably in the first semester). Students who have already completed a minimum of 30 credit hours of college level courses do not have to take the FYE course. FYE courses taken at other institutions will also transfer to NNMC.

Total required for associate degrees = 38 semester hours

TOTAL REQUIRED FOR BACCALAUREATE DEGREES = 38 SEMESTER HOURS

An additional new bachelor's degree requirement that does not add hours to the General Education Core is the Writing Intensive Course requirement. Writing Intensive Courses (which will be designated as WIC) are upper division writing courses that focus on the writing process within specific disciplines. All bachelor degree seeking students are required to take at least one Writing Intensive Course in their declared field of study where they will be given the opportunities to learn the appropriate writing genres for the field, the guidelines of their discipline's writing format, and complete professional writing assignments using models of writing from within their chosen field.

The WIC in each bachelor's degree program is a course that is already part of the program requirements so it does not add to the total number of General Education credits required.

FOR PURPOSES OF MEETING GRADUATION REQUIREMENTS, courses that appear on Northern’s General Education Common Core list and that also appear as part of your program/major core will be used to satisfy only major core requirements. For example, if your major requires ECON 200, you may not count this course to also satisfy General Education Common Core requirements.

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 and by the Faculty Senate.

If you have any questions concerning the Application of the General Education Common Core, please check with your academic advisor to avoid signing up for what might be an inappropriate course.

Grading System

Following are the allowable grades and associated grade points:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.33</td>
<td>Outstanding</td>
</tr>
<tr>
<td>A</td>
<td>4.00</td>
<td>Outstanding</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
<td>Outstanding</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
<td>Above Average</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
<td>Above Average</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
<td>Above Average</td>
</tr>
</tbody>
</table>
Letter grades are issued by instructors to indicate the quality of work done; instructors are not required to issue +/- grades.

*Grades of D+ and below do not count toward graduation and do not meet the criteria for satisfying prerequisites.

From Fall 2008 through Fall 2009 remedial MATH 100N and 102N used letter grades with a suffix of “N.” These grades, such as a BN or a CN were not used in computing a GPA. As of Spring Semester 2010, these grades are no longer used.

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. A grade of NC does not meet the requirements for meeting prerequisites.

- **TR**: a grade used to show that credit has been accepted in transfer for a course taken at other than Northern or is the entry posted in cases of successfully passing a locally-developed exam.

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, either by the end of the second week of a regular semester or by the end of 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 a regular semester). “Officially” describes a process in which you withdraw online (within given deadlines). 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. However, it is the student’s responsibility to withdraw from a course to avoid receiving a failing grade.
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 were hospitalized in the last couple of weeks of the term), you were not able to complete that last small portion of the course requirements. By mutual, signed agreement between you and the instructor, and subsequently accepted by the Registrar, you will have up to one year to complete that small portion of the course still lacking. The deadline for completion will usually be one to three months rather than a full twelve months. These deadlines are carefully monitored and, if the grade of “I” has not been promptly removed, the Registrar administratively changes the grade to a failing grade (“F”). Such an administratively-assigned grade cannot later be changed by the original instructor of the course.

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 instructor converts the “I” 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 to get grades entered 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, as a student, to challenge a grade, refer to the section of this catalog below dealing with appeals of grades. If the grade you question has been issued by an instructor who is no longer employed by Northern, you should contact the chairperson responsible for that department.

No requests for a grade change or correction will be accepted after one year from the initial assigning of the grade by the instructor. Since Northern does not generally mail grades (see section “Issuance of Grades”), you are responsible for accessing your records online to determine any discrepancy. If anything seems to be incorrect about the grade, it is your responsibility to promptly alert the Office of the Registrar.

GRADE APPEALS

Only you, the affected student, may challenge or appeal a final course grade (henceforth “grade”) which you feel is improper or incorrect. The Grade Appeal Form is available on the Registrar’s page at www.nnmc.edu:

Step 1) The student must read and understand the policy, and compose and attach a letter or memo stating the exact nature of the appeal and the reason(s) for the appeal. The student must initiate the appeal with the instructor no later:

• Fifteen (15) college business days of the Spring semester following a grade awarded in the previous Fall semester; or
• Fifteen (15) college business days of the Fall semester following a grade awarded in the previous Spring semester; or
• Fifteen (15) college business days of the Fall semester following a grade awarded in the previous Summer term.

The chair/director (dean if chair/director is not available) shall become the instructor for purposes of the grade appeal if the instructor is not available or unreachable in which case Step 3 is omitted.

The instructor must initial and date this form at the time of receipt from the student.

Step 2) Upon receipt of this completed form:
• The instructor shall record the decision on this form, and sign and date; and
• The instructor shall inform (email, letter, in-person) the student of his/her decision within ten (10) college business days; and
• The instructor shall return this form to the student and attach a memo or letter describing the basis for the decision and supporting the decision with documentation (e.g. homework, exam scores). If the student is communicating via email, the form can be returned to the student by email after the form is scanned.

Step 3) If the appeal is denied at Step 2:
• If the appeal is denied at Step 2, the student may continue the appeal with the department chair/director (or Dean if there is no chair/director). The student has five (5) college business days following the decision at Step 2 to continue with the appeal.
• The chair/director/dean will review the grade appeal and attempt to resolve the grade appeal with the instructor and the student. If the grade appeal cannot be resolved, the chair/director/dean will send his or her recommendation to the Academics Standards Committee.
• If the grade appeal is resolved, the instructor shall submit a Change of Grade form to the Office of the Registrar within ten (10) college business days.

Step 4) If the appeal is denied at Step 3:
• If the appeal is denied at Step 3 by the department chair/director (or Dean if there is no chair/director), the student may continue the appeal to the Academic Standards Committee via e-mail: academic-sc@nnmc.edu within ten (10) college business days. The department chair/director (or Dean if there is no chair/director) shall inform the chairperson of the Academic Standards Committee of the denial. The Academic Standards Committee shall review the appeal (based on information from both the student and the instructor) and hold a hearing if indicated within twenty (20) college business days. The Academic Standards Committee may not convene over the summer for a hearing due to limited availability of faculty. Then the committee shall submit a recommendation to the Office of the Provost within five (5) college business days. The Office of the Provost shall communicate the final decision on the appeal to the Dean of Students who will inform the student within five (5) college business days.
• If the appeal is granted, the department chair/director (or Dean if there is no chair/director) shall submit a Change of Grade form to the Office of the Registrar within five (5) college business days.

RETROACTIVE WITHDRAWAL

The Retroactive Withdrawal policy is designed to allow for the change of failing grades to grades of “W” (withdraw) when a serious and unforeseen circumstance occurs which makes it impossible for the student to complete the official withdrawal process prior to the withdrawal deadline set in the academic calendar.
A student may petition for Retroactive Withdrawal from a course(s) or from all courses taken during a prior semester if circumstances of a serious and compelling nature prevented the completion of course work and extenuating circumstances prevented submission of a regular withdrawal petition by the deadline. In filing a petition for Retroactive Withdrawal, withdrawal from all courses taken during the term is normally expected since ‘extenuating circumstances’ are not course-specific. When a retroactive withdrawal is approved, failing grades for the semester will be changed to a “W”. Students who gain a retroactive withdrawal are not candidates for the remission of tuition and fees. The time limit for filing a petition for a retroactive withdrawal is one year from the last day of the semester for which the retroactive withdrawal is sought. Petitions require approval from either the Dean or Chairperson of the College that the student is declared under.

*Students may be candidates for retroactive withdrawal when:* The extenuating circumstances that contributed to the inability to withdraw by the deadline were: 1) beyond their control 2) unforeseeable 3) severe 4) verifiable.

For more information, please contact the Registrar at 505.747.2148

**GRADE POINT AVERAGE (GPA)**

You may calculate your GPA by dividing the number of grade points earned by the total number of credit hours generating those points, 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**

All grades are available online. Northern does not mail mid-term or final grade reports.

**ACADEMIC FORGIVENESS**

Northern recognizes that sometimes students are not academically prepared to start college, or are perhaps not emotionally or socially prepared, and sometimes receive failing grades or have to withdraw in their first term(s). The results may follow them throughout their academic careers and even affect them to the point that they drop out of college or are denied financial aid. Northern has, therefore, adopted a policy which allows those who fall into this category to request that such grades be deleted from their academic transcript. Students who meet all of the criteria listed below may submit a Request for Academic Forgiveness form to the Office of the Registrar, who is responsible for administering this policy. The criteria for exercising Academic Forgiveness:

1. The term(s) for which you seek forgiveness must have happened at least three years prior to your formal request for forgiveness, and your semester GPA at that time for each term involved must have been below 2.00; and
2. The terms involved are limited to your first, or first two, terms at Northern; and
3. Since returning to Northern, you must have completed at least 12 credit hours (spread over one or more terms) and must have a minimum cumulative GPA of 2.00 over those courses (completed after the period for which forgiveness is sought) before applying for forgiveness; and
4. You must not yet have graduated from Northern.

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.

REPEATING COURSES

You may re-enroll, without special permission, for any course which you have
taken at Northern. Each course enrollment and its grade will appear on your tran-
script, but only the last grade earned will be used to calculate your cumulative GPA
and only the last grade earned will be counted toward graduation.

Some courses, however, are already designed to permit a certain number of repeats
(i.e., a HPER course, an ART-studio course, etc.) without affecting your cumulative
GPA. For such 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 dif-
ferent 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 CR before
being able to enroll in 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.

SCHOLASTIC STANDING

Scholastic standing will be determined at the close of each semester and an appro-
priate 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 permanently recorded on your 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 published as the offi-
cial recognition of outstanding academic accomplishments. Only full-time students
who are pursuing a declared major and who have earned a semester GPA of at least
3.50 over a minimum of 12 credit hours (excluding any courses labeled as remedial),
and completed each course with a grade of C or better, are eligible for this honor. The
entry will be posted to your transcript, and you will receive a letter of congratulations
Note: The following policies regarding probation and suspension relate to academic probation and suspension, not financial aid probation and suspension. For financial aid policies, see page 47.

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. You may not appeal probation.

If you are notified 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 Provost. As you continue to raise your GPA, your status will be recorded as Continued Academic Probation until you have achieved a cumulative GPA of 2.00 or higher and achieve Good Standing.

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. If you have registered early for a succeeding term and then are put on suspension, the Registrar’s Office will delete your enrollment until after you have submitted an official appeal. Under these conditions, you will have no guarantee of enrollment in the course which will have been dropped.

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

SUSPENSION APPEAL

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

1. Providing the Dean of Student Services 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 Dean of Student Services 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.

2. If the Dean of Student Services denies your appeal, you may appeal to the Faculty’s Academic Standards Committee, providing that Committee with a written summary of the situation and a detailed, specific statement of what you want. If the Committee recommendation is in your favor, it will send its recommendation.
Graduation

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 coursework with no grade below a “C” if the course was completed before Fall 2018 or with no grade below a “C-” if the course was completed during or after Fall 2018. Certain programs with professional accreditation may require special or additional standards for graduation.

2. You may not count toward degree requirements any course considered to be remedial in nature (i.e., usually 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 may not count a course more than once for any requirements for a certificate, degree, major, or minor. This includes courses required for a major that might also be on the list for General Education courses, courses in a minor that are also required for a major or vice versa, etc. One exception is that General Education as well as core courses in a degree program may count toward a double major, as long as you have taken all of the other distinct courses in the second major. In addition, students pursuing a second degree may use the same General Education and required major core courses for both degrees as long as you take an additional 30 new hours approved by the Department chair of the second department.

4. Residency for Graduation: for a certificate or associate degree program, you must have earned at Northern at least the last 15 credit hours towards an associate degree or certificate; for a baccalaureate degree, the minimum is the last 30 credit hours. 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, thus delaying graduation.

5. Upper Division Coursework Requirement: Students must complete 40 credit hours of upper division coursework for a Baccalaureate degree. Of the 40 credit hours, 20 credit hours are to be in the major.

6. You must complete an online Graduation Application as well as a Petition to Graduate form. This includes payment of the required graduation fee, (currently $100.00 (2016-2017); completing and obtaining signatures from your academic advisor and department chair; and submission of the petition to graduate form through various college departments for signatures; and finally to the Office of the Registrar. Applications are due by the end of the second week of the semester you intend to graduate. Check the Academic Calendar for the exact deadline. The Registrar will conduct a further review of your records and, if the Registrar identifies concerns with credit hours or requirements you will be notified that your graduation may be in jeopardy. You will begin to receive information for the Office of the Registrar about the Commencement program around the middle of the semester.
7. 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 more than one (1) academic year 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.

The graduation fee of $100.00 covers all degrees earned over the course of five years.

8. You cannot receive your diploma or official transcripts if you owe a debt or have an administrative hold of any kind to the College or if your undergraduate admission status is incomplete.

9. 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 titled “Change of Name”) prior to graduation.

10. Replacement diplomas will be provided for a fee of $7.50 each, but only if the diploma was awarded since 1999. Northern cannot produce a diploma for any period earlier than 1999.

11. 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 end of the term in which the last requirements are met (payment, for example). If you should find yourself in this situation, you must submit a Graduation Application and Petition-to-Graduate within two years of having completed all of your program requirements.

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** 3.75–3.94 cum. GPA
- **Summa Cum Laude** 3.95–4.00 cum. GPA

GRADUATION WITH MENTION OF HONOR SOCIETY MEMBERSHIP

If you are a member in good standing in Northern’s Alpha Lota Sigma chapter of Phi Theta Kappa, the international honor society for two-year colleges, you will be entitled to wear the Society’s honor regalia at graduation. See the chapter advisor for information on membership and honor regalia.

ALUMNI STATUS

Once you have graduated from a program, you become a Northern alum. This is an important role: satisfied graduates make the best recruiters for any college. You satisfy this role by mentioning where you received your degree and recommending Northern to family, friends, and co-workers as well as by becoming active in the Northern Alumni Association.

As an alum, it is important that you stay in touch with Northern and keep your information current for our records.
## Tuition & Fees (Fall 2018)
Tuition, general fees, and other charges are subject to change at any time by the College Board of Regents.

### UNDERGRADUATE

<table>
<thead>
<tr>
<th></th>
<th>Tuition</th>
<th>General Fees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEW MEXICO RESIDENTS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-11 hours, per credit hour (Part-time)</td>
<td>$135.85</td>
<td>$62.70</td>
<td>$198.55</td>
</tr>
<tr>
<td>12 to 18 hours = block (Full-time)*</td>
<td>$1630.20</td>
<td>$752.40</td>
<td>$2382.60</td>
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<tr>
<td><strong>SENIOR RESIDENTS</strong></td>
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<tr>
<td>Per credit hour ( 6 hours or less)</td>
<td>$5.00</td>
<td>$62.70</td>
<td>$67.70</td>
</tr>
<tr>
<td>Per credit hour (more than 6 hours)</td>
<td>$135.85</td>
<td>$62.70</td>
<td>$198.55</td>
</tr>
<tr>
<td><strong>NON-RESIDENTS</strong></td>
<td></td>
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<tr>
<td>(including international students)</td>
<td></td>
<td></td>
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<tr>
<td>1-11 hours, per credit hour (Part-time)</td>
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<tr>
<td>(Western Undergraduate Exchange)**</td>
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<td>1-11 hours, per credit hour (Part-time)</td>
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<td><strong>COMMUNITY RATE</strong></td>
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<td>(for art classes)</td>
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<td>Per credit hour ( 6 hours or less)</td>
<td>$80.00</td>
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<tr>
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<td>$135.85</td>
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<td>$198.55</td>
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### POST-BACCALAUREATE

<table>
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<th></th>
<th>Tuition</th>
<th>General Fees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEW MEXICO RESIDENT</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Per credit hour + flat fee for 1 - 6 hours</td>
<td>$147.35</td>
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<td>Engineering per credit hour + flat fee for 1 to 6 hours</td>
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<td>Engineering per credit hour + flat fee for over 6 hours</td>
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<tr>
<td>Per credit hour + flat fee for 1 to 6 hours</td>
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<tr>
<td>Engineering per credit hour + flat fee for 1 to 6 hours</td>
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**Additional charge:** Registration (over 6 hours, flat fee per semester), $29.26

*Note: Course-specific fees may apply, such as lab ($78.38/course) or online class ($31.35/credit) fees.

*Each credit hour over 18 will be charged at $198.55/hour for residents, $567.44/for non-residents.

** Reduced rate of 150% of resident tuition for eligible degrees, offered through the Western Undergraduate Exchange ([www.wiche.edu/wue](http://www.wiche.edu/wue)).
LATE FEES

- Late Registration Fee $41.80
- Online Payment Plan Late Fee $10.00

OTHER FEES (as applicable)

- Online Payment Plan $25.00
- Graduation* $100.00
- Cap & Gown $40.00
- Additional/replacement diplomas $7.50
- Unofficial Transcript $2.00
- Official Transcript $5.00
- ID Card replacement $5.00
- Lab fee (per course) $78.38
- Course Fee Field Experience $78.38
- CPR Cards & Textbook (HSCI 102/109) $21.00/$50.00
- EMT Basic Materials & Certification $184.00
- Fingerprinting (per year) $17.00
- Background Check Fee (per year) $74.00
- Capitol Challenge $45.00
- Standard Nurse Testing $135.00
- Drug screen $42.00
- Nursing uniforms $100.00
- Nursing tote $70.00
- Nursing Docucare $75.00
- Herbal supplies $35.00
- Institutional Testing (LDCE Exam) $20.00
- Capstone Test-Business $25.00
- In-house examinations (per course) $20.00
- CLEP/DSST examination (per course) $15.00
- GIS Industrial Certification $245.00

ESTIMATED EXPENSES FOR NEW MEXICO RESIDENT PER SEMESTER

- Tuition: see pertinent section about resident vs. non-resident on page 41.
- Books, Supplies, and Equipment: $600.00
- Living Expenses/Other: $650.00

SPECIAL ASSESSMENTS

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

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 Northern New Mexico College Board of Regents.

*The $100.00 graduation fee covers all degrees earned over the course of five years. The fee includes the diploma, diploma cover, honor cords, etc. but not the cost of cap and gown.
Once you have registered for a class, you are liable for payment in full unless you drop the class within the period designated for a full (100%) refund. Failure to pay will result in disenrollment. Check the Course Schedule or myNNMC for exact disenrollment dates and other deadlines for each semester.

Northern has a Payment Plan which you can automatically access by paying 5% of the total charges at the time you register, and a $25.00 service charge. For summer sessions, there will be two installments due on 15th of each month; for fall and spring semesters, there will be three installments due on the 15th of each month. When you enter into the agreement, you will be charged a fee of $25.00. If your payment(s) is late, you will be charged a $10.00 late payment fee.

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.

The Bill+Payment System is a secure site. You can access the Bill+Payment System by clicking on TouchNet Online Bill Pay after logging into myNNMC (next to the search field at the top of the Northern’s home page). There you can:

1. View your tuition and fee charges for the term.
2. Make an online payment using your debit card, credit card, or electronic check.
3. Enroll online for a payment plan (Note: A $25 service charge is assessed and due at time of enrolling in a payment plan; a late fee of $10 will be assessed if the payment plan amount is not paid by the due date.)
4. Sign up for electronic refund of your financial aid or any credit balances on your student account. All refunds will be delivered via Direct Deposit.
5. Authorize parent or third party access to your student account information to make an online payment or enroll online for a payment plan on behalf of the student.
6. Receive automatic emails sent to you and/or an authorized third party when payments are due or a new statement is posted. Note: You must activate your NNMC email account. Instructions are available at myNNMC.

Personal checks submitted for any fees must have your student ID number 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 cash. The cashier will write your student ID number on checks if you have not already done so.

Students expecting payment by a third party must turn in authorization documentation to Student Billing a minimum of 2 weeks prior to the class start date.

OTHER DEADLINES

Departments that offer assistance grants for special programs must turn in authorization documentation to Student Billing prior to the payment deadline published in the Academic Calendar.

Tuition waivers for faculty and staff must be received in the Business Office a minimum of 2 weeks prior to the class start date. Note: Faculty and staff are responsible for paying 100% of all required fees and books. You may choose to set up a payment plan to pay these fees or make payments via payroll deduction. Otherwise fees must be paid in full when you register.

Failure to submit authorizations, pay in full or enroll in a payment plan in a timely
manner will result in disenrollment. Disenrollment is one week before the semester begins and the two subsequent Fridays through the first week of the semester.

Some Exceptions

SENIOR CITIZENS

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. If you enroll for more than 6 credit hours in such courses, charges for credit hours in excess of 6 will be charged at the regular rate of $198.55 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 one 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. Check with the Admissions Office to see if you are eligible.

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.

Note: 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.

If you are granted this waiver, it is applicable to fall and spring terms only.

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 ($203.78 per credit) which is 150% of the in-state rate: 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.

Note: 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.

If you are granted this waiver, it is applicable to fall and spring terms only.

DETERMINATION OF RESIDENCY STATUS

A. At time of first admission. A person’s residency classification for tuition purposes shall be determined at time of admission and must be completed by the census date of that first enrollment in a given public postsecondary educational institution. A person not meeting the residency requirements shall be classified as a non-resident for purposes of tuition charges. The student’s classification at time of admission remains in effect unless the individual is re-admitted to the institution or until the individual petitions to become a New Mexico resident.

B. Petition for resident tuition classification. Once determined a non-resident at the time of census date, a student can petition to be classified as a New Mexico resident by completing the Petition for resident tuition classification form (see Paragraph (3) of Section B of 5.7.18.12 NMAC, procedure to petition for resident tuition classification).

[5.7.18.8 NMAC–Rp, 5.7.18.10 NMAC, 8/30/2007]

REQUIREMENTS TO ESTABLISH NEW MEXICO RESIDENCY:

To become a legal resident of New Mexico for tuition purposes each of the following requirements must be satisfied:

A. Twelve month durational requirement. A person must physically reside in New Mexico for the twelve consecutive months immediately preceding the term for which the resident classification is requested.

B. Financial independence requirement. Only persons who are financially independent may establish residency apart from parents or guardians. A student cannot be approved for residency who is financially dependent upon his or her parents or legal guardians who are non-residents of New Mexico. Dependency will be determined according to the 1954 Internal Revenue Service Code, Section 152 and is always based on the previous tax year for residency purposes. If under the age of 23 at the time the student applies for residency, a copy of his/her parents’ or guardians’ 1040 or 1040A U.S. income tax form for the previous tax year is required. If the student is shown to be a dependent on this tax form, he/she will not be considered financially independent or eligible for residency during the current year.

C. Written declaration of intent requirement. The student or person must sign a written declaration of intent to relinquish residency in any other state and to establish it in New Mexico.

D. Overt acts requirement.

(1) Overt acts are required to evidence support of the written declaration of intent to establish permanent residency in New Mexico. Any act considered inconsistent with being a New Mexico resident, will cause the request for resident classification to be denied. The required overt acts are evidence of any two of the following:

(a) the applicant is financially dependent, a copy of the parent or guardian’s previous year’s income tax return showing the applicant as a dependent and the parent’s address as New Mexico; or
(b) a New Mexico high school transcript issued in the past year confirming attendance at a New Mexico public or private high school within the past twelve (12) months; or

(c) a transcript from an online high school showing a New Mexico address confirming attendance within the past twelve (12) months; or

(d) a New Mexico driver’s license or ID card with an original date of issue or a renewal date issued prior to the first day of the term or semester; or

(e) proof of payment of New Mexico state income tax for the previous year; or

(f) evidence of employment within the state of New Mexico; or

(g) New Mexico vehicle registration; or

(h) voter registration in New Mexico; or

(i) proof of residential property ownership in New Mexico; or

(j) a rental agreement within New Mexico; or

(k) utility bills showing the applicant’s name and a New Mexico address; or

(l) other evidence which would reasonably support the individual’s intent to establish and maintain New Mexico residency.

(2) The department recognizes that there may be circumstances in which a student would not be able to fulfill the requirements of an overt act as listed in this section, such as: 1) individual is physically disabled and does not have a driver’s license, or 2) individual is a convicted felon and therefore cannot vote, etc. In instances such as these, the institution will afford the student an opportunity to provide other documentary evidence or reasonable explanation which demonstrates that permanent residency in New Mexico has been established by the student.

E. Exceptions to the twelve (12) month requirement. If a student has met the requirements of one of the following exceptions, and is granted residency status, the student shall continue to be classified and reported as a resident for subsequent continuing enrollment.

(1) An individual married to a legal resident of New Mexico and providing appropriate evidence shall not be required to complete the 12-month durational requirement but must satisfy all other requirements listed in Subsections B, C, and D of 5.7.18.9 NMAC.

(2) Any person, their spouse and dependents who move to New Mexico or who now live in New Mexico and who provide appropriate evidence that they work in a permanent full-time position or practice a profession or conduct a business full-time in New Mexico, shall not be required to complete the 12-month durational requirement but must satisfy all other requirements listed in Subsections B, C, and D of 5.7.18.9 NMAC.

(3) Any person entering the active [military] service of the United States while a resident of New Mexico and who enters a state institution of postsecondary education in New Mexico after separation from such service may be classified as having been a legal resident in New Mexico during the time spent in the service provided they:

(a) have not while in the service done anything (such as voting in another state) to show abandonment of their New Mexico residency;
(b) have not established residence in some other state subsequent to being separated from service;
(c) return to New Mexico within one year after separation from service with the intention of maintaining this state as their legal residence;
(d) are not a dependent minor with parent(s) or guardian(s) whose place of residence classifies him or her as a non-resident of New Mexico.

(4) Any person, their spouse and dependents, who move to New Mexico for retirement purposes, and who provide appropriate evidence of retirement shall not be required to complete the 12-month durational requirement. They must, however, satisfy the other requirements listed in Subsections B, C, and D of 5.7.18.9 NMAC.

5.7.18.10 WAIVERS

If a student has met the requirement of one of the following waivers, the student shall continue to be considered a non-resident for reporting purposes but will receive the benefit of in-state tuition rates. In receiving such a waiver, the student does not become eligible for state-funded student financial aid, unless the regulations for a particular aid program allow for such eligibility.

A. American Indian nations, tribes and pueblos. All out-of-state members of an American Indian nation, tribe, and/or pueblo located wholly or partially in New Mexico, regardless of the residence of the member prior to acceptance at a post-secondary educational institution, shall be eligible to pay the in-state tuition rate. These include members of the following tribes or pueblos: Navajo Nation, Jicarilla Apache, Mescalero Apache, Taos Pueblo, Picuris Pueblo, Ohkay Owingeh, Santa Clara Pueblo, Nambe Pueblo, San Ildefonso Pueblo, Pojoaque Pueblo, Tesuque Pueblo, Cochiti Pueblo, Jemez Pueblo, Santo Domingo Pueblo, San Felipe Pueblo, Zia Pueblo, Santa Ana Pueblo, Sandia Pueblo, Isleta Pueblo, Laguna Pueblo, Acoma Pueblo, Zuni Pueblo, and the Ute Mountain tribe.

B. Armed forces. Any person, their spouse or dependent child, not otherwise entitled to claim residence, who is a member of the armed forces of the United States or armed forces of a foreign country assigned to active duty in the state of New Mexico, will be assessed in-state tuition rates.

(1) Assignment to active duty within New Mexico must be certified by the military person’s commanding officer upon the student’s initial enrollment. Such students may continue paying resident rates for as long as they attend consecutive semesters at the same institution.

(2) A spouse or child of a veteran of the armed forces is entitled to pay tuition and fees at the rate provided for New Mexico residents; provide that spouse or child is eligible for benefits pursuant to the federal Post-9/11 Veterans Educations Assistance Act of 2008 or any other federal law authorizing educational benefits for a veteran and the dependents of a veteran.

C. National Guard. Pursuant to Section 20-4-14, NMSA 1978, an active member of the National Guard and the member’s spouse and children shall be deemed in-state residents for purposes of determining tuition and fees at all state institutions of higher learning.
D. Summer session. During summer sessions, non-resident tuition may be waived according to the institution’s tuition policy.

E. Certain Texas residents. Pursuant to Section 21-1-3D, NMSA 1978, for the purposes of tuition payment and budget and revenue calculations, the board of regents of any post-secondary, state educational institution, as defined in Article 12, Section 11 of the constitution of New Mexico (specifically, NMHU, ENMU, NMSU, or WNMU), may determine that any Texas resident who resides within a (one hundred thirty-five) 135 mile radius of that institution may qualify for in-state tuition rates.

F. Colorado and Arizona reciprocity. Tuition reciprocity participants from Colorado and Arizona shall be selected by eligible institutions to pay in-state tuition rates based on criteria set forth by each eligible institution. The department will notify each eligible institution of the maximum waivers allocated on an annual basis.

G. Athletic scholarship recipients. Pursuant to Section 21-1-3E, NMSA 1978, for the purposes of tuition payment and budget and revenue calculations, any student (U.S. citizens and foreign nationals) receiving an athletic scholarship from a post-secondary educational institution set forth in Article 12, Section 11 of the Constitution of New Mexico (specifically, UNM, NMSU, NMHU, ENMU, [or] WNMU, or NNMC) may qualify for in-state tuition rates.

H. Competitive scholarship recipients. Any student participating in this program shall be recognized as a competitive scholar and reported as such, unless the student petitions for and is granted residency status.

I. Graduate assistants, including research and teaching assistants, employed at least one-fourth time (10 hours weekly), will be assessed in-state tuition rates. To be eligible, students (U.S. citizens and foreign nationals) must be enrolled full-time, as defined in the graduate catalogue of the public postsecondary institution, during regular terms.

J. Nondiscrimination principle. Notwithstanding the provisions of Section of 5.7.18.7 NMAC, any tuition or state-funded financial aid that is granted to residents of New Mexico shall also be granted on the same terms to all persons, regardless of immigration status, who have attended a secondary educational institution in New Mexico for at least one year and who have either graduated from a New Mexico high school or received high school equivalency credential (such as a GED®)in New Mexico. State-funded financial aid programs with an employment component may require U.S. citizenship or eligible non-citizen status.

[5.7.18.10 NMAC–Rp, 5.7.18.12 NMAC, 8/30/2007; A, 5/30/2008]

APPEAL OF RESIDENCY

If, after your residency classification has been assigned, you feel that the admissions office has made a wrongful determination, you should contact the Dean of Student Services to appeal. 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 Higher Education Department, Northern’s appellate process is your last recourse prior to the courts (citation: HED Rule 910.10, effective 6/19/92).
Refunds

TUITION AND FEES

Refunds are computed from the course cancellation or enrollment drop date according to the following schedules:

<table>
<thead>
<tr>
<th>COURSE LENGTH (in weeks)</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-longer</td>
<td>100%</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>12-15</td>
<td>100%</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>9-11</td>
<td>100%</td>
<td>75%</td>
<td>None</td>
</tr>
<tr>
<td>8</td>
<td>100%</td>
<td>50%</td>
<td>None</td>
</tr>
<tr>
<td>6-7</td>
<td>100%</td>
<td>25%</td>
<td>None</td>
</tr>
<tr>
<td>3-5</td>
<td>100%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1-2</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

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

REFUNDS APPEAL

If you believe that the College’s policy for the refunding of charges has not been properly implemented, you may appeal to the Student Appeals Committee by providing the committee chair a letter of appeal, stating in detail what you believe to be inappropriate or incorrect with the decision. If the Student Appeals Committee upholds your appeal, the refund will be adjusted appropriately.

DROPPING/WITHDRAWING FROM COURSES

Once you have registered, you may drop (during the refund period) or withdraw (after the refund period) from any course online—without special permission—at www.nnmc.edu. Click on myNNMC, then on Banner Connect, and follow the directions. You may not drop or withdraw from a course by telephone, nor may anyone other than you or your instructor drop or withdraw you from a course. If you are withdrawing from your last remaining class for the semester you must complete the process in person. You cannot drop/withdraw from your last class though your student myNNMC portal. You must see your academic advisor; receive signature from the Office of Financial Aid; and turn in the signed form to the Office of the Registrar for final processing.

If it is established that you have never attended or have at least three consecutive absences during the first three weeks of a regular term (first week of a summer session) without prior knowledge of your instructor, that instructor has the right to withdraw you from the course—has the right to, but does not have to withdraw you. If you should stop attending a class after the deadlines mentioned above, do not assume that you will be withdrawn by your instructor—follow the instructions in the previous paragraph to avoid being billed or receiving an “F” for the course(s).

If you drop a course within the refund period (the first two weeks of a regular fall or spring semester or the first week of a summer session), your enrollment in that course will not appear on your transcript.
DEADLINES FOR WITHDRAWING FROM FULL-TERM COURSES AND LESS THAN FULL-TERM COURSES:

<table>
<thead>
<tr>
<th>COURSE LENGTH</th>
<th>DEADLINE TO WITHDRAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-7 days</td>
<td>before scheduled class</td>
</tr>
<tr>
<td>2 weeks</td>
<td>end 2nd day of course</td>
</tr>
<tr>
<td>3 weeks</td>
<td>end 1st week</td>
</tr>
<tr>
<td>4 weeks</td>
<td>end 2nd week</td>
</tr>
<tr>
<td>5 weeks</td>
<td>end 3rd week</td>
</tr>
<tr>
<td>6 weeks</td>
<td>end 4th week</td>
</tr>
<tr>
<td>7 weeks</td>
<td>end 5th week</td>
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<tr>
<td>8 weeks</td>
<td>end 6th week</td>
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<tr>
<td>9 weeks</td>
<td>end 7th week</td>
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<tr>
<td>10 weeks</td>
<td>end 8th week</td>
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<tr>
<td>11 weeks</td>
<td>end 9th week</td>
</tr>
<tr>
<td>12 weeks</td>
<td>end 10th week</td>
</tr>
<tr>
<td>13 weeks</td>
<td>end 11th week</td>
</tr>
<tr>
<td>14-16 weeks</td>
<td>end 12th week</td>
</tr>
</tbody>
</table>

COURSE CANCELLATION REFUNDS

Normally prior to the first day of class, the Provost will cancel those classes having insufficient enrollment. An email message will be sent to your college email address, informing you that one of your classes has been cancelled. If the Provost deems it 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.

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 10 working days from the start of classes. 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. For any purchases made after the first 10 days, the student 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 mid-terms or finals will be refunded; however, you may sell them back at the end of the term during the book buy-back period.

If your course has been cancelled, bring a copy of the cancellation (e.g., a new copy of your schedule showing “CC” on the line for that course) and your receipt to the Bookstore within 48 hours of the cancellation, and you will receive a full refund. New books must be in their new condition; if a shrink-wrapped book’s wrapper has been broken, the refund amount will be discounted by a stocking fee.

Non-text merchandise is fully refundable within 7 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 may have a 3-day waiting period before refunds are made.
GRADUATION FEE REFUNDS

If, after submitting your Graduation Application, you should decide not to graduate as scheduled or if you fail to meet the requirements for graduation, you will receive no refund.

Financial Aid

The Financial Aid Office at Northern New Mexico College is committed to helping students overcome financial barriers to reach success in higher education. To fulfill this goal, Northern’s Financial Aid Office administers a broad spectrum of grants, scholarships, student employment, and student loan programs to help meet the financial needs of our students.

The principle and primary responsibility to finance a college education though, belongs to the student. Therefore, it is important to recognize that whether you are a dependent student relying on financial support from your parents or are an independent student, you must be prepared to make some financial sacrifice to pay for the investment of earning your college degree.

APPLYING FOR FINANCIAL AID

To apply for most types of financial aid students must complete the Free Application for Federal Student Aid commonly referred to as the FAFSA. Students can complete the FAFSA online at www.fafsa.ed.gov. Northern’s school code is 005286. Students may also seek assistance with the FAFSA by visiting the Financial Aid Office. Some types of financial aid are limited, therefore, completing the FAFSA by the April 30th priority processing date and following through with all requested requirements will increase the likelihood of being awarded the maximum amount of financial aid possible.

GENERAL ELIGIBILITY REQUIREMENTS

To receive financial aid you must demonstrate the following:

1. Meet United States citizenship requirements for federal aid; non-citizens must meet state requirements for certain state aid; and
2. Meet the minimum Satisfactory Academic Progress (SAP) standards (explained later in this section); and
3. Not be in default on a Federal Perkins Loan, a Federal Stafford Loan, or Federal Direct Student Loan; and
4. Not owe a refund/overpayment on a Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Federal Student Loans; and
5. Have been accepted and enrolled in an eligible program of study.

Please note: Federal financial aid does not pay for PD Math 100NL or certain other developmental courses.

SATISFACTORY ACADEMIC PROGRESS (SAP)

There are three major standards listed below that are used to determine eligibility for participation in financial aid programs at Northern New Mexico College. To maintain eligibility a student must be meeting the minimum standards for SAP by
the end of any given enrollment period. Though this policy establishes the minimum standards for federal financial aid programs at NNMC, an individual aid program may have unique qualitative and/or quantitative standards as mandated by law or the program’s governing entity (e.g., Legislative 3% Scholarship and the Legislative Lottery Scholarship).

**MINIMUM STANDARDS OF SATISFACTORY ACADEMIC PROGRESS (SAP)**

1. **Cumulative Grade Point Average (GPA)**
   Students must meet the minimum of a 2.0 cumulative GPA.

2. **Completion Rate (Academic Progress)**
   Students must earn 67 percent of the total number of credits they attempt. A student’s completion rate or “academic progress” is calculated by dividing the total number of earned credits by the total number of attempted credits.

3. **Maximum Time Frame**
   Financial aid eligibility is limited to 150 percent of the published length of the student’s declared program of study.

   Example:
   
   *Bachelor’s in Business Administration* requires 120 credit hours
   
   $120 \text{ credit hours} \times 150\% = 180 \text{ credit hours maximum}$

4. **The following criterion applies when evaluating a student’s Satisfactory Academic Progress Standards:**

   **Earned Credit:** Courses in which grades of A, B, C, D, or CR are considered earned and completed.

   **Attempted Credit:** Courses with assigned grades of W, I, NC, and F are considered attempted but not earned hours.

   **Repeated courses:** Are included in the calculation of both attempted and earned hours. A student is allowed to repeat a course once if previously passed. A student is allowed to repeat a course twice if previously failed.

   **Audited courses:** Are not included in the determination of SAP nor are they eligible to be counted in a student’s enrollment status for the purpose of awarding aid.

   **Remedial courses:** For the purpose of evaluating the maximum time frame, up to 30 hours of remedial courses are excluded in the calculation of both attempted and earned hours, and for the purpose of evaluating the GPA standard, passing grades of (CR) are calculated at a 4.0 grade point average.

   **Transfer credits:** With the exception of remedial courses, all transfer credit hours that are counted as credit toward a student’s declared degree/certificate are included in the maximum time frame calculation (even if the student received no federal student aid for those courses). Transfer credits however, are not included in the calculation of GPA.

   **Changing a Program of Study and/or Pursuing Additional Degree:** Students are allowed to change majors, but may not exceed the maximum time frame as noted in item 3 above.

   **Semester Satisfactory Academic Progress (SAP) Review:** Those students not meeting the minimum Satisfactory Academic Progress standards at the end of any given enrollment period will be placed in either of the following statuses:

   - **Warning:** Status assigned to a student who was previously in good financial aid eligibility standing, but then fails to meet one or more of the SAP standards.
A student may continue to receive financial aid for the assigned warning payment period/semester, but must meet the SAP the minimum standards by the end of the warning semester. No appeal is necessary for this status.

- **Suspension**: If a student does not attain the required cumulative GPA and/or credit completion ratio by the end of the semester that has been assigned to the warning status, or if it is determined that a student is within 36 credits of reaching the 150% maximum time frame or has exceeded the time frame, the student will be placed on financial aid suspension status and will be notified of the change in eligibility. While on suspension status a student is not eligible to receive financial aid (The exceptions are external scholarships that may have different eligibility requirements). To regain eligibility a student must meet the minimum SAP standards by enrolling in and completing courses or by successfully gaining back eligibility through the appeal process. Appealing suspension status is explained below.

**APPEALING THE SUSPENSION OF FINANCIAL AID ELIGIBILITY**

If there are extenuating circumstances that contributed to a student’s inability to meet the minimum SAP standards the student can formally appeal the suspension status by submitting an Appeal/Academic Plan to the Financial Aid Office. The appeal must contain a typed and signed letter that clearly explains the extenuating circumstances that hindered the student from meeting the SAP standards and must also contain appropriate supporting documentation. Some examples of extenuating circumstances might include, but are not limited to:

- **Illness, accident, or injury** experienced by you or a significant person in your life. Documentation required: physician’s statement, police report, or other documentation from a third party professional; hospital billing statement.

- **Death of a family member** or significant person in your life. Documentation required: a copy of the obituary or death certificate.

- **Divorce experienced by you or parent**. Documentation required: attorney’s letter on law firm’s letterhead or copy of divorce decree.

- **Personal problems or issues** with your spouse, family, roommate, or other significant person. Documentation required: written statement from medical doctor, counselor, attorney, or other professional advisor.

**APPROVED APPEAL**: If the appeal/academic plan is approved, the student’s financial aid eligibility will be reinstated on a probationary status with the requirement for the student to follow the approved academic plan. The purpose of the academic plan is to help a student meet the GPA and/or Completion Rate requirement or to insure that the student will complete their intended degree within the 150% max time frame. The successful completion of the academic plan is monitored by the Financial Aid Office at the end of each term of enrollment and students must demonstrate academic progress or be subject to lose eligibility and be placed back on suspension status.

**DENIED APPEAL**: If the appeal is denied, then generally, financial aid suspension status remains until the student completes courses and attains the minimum SAP standards. The student will be responsible for any charges incurred by enrolling in courses.
SATISFACTORY ACADEMIC PROGRESS FOR STUDENT LOANS

Students MUST be meeting the minimum SAP requirements to apply for and/or to continue receiving both Federal Direct Subsidized/Unsubsidized Loans and Federal Parent Plus Loans. This is a non-appealable requirement.

ENROLLMENT REQUIREMENTS FOR FINANCIAL AID

To receive federal financial aid, students must generally enroll at least half-time as regular students in an eligible program. Most scholarships typically require full-time enrollment. Award amounts are prorated according to enrollment status (i.e., full-time, ¾ time and half-time). Audited classes are not included toward financial aid enrollment requirements. Grant awards are locked after the third week (census date) of the fall and spring semester. If a student increases his/her enrollment after the third week, the grant funding does not increase – for this reason it is important to enroll in all courses, including late starting courses by the census date.

Federal financial aid only covers the cost of courses that are part of a student’s declared course of study.

FINANCIAL AID DISBURSEMENTS AND REFUNDS

If all requirements are met for awarding before the start of the semester, financial aid funds are memoed to the student account prior to the start of the term. If authorized, the memo can be used to pay for tuition, fees, and other non-institutional charges. Books and supplies can be purchased with memoed financial aid that remains after tuition and fees have been paid. Any remaining balance will be refunded by direct deposit into the bank account that has previously been authorized for this purpose.

The Business Office will notify students regarding the specific refund disbursement dates for the semester, but typically, refunds occur five weeks after the start of classes. Disbursement for grants and scholarships will not be issued for late starting classes until approximately a week after the first date of attendance. Single semester loans will be issued in two disbursements, the second being after midterms.

WITHDRAWAL FROM COURSES AND THE RETURN OF TITLE IV FUNDS

Title IV Federal Student Aid funds are awarded under the assumption students will attend classes for the entire period for which the aid is awarded. When students completely withdraw, officially or unofficially, they may no longer be eligible to receive the full amount of Title IV aid originally awarded. When students who begin the academic period do not complete at least 60 percent of the period, a recalculation must occur to determine the percentage of aid that was earned. This percentage is derived by dividing the number of days students attended by the number of days in the period. This process is referred to as a Return of Title IV Funds calculation.

If the amount of aid disbursed to the student is greater than the amount of aid that the student earned, any unearned funds must be returned to the appropriate aid program. If the amount disbursed to a student is less than the amount the student earned, and for which he/she is otherwise eligible, any earned funds may be made available to the student as a post-withdrawal disbursement.

Students who receive all “F’s” for the semester are considered to be unofficially withdrawn.
Federal Aid funds determined to be unearned my means of the Return of Title IV calculation will be returned to the U.S. Department of Education in this order:

- Sub/Unsubsidized Stafford Loan
- Perkins Loan
- PLUS Loan
- Pell Grant
- SEOG Grant
- Iraq and Afghanistan Service Grant

Students withdrawing from classes are liable for any balance due to Northern New Mexico College as a result of the Return of Title IV aid funds. An unpaid balance resulting from a Return of Title IV funds will result in a hold being placed on the student’s account that will prevent the student from registering and obtaining official transcripts until the balance is paid in full. To find out more information see Return of Title IV on the Financial Aid web page.

**Typical Sources of Financial Aid**

Northern participates in the following federal and state financial aid programs. Unless otherwise indicated, students must meet all general eligibility requirements as mentioned above. For the most up to date list of available aid programs please visit Northern’s financial aid web page.

**GRANTS**

**Federal Pell Grant:** Intended to be the “foundation” of your financial aid package and is usually combined with other forms of student financial aid to meet your financial need. The maximum amount for the 18-19 aid year is $6,095.

**Federal Supplemental Educational Opportunity Grant (FSEOG):** Available if you have exceptional financial need. Priority is given to students who receive a Federal Pell Grant. An FSEOG does not have to be repaid. Award amounts range from $200 to $1,200 and are based on need and enrollment status.

**New Mexico Student Incentive Grant (NMSIG):** Combines federal and state funds to provide aid for New Mexico undergraduate students with substantial financial need. Award amount ranges from $200 - $1,200.

**New Mexico College Affordability Grant:** Recipients must demonstrate financial need and not qualify for other state grants or scholarships. A student cannot receive an NMSIG, SEOG and NM College Affordability Grant simultaneously.

**STUDENT EMPLOYMENT**

**Federal College Work Study Program (FWS):** Provides part-time employment to students who demonstrate financial need, allowing you to earn money to help pay your educational expenses. When awarded, you can work on-campus or at selected off-campus employment sites.

**New Mexico Work Study Program (SWS):** Provides part-time employment opportunities to qualified students. Although the program parallels the Federal College Work Study Program, an eligible student may not necessarily have an unmet need to participate. To be eligible, you must be a New Mexico resident.
FEDERAL AND STATE LOAN PROGRAMS

Northern participates in the following Federal Loan programs:

The William D. Ford Federal Direct Loan (subsidized and unsubsidized): These loans are available to eligible students to help pay for educational expenses that are not covered by other financial aid. To qualify, students must complete a FAFSA and be enrolled in at least six credit hours. All funds received must be used for educational expenses.

Federal Direct Parent PLUS Loan: is a loan for parents of dependent students. Must be the biological or adoptive parent of the student and the student must be enrolled at least half-time.

New Mexico Teaching and Health Professions: Student Loan–for–Service Programs. These loans provide New Mexico residents with loans to complete nursing and education (teaching) programs. These loans are repaid through service in a designated area that is under-served by licensed registered nurses and teachers. To be eligible, the recipient must demonstrate financial need and be enrolled in six or more credit hours per semester. Information is available on www.hed.state.nm.us or at Northern’s Financial Aid Office.

SCHOLARSHIPS

There are numerous scholarships offered to students attending Northern. For a complete updated list of available scholarships and their eligibility criteria, go to Northern’s Scholarship webpage located in the Student menu at www.nnmc.edu, or visit Northern’s Financial Aid Office on the Española campus.

Northern’s Bridge Scholarship: This one-time, tuition-only scholarship is offered to current year high school graduates or GED recipients and is applied to the cost of the first semester of attendance. The award is dependent upon available funds and ranges from $750 to full-tuition cost. To be eligible a recipient MUST be a NM resident who graduated from a NM accredited public or private school with a graduating grade point average of a 2.0 or better and register for a minimum of 15 credits within 16 months of earning their high school credential. A completed FAFSA form is required.

New Mexico Legislative Lottery Scholarship: This is a tuition-only scholarship. A recipient MUST be a NM resident and must have graduated from a NM accredited public or private high school or equivalency program within 16 months of enrolling in college. To qualify the student must successfully complete his/her first regular semester at Northern with 15 or more credit hours and a minimum grade point average of 2.5 or better. A student can receive this scholarship for up to three (3) semesters if declared under an Associates degree program and up to seven (7) semesters if declared under a Bachelor’s degree. A FAFSA form is not required; however, we encourage students to complete the FAFSA to ensure eligibility for other financial aid programs.

Northern Foundation Scholarships: The Northern New Mexico College Foundation is a non-profit 501(c) (3) corporation created to award scholarships to qualified and deserving students. Since 1996, over 1000 students have received scholarships ranging from $500 to $5,000. The application and guidelines are posted on the College website in the month of February each year. Students can also inquire at the Foundation office located in the Joseph P. Montoya Administration building, or visit the Foundation online at Northern Foundation.
Bienvenido Non-Resident Scholarship: This academically competitive scholarship aims to attract high performing students from across the country to further enrich Northern’s diverse and talented student population. Applicants must be non-residents in New Mexico and meet at least one of the following criteria: A minimum cumulative high school GPA of 3.0; 23 or greater on an ACT exam; 1070 or greater on an SAT exam; have completed at least 12 higher education credit hours with a cumulative higher education GPA of 3.0 or higher.

High School Equivalency graduates with the following test scores will also qualify for the scholarship program: HIGESET: 60 (total score); TASC: 500 (total score); GED (for years 2002-2014: 600 (total score); PearsonVue GED (years 2014 and later): 150 (total score).

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

New Mexico Vietnam Veterans: Administered by the New Mexico Department of Veterans Services in conjunction with the New Mexico Higher Education Department 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 505.827.6300 or online at http://www.nmdvs.org.

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 the Veterans Representative who is responsible for certifying to the VA the enrollment of eligible persons. They can be contacted at 505.747.5499. You can also find more information about VA benefits by visiting Northern’s Veterans Resource Center online.

Student Services Information

ACCESSIBILITY RESOURCES

If you have any type of disability, you may 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 our Accessibility Services department at 505.747.2152.

THE ADVISEMENT CENTER

Productive advising is built on a true partnership in which the student and the advisor work together. The spirit of an ideal advising partnership is one of mutual engagement, responsiveness, and dedication. Regular advising conversations, the fundamental building blocks of the partnership, enable an advisor to serve as a resource of knowledge and a source of referrals—so that students may plan and prepare, in the broadest sense, over the course of their years at Northern. For assistance, call 505.747.2150.
VETERANS RESOURCE CENTER
This office serves the advisement and certification needs for students and their dependents eligible for veterans’ educational benefits under any of the various G.I. Bills. For assistance, contact 505.747.5499.

COLLEGE ASSISTANCE MIGRANT PROGRAM (CAMP)
The CAMP program is a federally-funded program that provides academic support services, and financial resources for migrant/seasonal farmworkers throughout their first year of college. CAMP provides tuition assistance, book stipends, tutoring services, academic advisement, and monthly stipends to eligible full-time students for their first year of college at Northern. The program serves 35 students annually. For information, contact the CAMP office at 505.747.2200.

FIRST YEAR EXPERIENCE PROGRAM
Northern offers a unique array of programs and support services for first-year students. These include a required First-Year Experience course, New Student Orientation, Comprehensive Academic Advisement and other transitional/preparatory programs. These programs are designed to promote student success at Northern New Mexico College and beyond.

Through the first-year experience students will become engaged with the college and community, develop self-understanding, learn about strategies for studying, notetaking, preparing for exams, skills and resources that will advance their personal and academic success, build their information literacy and research skills, and plan for their future at the college and in their careers.

MATH CENTER
Do you need to improve your math skills? The Math Center, located in the Sigfredo Maestas High Tech building, offers assistance through individual tutoring, study groups, and math tutorial software. To schedule an appointment or obtain more information please call 505.747.2164.

WRITING CENTER
Do you need to improve your writing skills? If you feel challenged by the writing process, from brainstorming and organization to drafting and revising, the tutors at Northern’s Writing Center are available by appointment 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 AD 129. For an appointment, hours of operation, or further information, call the Writing Center at 505.747.2294.

CAREER SERVICES
We offer resume writing, interview skills and dress-for-success sessions. For additional information, contact the Director of Admissions and Recruitment at 505.747.2269.

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.
Student activities are coordinated by the Student Senate and the Student Activities 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 Lota Sigma (a chapter of Phi Theta Kappa, the international honor society for two-year colleges). For information about Phi Theta Kappa, contact Dr. Brenda Linnell at 505.747.2248.

**STUDENT SENATE**

The Student Senate is comprised of the elected officers of the Associated Students of Northern New Mexico College, which is the chartered organization representing students and their interests.

You may obtain more detailed information about the Student Senate and college clubs by contacting the Coordinator of Student Activities, at 505.747.2254, or by reviewing the information contained in the Student Handbook.

**STUDENT PHOTO ID**

Students will be issued a photo ID to be eligible for services available at NNMC. Students are required to validate their registration for each academic term of enrollment and receive a current semester sticker.

Students who are officially enrolled in the Adult 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 IDs will be issued to those enrolled in Continuing Education courses which have a minimum length of seven weeks.

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

**INSURANCE**

If you are an international student who will be attending under a student visa, you are required to obtain health and accident insurance. Please contact the Director of Admissions and Recruitment, 505.747.2269.

In addition, students in some specific programs and/or courses must obtain specific types of insurance before enrolling. For further information, check with the Department Chairperson responsible for your particular major, such as Nursing, Cosmetology, etc.

**Auxiliary Services**

**FOOD SERVICES**

Northern provides food service at its Española campus.

**BOOKSTORE SERVICES**

The College Bookstore on the Española campus is a full-service bookstore. Students should familiarize themselves with Bookstore hours and policies posted on Northern’s
The bookstore policy allows book buy-backs during finals week at the end of the Spring and Fall semesters. No receipt is necessary.

LIBRARY SERVICES

The main library facility is at Northern’s Española campus. A Northern ID card is required to borrow materials but the facilities are open to students, faculty, staff, and the community for quiet study, research, viewing of audiovisual materials, and computer usage. Only five books in one subject area may be checked out at one time.

Electronic books as well as subscription library databases consisting of full text journal articles in various disciplines are made available on campus and remotely twenty-four hours daily, seven days a week; however, Northern ID numbers are required to gain access. All of these options are available through the Northern Library website, including the library book catalog. Those community members who are not enrolled as students can pay an annual borrowing fee to checkout physical materials, but they do not have access to electronic databases or eBooks.

The Library provides orientation sessions for class groups and/or individualized instruction on the use of library database utilization. In addition, the library provides a copy machine, computers for library database access as well as Internet access and Microsoft Office products, group study rooms, WiFi, an audiovisual viewing and listening space, Interlibrary loan and reciprocal borrowing privileges. For more detailed information, go to the Library webpage located in the Academics menu at www.nnmc.edu, call 505.747.2243, or email library@nnmc.edu.

PARKING

In general, the only reserved parking is for those who are handicapped and whose automobile shows a valid handicapped placard. Unless you have a physical disability and possess the required placard, do not park in spaces reserved specifically for the physically disabled; your vehicle will be ticketed or towed.

ON–CAMPUS SPEED LIMITS

On-campus driving is restricted to a maximum of 10 mph, or less. 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.

CHILDREN ON CAMPUS

Northern’s “Children on Campus” policy is currently being revised. Please check our policy page on our website for an updated policy.

Other Services

In addition to the services already listed, a number of others are provided by varied programs at Northern: Adult Education (AE), High School Equivalency Program (HEP), High School Equivalency Testing (HSE), and Continuing Education.
ADULT EDUCATION (AE)

This program provides instruction throughout northern New Mexico in the area of HSE test preparation, pre-HSE, English and math basic skills brush-up, Integrated Life Skills, literacy improvement, English for speakers of other languages (ESL), and U.S. citizenship preparation. For information, call 505.747.2198.

CONTINUING EDUCATION AND COMMUNITY SERVICES (CE/CS)

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

Business, professional, or community groups interested in meeting to discuss topics of special interest at either the Española or the El Rito campus may contact the Office of Continuing Education/Community Services at 505.747.5447.

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

HIGH SCHOOL EQUIVALENCY PROGRAM (HEP)

The Northern New Mexico College High School Equivalency Program (HEP) is a Federal Program funded by the Office of Migrant Education, a department of the United Stated Department of Education.

The mission of Northern’s HEP is to provide academic instruction, support services, and financial resources for migrant/seasonal farmworkers pursuing a high school equivalency diploma. Students must be at least 16 years of age. For information, contact the HEP office at the Española campus at 505.747.2144 or 505.747.5441.

Note: Students enrolled in either the AE or HEP programs are not eligible for admission to the college until they have earned their HSE.

TESTING SERVICES

Northern New Mexico College is the designated testing center for Rio Arriba County. For further information, contact Testing at the Española campus at 505.747.2164.

UPWARD BOUND

TRiO Upward Bound is an intensive academic preparation program for college-bound low-income and first generation students at Española Valley High School. Participants in this program receive a number of services including: afterschool tutoring, Saturday Academy workshops at NNMC, a six-week Summer Academy, field trips and college visits, leadership development and family engagement, and academic counseling. This program is sponsored by a grant from the U.S. Department of Education.

STUDENT RECORDS AND FERPA

The Office of the Registrar is responsible for the maintenance of your educational records at Northern New Mexico 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 catalog.
The following information provides policies and procedures as they pertain to educational records:

**Access to and Confidentiality of Student 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 medium 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 member 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. 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 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 educational 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, although the college has an obligation to make a reasonable attempt to give you prior notice before complying with the subpoena. An exception to the “reasonable attempt” exists when the subpoena is issued for a federal grand jury or for law enforcement purposes.

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

Directory Information. 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 on-line or from the Office of Admissions and Records. If no restriction is received by the Registrar, your information will be classified as directory information until such a restriction is placed. Directory information that may be released includes:

- Name
- mailing address
- major field of study
- classification
- enrollment status (full- or part-time)
- dates of attendance
- participation in officially recognized activities and sports (including weight, height, or photograph of athletic team members)
- honors and degrees awarded
- and the name of the education agency or college attended immediately prior to attending Northern.

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 the following particular information 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 seventeen and those seventeen 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 forty-two.

When a transcript 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 Española Campus.


Restriction of Access. You may request this restriction only during a term in which you are then enrolled. If you have applied a restriction to your records, it will continue in effect after you graduate and/or otherwise leave the college.

A brief version of FERPA (FERPA for Dummies) may be found on the Office of the Registrar’s webpage located in the Students menu at www.nnmc.edu.

TRANSCRIPTS

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

In order to obtain an official transcript for yourself or to have one sent to a person, agency, or school, you must submit a written request to the Office of the Registrar. You may pick up a form at the Registrar’s, write/fax a letter to 505.747.5449, or request a transcript by e-mail. If you have questions, please call 505.747.2138. A copy of the request form can be found on Northern’s website at Office of the Registrar located in the Students menu.

Each transcript will be issued at $5.00 per official copy and $2.00 per unofficial copy. However, no transcripts will be issued unless all institutional obligations are paid (including loans issued through the instrumentality of Northern).

You may also request that your transcript be sent via a secure email system (eScrip) directly to whomever you provide an email address for. Be sure to verify that the receiving party is willing to accept an electronic transcript before deciding to have us send one by that method.

Students can now log into their Banner account to order official transcripts online in Transcripts on Demand. This automated system gives students the freedom to request transcripts online 24/7, from anywhere. Transcripts can be delivered to academic institutions, prospective employers, and other recipients through this integrated eScrip-Safe electronic transcript delivery network.

You can obtain an unofficial copy of your transcript by visiting our website, clicking on myNNMC, and following the appropriate links.
TRANSCRIPTS FROM OTHER INSTITUTIONS

Transcripts from other institutions which you have had sent to Northern for purposes of establishing admission eligibility for regular status do not belong to you and will not be returned to you. 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. In unusual circumstances, we may make a photocopy of another institution’s transcript, but it will be reduced in size, so it cannot be modified.

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. 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. In addition, name changes are not made for alumni.

Standards 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 conducive to teaching and learning. This assures each student that a safe and healthy environment exists at Northern. To ensure the attainment of this goal, Northern has developed Standards of Conduct for all students. These standards identify behavior that 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 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.

PLAGIARISM

Dishonesty in connection with tests, quizzes, or coursework 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 your 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.

### 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 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 and 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. Specific questions concerning this policy should be directed to the Director of Institutional Research at 505.747.2118.
CAMPUS SECURITY

All students, faculty, and staff are to report to the Director of Campus Security 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.

Under the terms of the law, in September of each year the College prepares, publishes, and distributes an annual Campus Safety and Security Report, which is available upon request to current students and employees, and to any applicant for enrollment or employment.

In addition, Section 485(f)(1) of the Higher Education Act of 1965 (20 USC 1092(f)(1)) requires that the College notify the campus community how to obtain information provided by the state under the Violent Crime Control and Law Enforcement Act of 1994 (42 USC 14071(j)) concerning registered sex offenders. For our area, this information can be obtained from the New Mexico Department of Public Safety website (www.nmsexoffender.com).

Specific questions concerning this policy should be directed to the Dean of Student Services.

*Commonly referred to as the Megan Act.*
COLLEGE of
ARTS and SCIENCES

Dean: Ulises M. Ricoy, PhD
747.2223  urico@nnmc.edu

Department of
Fine Arts

The mission of the Fine Arts Department is to provide you with the opportunity to enrich your life through study of the traditional fine arts (art, dance, music, theatre, film, and southwest heritage arts), and to prepare you for entry into baccalaureate and master’s programs.

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

Mateo Frazier, MA, Chair
Film & Digital Media/Fine Arts
747.5402  mateo.frazier@nnmc.edu

David Lindblom, MFA
Film & Digital Media Arts
747.2266  dlindblom@nnmc.edu

Associate of Arts
FILM & DIGITAL MEDIA ARTS (FDMA)

The two-year FDMA Program is for students interested in pursuing a career in creative industries including Film, Television, Radio, Audio Production, Digital Photography, and Design. This program provides training for entry-level Film and Digital Media technical positions, and a foundation for students seeking to transfer to a four-year program.

GENERAL EDUCATION (38 CR)

Area I. Communications (9 cr)
Area II. Mathematics (3 cr)
Area III. Laboratory Sciences (8 cr)
Area IV. Social/Behavioral Sciences (6 cr)
Area V. Humanities and Fine Arts (9 cr)

FDMA 280  History of Cinema (3)
Select two Area V courses on page 27 (6), one of which is not in FDMA.

Area VI. First Year Experience (3 cr)
FYE 101  First Year Experience (3)
### FDMA Program Requirements (24-25 CR)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>FDMA 101</td>
<td>Intro to Digital Video Production (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 111</td>
<td>Digital Media Production I (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 155</td>
<td>Digital Animation I: Motion Graphics (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 211</td>
<td>Digital Media Production II (4)</td>
<td></td>
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<tr>
<td>FDMA 295</td>
<td>Digital Media Portfolio (2)</td>
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</table>

Choose 8-9 credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDMA 102</td>
<td>Intro Digital Audio Documentary (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 110</td>
<td>Non-linear editing (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 115</td>
<td>Intro to Documentary Filmmaking (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 120</td>
<td>Digital Music Production Techniques (4)</td>
<td></td>
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<tr>
<td>FDMA 125</td>
<td>Digital Audio Production (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 130</td>
<td>TV Production I (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 140</td>
<td>Digital Imaging I: Adobe Photoshop® (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 175</td>
<td>Web Design I (4)</td>
<td></td>
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<tr>
<td>FDMA 201</td>
<td>Advanced Digital Video Production (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 230</td>
<td>TV Production II (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 240</td>
<td>Digital Imaging II: Adobe Indesign® (4)</td>
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</tr>
<tr>
<td>FDMA 255</td>
<td>Digital Animation II (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 275</td>
<td>Web Design II (4)</td>
<td></td>
</tr>
<tr>
<td>FDMA 290</td>
<td>Multimedia (4)</td>
<td></td>
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<tr>
<td>FDMA 296</td>
<td>Digital Media Production Internship (6)</td>
<td></td>
</tr>
<tr>
<td>FTT 103</td>
<td>Film Crew I (9)</td>
<td></td>
</tr>
<tr>
<td>FTT 104</td>
<td>Film Crew II (9)</td>
<td></td>
</tr>
<tr>
<td>FTT 105</td>
<td>Film Crew III (6)</td>
<td></td>
</tr>
<tr>
<td>ART 110</td>
<td>Drawing I (3)</td>
<td></td>
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<tr>
<td>ART 120</td>
<td>Painting I (3)</td>
<td></td>
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<tr>
<td>ART 122</td>
<td>Design Elements in Art (3)</td>
<td></td>
</tr>
<tr>
<td>ART 170</td>
<td>Photography I (3)</td>
<td></td>
</tr>
<tr>
<td>THE 122</td>
<td>Acting I (3)</td>
<td></td>
</tr>
<tr>
<td>THE 124</td>
<td>Acting for the Camera (3)</td>
<td></td>
</tr>
<tr>
<td>THE 132</td>
<td>Stagecraft (3)</td>
<td></td>
</tr>
<tr>
<td>THE 196</td>
<td>Light and Sound (3)</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credits: 62-63**
Certificate
FILM TECHNICIAN

This program prepares you for entry-level jobs in the craft and skills portion of the film industry. You will study film set etiquette, terminology, film history, basic equipment handling, and OSHA safety rules to enable you to work on a movie set.

GENERAL EDUCATION (6-9 CR)

Communications (3-4 cr)
ENG 108N Basic Composition I (4) or a higher level course

Mathematics (3-5 cr)
MATH 100NL Fundamentals of Math (5) or a higher level course

PROGRAM REQUIREMENTS (24 CR)

FTT 103 Film Crew I (9)
FTT 104 Film Crew II (9)
FTT 105 Film Crew III–Internship (6)

TOTAL CREDITS: 30-33
Department of Biology, Chemistry & Environmental Sciences (BCES)

The mission of the Biology, Chemistry and Environmental Science Department at NNMC is to provide a progressive and balanced learning experience to prepare students for placement in advanced professional programs, and applied technical and research-oriented careers. Our department is committed to student education in fundamental concepts, laboratory and field techniques, research principles and practices that are aligned with marketable skills and the pursuit of life-long scholarship to meet the needs of our culturally rich and diverse student population.

Note: In 2014, Northern completed a review of the total credit hours required to earn an associate and bachelor’s degree, leading to a reduction of required hours to 60 and 120 respectively for most degrees. Due to accreditation requirements and other industry regulations, some degrees may require additional hours.

Joaquin Gallegos, MS, Chair 747.5480 joaquin.gallegos@nnmc.edu
Biology, Chemistry, Environmental Science

Teresa Beaty, PhD 747.5038 teresa.beaty@nnmc.edu
Anatomy & Physiology

Mario Izaguirre-Sierra, PhD 747.5474 mario.izaguirre@nnmc.edu
Biology

Brenda Linnell, PhD 747.2248 bmlinnell@nnmc.edu
Chemistry

Sushmita Nandy, PhD 747.5468 sushmita.nandy@nnmc.edu
Biology

Rhiannon West, PhD 747.5466 rhiannon.west@nnmc.edu
Biology
Bachelor of Science
BIOLOGY

This program prepares you to pursue a graduate degree in biology or to go on to professional schools in the health sciences. Training in biology also prepares you for a wide variety of career choices, including careers in research in academic, government, and private research laboratories, science teaching, positions in the biomedical, biotechnology, and pharmaceutical industries, and other related fields. While many positions are open to those holding a BS degree, some may only be open to those holding advanced graduate degrees.

Matriculation into this program is dependent upon:
1) your having been granted final regular admission to Northern;
2) your having a cumulative grade point average of at least 2.50 in all coursework attempted at Northern and/or other institutions;
3) your having completed 48 credits of college-level work, including the following required courses: BIOL 110/L or BIOL 210/L, BIOL 203/L or BIOL 237/L, BIOL 204/L or BIOL 238/L
4) submission of a personal statement to the program director in which you outline your interest in biology and your career goals.

GENERAL EDUCATION (38 CR) SEE PAGES 24-28
Courses listed under each area are specific requirements for the BS in Biology that also fulfill the requirements for General Education. See pages 24-28 for additional courses to meet the required credits in each area.

Area I. Communications (9 cr)
- ENG 111 Composition I (3)
- SPCH 130 Public Speaking (3)
- ENG 112 Composition II (3)
or
- ENG 116 Professional and Technical Communication (3)

Area II. Mathematics (3 cr)
- MATH 150 College Algebra (3)

Area III. Laboratory Sciences (8 cr)
- CHEM 110/L Introduction to Chemistry with lab (4)
- BIOL 110/L Current Topics in Biology with lab (4)

Area IV. Social/Behavioral Sciences (6-9 cr)
Area V. Humanities and Fine Arts (6-9 cr)

* You must complete at least 15 credits between areas IV and V, Social/Behavioral Science and Humanities/Fine Arts, maintaining at least two disciplines in each area.

Area VI. First Year Experience (3 cr)
- FYE 101 First Year Experience (3)
PROGRAM REQUIREMENTS (82 CR)

- **Biology Core Curriculum (16 cr)**
  - BIOL 201/L Introduction to Molecular and Cell Biology with Lab (4)
  - BIOL 202/L Principles of Genetics with Lab (4)
  - BIOL 203/L Ecology and Evolution with Lab (4)
  - **or**
  - BIOL 237/L (Pre-Health) Anatomy and Physiology I with Lab (4)
  - BIOL 204/L Plant and Animal Form and Function with Lab (4)
  - **or**
  - BIOL 238/L (Pre-Health) Anatomy and Physiology II with Lab (4)

- **Immersive Biology Experience (7 cr)**
  - BIOL 372 Advances in Biology Discussion (3)
  - **or**
  - BIOL 382 Undergraduate Teaching Experience (3)
  - BIOL 392 Undergraduate Research Experience (3)
  - BIOL 472 Undergraduate Seminar in Biology (1)
  - BIOL 492 Biology Capstone Project (3)

- **Supportive Courses in Math, Chemistry, and Physics (35 cr)**
  - **Mathematics (11 cr)**
    - MATH 145 Introduction to Probability and Statistics (3)
    - MATH 155 Trigonometry and Pre-Calculus (4)
    - MATH 162 Calculus I (4)
  - **Chemistry (16 cr)**
    - CHEM 121/L General Chemistry I with lab (4)
    - CHEM 122/L General Chemistry II with lab (4)
    - CHEM 301/L Organic Chemistry I with lab (4)
    - CHEM 302/L Organic Chemistry II with lab (4)
  - **Physics (8 cr)**
    - PHYS 121/L Applied Physics I with lab (4)
    - PHYS 122/L Applied Physics II with lab (4)

- **Additional Program Requirements (24)**

  The remaining 24 credit hours MUST be upper division (300-400). Please seek departmental advisement to tailor your course selections to your individual career objectives. The following courses are suggestions from each discipline. Upper division Special Topics (399 or 499) and Independent Study (398 or 498) courses, which are taught on an occasional basis, may also count toward these credit hours. Credits from courses in the Immersive Biology Experience area (in addition to the 7 credits required) can also count toward these credit hours. **Note:** Course selection must be approved by a BIOL program advisor and Chair of the department.
**Suggested Areas of Concentration:**

**PRE-HEALTH**
- BIOL 310 Science and Society (4)
- BIOL 329 Cellular and Molecular Biology (4)
- BIOL 349/L Essentials of Anatomy and Physiology with lab (4)
- BIOL 351/L General Microbiology with lab (4)
- BIOL 386 Vertebrate Biology (4)
- BIOL 399 Biopsychology (3)
- BIOL 410 Bioinformatics (3)
- BIOL 412/L Developmental Biology with lab (4)
- BIOL 422/L Comparative Vertebrate Anatomy with lab (4)
- BIOL 425 Molecular Genetics (4)
- BIOL 426/L Neurobiology with lab (4)
- BIOL 431 Drugs and Their Actions (4)
- BIOL 456 Immunology (4)
- BIOL 499 Animal Behavior (4)
- BIOL 499 Evolution of Life Histories (4)
- MATH 345 Elements of Mathematical Statistics and Probability Theory (3)
- CHEM 421/L Biochemistry with lab (4)

**CELLULAR AND MOLECULAR BIOLOGY**
- BIOL 310 Science and Society (4)
- BIOL 329 Cellular and Molecular Biology (4)
- BIOL 399 Biopsychology (3)
- BIOL 410 Bioinformatics (3)
- BIOL 412/L Developmental Biology with lab (4)
- BIOL 425 Molecular Genetics (4)
- BIOL 426/L Neurobiology with lab (4)
- BIOL 431 Drugs and Their Actions (3)
- BIOL 456 Immunology (4)
- MATH 345 Elements of Mathematical Statistics and Probability Theory (3)
- CHEM 421/L Biochemistry with lab (4)

**ECOLOGY AND EVOLUTION**
- BIOL 310 Science and Society (4)
- BIOL 371/L Invertebrate Biology with lab (4)
- BIOL 360/L Plant Biology with lab (4)
- BIOL 386 Vertebrate Biology (4)
- BIOL 406 Stream Ecology and Field Methods (4)
- BIOL 418 Conservation Biology (4)
- BIOL 451/L General Ecology with lab (4)
- BIOL 499 Animal Behavior (4)
- BIOL 499 Evolution of Life Histories (4)
- BIOL 499 Ecological Theory (4)
ES 308  Invasive Species (3)
ES 412  Environmental Health and Toxicology (3)
ES 420  Ecology and Hydrology of the Southwest (3)
MATH 345  Elements of Mathematical Statistics and Probability Theory (3)

TOTAL CREDITS: 120

**Associate of Science**

**BIOLOGY**

The associate of science in biology program prepares you to pursue a baccalaureate degree in biology for ecology, wildlife, molecular and pre-professional medical studies. While some positions are open to holders of the associate degree, most of the opportunities exist at the bachelor, master, and doctoral levels.

**GENERAL EDUCATION (38 CR) SEE PAGES 24-28**

Courses listed under each area are specific requirements for the AS in Biology that also fulfill the requirements for General Education. See pages 24-28 for additional courses to meet the required credits in each area.

**Area I. Communications (9 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>3</td>
</tr>
<tr>
<td>ENG 112</td>
<td>3</td>
</tr>
<tr>
<td>or ENG 116</td>
<td>3</td>
</tr>
</tbody>
</table>

**Area II. Mathematics (3 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 150</td>
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</table>

**Area III. Laboratory Sciences (8 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CHEM 110/L</td>
<td>4</td>
</tr>
<tr>
<td>or BIOL 110/L</td>
<td>4</td>
</tr>
<tr>
<td>or BIOL 210/L</td>
<td>4</td>
</tr>
</tbody>
</table>

**Area IV. Social/Behavioral Sciences (6-9 cr)**

**Area V. Humanities and Fine Arts (6-9 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 220</td>
<td>3</td>
</tr>
</tbody>
</table>

*You must complete at least 15 credits between areas IV and V, Social/Behavioral Science and Humanities/Fine Arts, maintaining at least two disciplines in each area.*

**Area VI. First Year Experience (3 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FYE 101</td>
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</tbody>
</table>

**PROGRAM REQUIREMENTS (24 CR)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 201/L</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 202/L</td>
<td>4</td>
</tr>
</tbody>
</table>
BIOL 203/L Ecology and Evolution with Lab (4)  
or  
BIOL 237/L (Pre-Health) Anatomy and Physiology I with Lab (4)  
BIOL 204/L Plant and Animal Form and Function with Lab (4)  
or  
BIOL 238/L (Pre-Health) Anatomy and Physiology II with Lab (4)  
CHEM 121/L General Chemistry I with lab (4)  
CHEM 122/L General Chemistry II with lab (4)  
TOTAL CREDITS: 62

Associate of Applied Science  
CHEMISTRY  
This program 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 (38 CR) SEE PAGES 24-28  
Courses listed under each area are specific requirements for the AS in Chemistry that also fulfill the requirements for General Education. See pages 24-28 for additional courses to meet the required credits in each area.

Area I. Communications (9 cr)  
ENG 111 Composition I (3)  
SPCH 130 Public Speaking (3)  
ENG 112 Composition II (3)  
or  
ENG 116 Professional and Technical Communication (3)

Area II. Mathematics (3 cr)  
MATH 150 College Algebra (3)

Area III. Laboratory Sciences (8 cr)  
CHEM 121/L General Chemistry I with lab (4)  
BIOL 110/L Current Topics in Biology with lab (4)  
or  
ES 112/L Intro to Environmental Science with lab (4)

Area IV. Social/Behavioral Sciences (6-9 cr)*  
Area V. Humanities and Fine Arts (6-9 cr)*  
PHIL 220 Ethics (3)  
*You must complete at least 15 credits between areas IV and V, Social/Behavioral Science and Humanities/Fine Arts, maintaining at least two disciplines in each area.
Area VI. First Year Experience (3 cr)
FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (22 CR)
CHEM 122/L General Chemistry II with lab (4)
CHEM 301/L Organic Chemistry I with lab (4)
CHEM 302/L Organic Chemistry II with lab (4)
* You must complete the remaining 10 credits as Electives from BIOL, CHEM, or ES courses.

TOTAL CREDITS: 60

Bachelor of Science
ENVIRONMENTAL SCIENCE

GENERAL EDUCATION (38 CR) SEE PAGES 24-28

Area I. Communications (9 cr)
ENG 111 Composition I (3)
ENG 116 Professional and Technical Communication (3)
SPCH 130 Public Speaking (3)

Area II. Mathematics (3 cr)
MATH 150 College Algebra (3)

Area III. Laboratory Science (8 cr)
ES 112/L Introduction to Environmental Science with Lab (4)
CHEM 110/L Introduction to Chemistry with Lab (4)

Area IV. Social/Behavioral Sciences (6 cr)

Area V. Humanities and Fine Arts (9 cr)
PHIL 220 Ethics (3)
Second Language (3)

Area VI. First Year Experience (3 cr)
FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (82 CR)

Required Science Courses (34 cr)
MATH 145 Introduction to Probability and Statistics (3)
MATH 155 Trigonometry (3)
MATH 162 Calculus I (4)
CHEM 121/L General Chemistry I with lab (4)
CHEM 122/L General Chemistry II with lab (4)
BIOL 201/L Principles of Molecular and Cell Biology (4)
BIOL 203/L Ecology and Evolution (4)
BIOL 204/L Plant and Animal Form and Function (4)

Choose one of the following:
ES 201/L Environmental Physical Chemical Processes (4)
BIOL 202/L Principles of Genetics with lab (4)
CHEM 210/L Integrated Organic and Biochemistry (4)

Additional Program Requirements (48 cr)

Required ES Courses (26 cr)
ES 203 Introduction to GIS/GPS and Cartography (3)
ES 225 Principles of Agricultural Ecology (3)
ES 317 Rangeland Management (3)
or
ES 318 Silviculture (WIC) (3)
ES 319 Principles of Wildlife Science and Management (3)
ES 336/L Environmental Sampling and Instrumentation (4)
ES 338 Environmental Law and Regulations (3)
ES 380 Undergraduate Research Experience (3)
ES 480 Senior Capstone – Field Experience (3)
BIOL 472 Seminar (1)

The remaining 22 credit hours MUST be upper division ES courses (300-400).

Please seek departmental advisement to tailor your course selections to your individual career objectives. Note: Course selection must be approved by ES program advisor and Chair of the department.

TOTAL CREDITS: 120
Associate of Science  
ENVIRONMENTAL SCIENCE

This program is designed to provide the technical skills needed to gather, record, and analyze critical environmental data to perform health risk assessments and evaluations.

GENERAL EDUCATION (38 CR) SEE PAGES 24-28

Area I. Communications (9 cr)
- ENG 111 Composition I (3)
- ENG 116 Professional and Technical Communication (3)
- SPCH 130 Public Speaking (3)

Areas II and III. Mathematics/Laboratory Science (11 cr)
- CHEM 110/L Introduction to Chemistry (4)
- ES 112/L Introduction to Environmental Science with lab (4)
- MATH 150 College Algebra (3)

Area IV. Social/Behavioral Sciences (6 cr)

Area V. Humanities and Fine Arts (9 cr)
- PHIL 220 Ethics (3)
- Second Language (3)

Area VI. First Year Experience (3 cr)

PROGRAM REQUIREMENTS (22 CR)
- BIOL 201/L Principles of Molecular and Cell Biology (4)
- BIOL 203/L Ecology and Evolution (4)
- CHEM 121/L General Chemistry I with lab (4)
- ES 201/L Environmental Physical and Chemical Processes (4)
- ES 203 Introduction to GIS/GPS (3)
- ES 225 Principles of Agricultural Ecology (3)

TOTAL CREDITS: 60
Associate of Applied Science
RADIATION PROTECTION

The Radiation Protection program is designed to prepare for a career as a Health Protection Technician in environmental programs and scientific laboratories. The program provides the technical skills needed to conduct radiation surveys, interpret survey data, assess personnel protection requirements, and instruct personnel in appropriate protective procedures and environmental clean-up.

GENERAL EDUCATION (33 CR) SEE PAGES 24-28

Area I. Communications (6 cr)
  ENG 111  Composition I (3)
  ENG 116  Professional and Technical Communication (3)

Areas II. Mathematics (10 cr)
  MATH 130  Intermediate Algebra (4)
  MATH 145  Introduction to Probability and Statistics (3)
  MATH 150  College Algebra (3)

Areas III. Laboratory Science (8 cr)
  ES 112/L  Introduction to Environmental Science with lab (4)
  CHEM 110/L  Introduction to Chemistry with lab (4)

Area IV. Social/Behavioral Sciences (3 cr)

Area V. Humanities and Fine Arts (3 cr)

Area VI. First Year Experience (3 cr)
  FYE 101  First Year Experience (3)

PROGRAM REQUIREMENTS (33 CR)
  PHYS 121/L  Applied Physics I with lab (4)
  CHEM 121/L  General Chemistry I with lab (4)
  BCIS 102  Computer Literacy (3)
  RDPR 233  Radiation Biology (3)
  RDPR 234  Introduction to Radiation Science & Technology (4)
  RDPR 238  Introduction to Radiation Protection (4)
  RDPR 242  Problems in Radiation Protection (4)
  RDPR 243  Practical Radiological Programs and Sampling Methods (4)
  RDPR 250  Supervised Field Experience (3)

TOTAL CREDITS: 66
Technical Certificate
RADIATION CONTROL TECHNICIAN

This certificate is designed to provide entry-level skills required for employment in the nuclear industry. This program provides the technical skills to conduct radiation surveys, interpret survey data, and assess personnel protection requirements for the protection of human health.

Qualified radiation protection technicians work at Department of Energy (DOE) National Laboratories, medical facilities, research laboratories, nuclear power plants under the direction of the Nuclear Regulatory Commission (NRC) medical facilities, and industries that work with radioactive material. In addition to specialized classroom and laboratory instruction, students are required to complete supervised field experience.

GENERAL EDUCATION (7 CR)
Area I. Communications (3 cr)
ENG 111 English Composition (3)

Area II. Mathematics (4 cr)
MATH 130 Intermediate Algebra (4)

PROGRAM REQUIREMENTS (25 CR)
ES 134 OSHA Health and Safety (3)
RDPR 233 Radiation Biology (3)
RDPR 234 Introduction to Radiation Science & Technology (4)
RDPR 238 Introduction to Radiation Protection (4)
RDPR 242 Problems in Radiation Protection (4)
RDPR 243 Practical Radiological Programs and Sampling Methods (4)
RDPR 250 Supervised Field Experience (3)

TOTAL CREDITS: 32
Associate of Applied Science
WILDLAND FIRE SCIENCE
This program is designed to allow professional wildland firefighters to obtain an associate degree.

This program provides training for entry and advanced level careers in Wildland Fire Management. This program provides the technical skills required in the areas of fire suppression, safety, decision-making, communications, business management, fire behavior, fire line tactics, water hydraulics, and chain saw operation.

Additional skills are designed to produce efficiency in performance of single operations resource positions while on and off duty times, before and during assignment. The degree is targeted towards operational Incident Command positions, but is also applicable to logistic and financial/administration Incident Command positions. All of the Wildland Fire courses meet National Wildfire Coordination Group standards.

GENERAL EDUCATION (35 CR) SEE PAGES 24-28

Area I. Communications (9 cr)
- ENG 111  Composition I (3)
- ENG 116  Professional and Technical Communication (3)
- SPCH 130  Public Speaking (3)

Areas II and III. Mathematics/Laboratory Science (11 cr)
- ES 112  Introduction to Environmental Science (3)
- ES 112L  Introduction to Environmental Science Lab (1)
- BCIS 102  Computer Literacy (3)
- MATH 130  Intermediate Algebra (4)

Area IV. Social/Behavioral Sciences (6 cr)
- PSY 105  General Psychology (3)

Area V. Humanities and Fine Arts (6 cr)
- PHIL 220  Ethics (3)

Area VI. First Year Experience (3 cr)
- FYE 101  First Year Experience (3)

PROGRAM REQUIREMENTS (32.5 CR)
- ES 137  OSHA Hazmat First Responder (1.5)
- ES 203  Introduction to GIS/GPS & Cartography (2)
- ES 103  Introduction to Natural Resource Management (3)
- ES 120  Forest and Range Ecology (3)
- WFS 130  Basic Wildland Fire Fighter Training (includes S-190 I-100 and L-180) (3)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFS 260</td>
<td>Incident Business Management</td>
<td>1</td>
</tr>
<tr>
<td>WFS 270</td>
<td>Basic Air Operations</td>
<td>1</td>
</tr>
<tr>
<td>WFS 134</td>
<td>Lookouts, Communication, Escape Routes &amp; Safety Zones</td>
<td>1</td>
</tr>
<tr>
<td>WFS 131</td>
<td>Advanced Fire Fighter Training (Includes S-131)</td>
<td>1</td>
</tr>
<tr>
<td>WFS 280</td>
<td>Followership to Leadership (L-280)</td>
<td>1.5</td>
</tr>
<tr>
<td>WFS 290</td>
<td>Fundamentals of Fire Behavior</td>
<td>2</td>
</tr>
<tr>
<td>WFS 234</td>
<td>Ignition Operations</td>
<td>2</td>
</tr>
<tr>
<td>WFS 230</td>
<td>Crew Boss</td>
<td>2.25</td>
</tr>
<tr>
<td>WFS 211</td>
<td>Portable Pumps and Water Use</td>
<td>2</td>
</tr>
<tr>
<td>WFS 212</td>
<td>Wildland Fire Chain Saws</td>
<td>3</td>
</tr>
<tr>
<td>WFS 231</td>
<td>Engine Boss</td>
<td>1</td>
</tr>
<tr>
<td>WFS 232</td>
<td>Dozer Boss (S-232)</td>
<td>1.25</td>
</tr>
<tr>
<td>WFS 200</td>
<td>Incident Commander Type 4</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 67.5**
Notes:
Department of Humanities and Social Sciences

The mission of the Humanities and Social Sciences Department is aligned with the strategic mission of Northern New Mexico college, to provide students with skills such as communication, critical thinking, research, and inter-personal ability, through high quality academic course work.

**Degrees offered include:** Certificate Program in Trauma Aide, Associate degrees in Substance Abuse Counselor, General Psychology, Criminal Justice, Pueblo Indian Studies, and the Bachelor's in Integrated Studies.

Our Bachelor of Integrated Studies (BAIS) is a unique program, relevant to students’ personal and professional needs; they develop critical thinking skills and are self-transformed as individuals into organized, focused, empowered, and independent lifelong learners.

The BAIS at Northern is first and foremost geared towards creating a learning community, offering dialog style classes which integrate student learning by reading original texts and engaging in essential questions that give rise to thoughtful discussion and critical inquiry.

**Stephanie Amedeo-Marquez, PhD**  
Social Sciences/ Integrated Studies  
747.2120  amedeo@nnmc.edu

**David Barton, PhD**  
Humanities / Self-Design  
747.2217  dbarton@nnmc.edu

**Robert Beshara**  
Psychology  
747. 2104  robert.beshara@nnmc.edu

**Kiersten Figurski, MA**  
Psychology  
747. 2229  kiersten.figurski@nnmc.edu

**Matthew Martinez, PhD**  
Pueblo Indian Studies  
747.5458  martinez@nnmc.edu

**Pam Piccolo, MA**  
Psychology/ Integrated Studies  
747.2141  pmpiccolo@nnmc.edu

**Rachel Begay**  
Admin. Assistant  
747.2229  rbegay@nnmc.edu
Bachelor of Arts  
**INTEGRATED STUDIES in the HUMANITIES and SOCIAL SCIENCES:**

**Emphasis areas in Humanities, Psychology, Crime and Justice Studies, Pueblo Indian Studies, and Self-Design**

According to the Center for Integrated Studies, integrated studies is based upon the idea that to integrate is “to blend into a whole.” All learning is integrative in this sense, since all learning blends old and new experiences, information, and perspectives. Students who study integrative methods are able to be both intentional and reflective, to blend their diverse educational experiences into pursuit of personal and career goals.

Integrated studies is a degree program that will prepare students for many careers that require reliable and flexible thinking and communication, such as in counseling agencies, local and state government, law enforcement, and public service. It will also provide a solid basis for those wishing to pursue advanced degrees in various fields, including social work, addiction recovery, psychology, law, and cultural anthropology.

This is an academic degree that seeks to provide not only the skills and knowledge promised by a liberal arts education but also the encouragement that will allow students to use the skills and knowledge to become effective and inspired leaders.

**GENERAL EDUCATION (31 CR) SEE PAGES 24-28**

**ALL BAIS DEGREES REQUIRE FULFILLMENT OF GENERAL EDUCATION**

Students choosing their emphases in Psychology and Criminal Justice must take MATH 145; students choosing other emphases may choose MATH 150 or MATH 151.

**INTEGRATED STUDIES CORE PROGRAM REQUIREMENTS (21 CR)**

Students in the following emphases (Humanities, Psychology, Crime and Justice Studies, and Pueblo Indian Studies) must take all core requirements.

**Group A: Integrating Core (9 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSS 288</td>
<td>Foundations of Integrated Studies (3)</td>
</tr>
<tr>
<td>HSS 388</td>
<td>Integrated Studies II (3)</td>
</tr>
<tr>
<td>HSS 488</td>
<td>Integrated Studies III (3) (WIC)</td>
</tr>
</tbody>
</table>

**Group B: The Dialogues (12 cr)**

*Students choose three of the following Dialogue courses:*

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSS 311</td>
<td>Readings in the Social Sciences (4)</td>
</tr>
<tr>
<td>HSS 320</td>
<td>Genesis of Mathematics and Science (4)</td>
</tr>
<tr>
<td>HSS 414</td>
<td>Humanity and Creativity (4)</td>
</tr>
<tr>
<td>HSS 421</td>
<td>Themes in the Humanities: History, Literature, Art, and Philosophy (4)</td>
</tr>
<tr>
<td>HSS 450</td>
<td>Readings in Crime and Justice (4)</td>
</tr>
</tbody>
</table>
INTEGRATED STUDIES EMPHASES REQUIREMENTS

Students must choose one of the following emphases or concentrations: Humanities, Psychology, Crime and Justice Studies, Pueblo Indian Studies, or Self-Design.

HUMANITIES EMPHASIS (61 CR)

GROUPS A, B, C, AND D (24)

Students complete a total of 24 credit hours from courses that fall under the humanities umbrella, which includes English, History, and Philosophy (as well as courses that are listed under the HUM rubric). Eighteen of those hours must be upper-division. At least one course from each of the following groups:

**Group A: Philosophy**
- PHIL 300 Comparative Metaphysics (3)
- PHIL 364 Great Works of Western Philosophy (3)
- PHIL 366 Great Works of Asian Thought (3)
- PHIL 452 Philosophy of Technology (3)

**Group B: Humanistic Approaches to Myth, Psyche, and Religion**
- HUM 324 Literature as Psychological Insight (3)
- HUM 390 Topics in the Study of Religion (3)
- HUM 460 Psychology of Myth (3)
- ENG 318/HUM 318 Oral Traditions: Folk Stories (3)

**Group C: Literature**
- ENG 221 Creative Writing (3)
- ENG 260 The Bible as Literature (3)
- ENG 230 World Literature I (3)
- ENG 231 World Literature II (3)
- ENG 265/PIS 265 Native American Literature I (3)
- ENG 266/PIS 266 Native American Literature II (3)
- ENG 318 Oral Traditions: Folk Stories (3)
- ENG 456 Shakespearean Plays (3)

**Group D: Critical Thinking**
- PHIL 250 Critical Thinking (3)
- HUM 200 Comparative Religion (3)

Multi-Disciplinary Requirement (12 cr)

As part of the multi-disciplinary requirement, students must take at least 12 credit hours in upper division courses (300 level or higher) from Psychology, Crime and Justice Studies, or Pueblo Indian Studies. At least three of these hours must be in Pueblo Indian Studies (or, alternatively, HIST 360).
Elective Requirement for Humanities Emphasis (25 cr)

The remaining 25 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. No more than four hours of HPER may count toward the degree.

TOTAL CREDITS: 120

PSYCHOLOGY EMPHASIS (61 CR)

Group A and B (33 cr)

Students must complete all courses from Group A and at least 12 hours from Group B. Topic courses and independent studies may qualify in any group for substitute credits, with departmental approval. This emphasis articulates with the AA in Substance Abuse Counseling and with the AA in General Psychology and Liberal Arts.

Group A. The following 21 credit hours are required:

- PHIL 250 Critical Thinking (3)
- PSY 210 Theories of Personality (3)
- PSY 215 Basic Counseling Skills (3)
- PSY 232 Abnormal Psychology (3)
- PSY 290 Developmental Psychology (3)
- PSY 321 Research Design (3)
- PSY 421 Independent Research Project (3)

Group B. Students must choose 12 credits from the following courses:

- PSY 260 Family Systems Theory (3)
- PSY 301 Biopsychology (3)
- PSY 302 Issues in Death and Dying (3)
- PSY 305 Positive Psychology (3)
- PSY 370 Social Psychology (3)
- PSY 400 Topics in Psychology (3)
- PSY 410 Comparative Perspectives in Psychology (3)
- PSY 411 Human Ecology (3)
- PSY 477 Gender and Sexuality (3)

Multi-Disciplinary Requirement (12 cr)

As part of the multi-disciplinary requirement, students must take at least 12 credit hours in upper division courses (300 level or higher) from Humanities (including any upper-division course in HUM, HIST, ENG, and PHIL, Crime and Justice Studies, or Pueblo Indian Studies. At least three of these hours must be in Pueblo Indian Studies (or, alternatively, HIST 360).

Additional Electives for Psychology Emphasis (16 cr)

The remaining 16 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. No more than four hours of HPER may count toward the degree.

TOTAL CREDITS: 120
PUEBLO INDIAN STUDIES EMPHASIS (61 CR)

Group A and B (24 cr)

Twenty-four credits, at least 12 upper division, must be completed from the courses listed below. Students must complete all courses in Group A and at least 18 hours in Group B. Topics courses and independent studies may qualify for substitute credits with permission of the department chair. (This emphasis articulates with the AA in Pueblo Indian Studies.)

Group A. The following 6 credit hours are required:
- **PIS 458** Advanced Research (3)
- **PIS 488** Pueblo Indian Studies Senior Seminar (3)

Group B. At least 18 hours must be chosen from the following courses:
- **PIS 220** Pueblo Arts, Crafts, and Cultures (3)
- **PIS 240** Research Topics in Pueblo Indian Studies (1-6)
- **PIS 242** Pueblo Indian Women's Lives (3)
- **PIS 250** Internship in Tribal Leadership I (3)
- **PIS 251** Internship in Tribal Leadership II (3)
- **PIS 252** Pueblo Indian History (3)
- **PIS 256** Pueblo Indian Government (3)
- **PIS 258** Indian Gaming, Entrepreneurship, Sovereignty, & Casinos (3)
- **PIS 265/ENG 265** Native American Literature I (3)
- **PIS 266/ENG 266** Native American Literature II (3)
- **PIS 346/HUM 346** Tourism and the Arts in New Mexico Pueblos (3)
- **PIS 370** Pueblo Indians and Education (3)
- **PIS 372** Pueblo Health Concepts and Practices (3)
- **PIS 381/HUM 381** Spirit of Place: Native Senses of Place (3)
- **PIS 386** Special Topics in PIS (3)
- **PIS 483** Tewa Ethnobiology: Plants & Animals of the Tewa World (3)
- **PIS 484** Agricultural Practices of the Pueblo World (3)

Multi-Disciplinary Requirement (12 cr)

As part of the multi-disciplinary requirement, students must take at least 12 credit hours in upper division courses (300 level or higher) from Humanities (including any upper-division course in HUM, HIST, ENG, and PHIL, Psychology, or Crime and Justice Studies.

Additional Electives for PIS Emphasis (25 cr)

The remaining 25 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. No more than four credits of HPER may count toward the degree.

**TOTAL CREDITS: 120**
CRIME AND JUSTICE STUDIES EMPHASIS (61 CR)

Students must complete all courses from Group A and at least 12 hours from Group B.

Group A: Concentration (33 cr)

The following credit hours are required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 111</td>
<td>Introduction to Criminal Justice System</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 320</td>
<td>Theories of Crime</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 321</td>
<td>Research Design</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 400</td>
<td>Topics in Crime and Justice</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 410</td>
<td>Comparative Perspectives in Law</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 421</td>
<td>Independent Research Project</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Group B: Additional Courses (12 cr)

Students must choose 12 credits from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 132</td>
<td>Introduction to Criminology</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 201</td>
<td>Criminal Law</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 202</td>
<td>Courts and Criminal Justice</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 224</td>
<td>Introduction to Corrections</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 233</td>
<td>Juvenile Justice</td>
<td>(3)</td>
</tr>
<tr>
<td>CJ 488</td>
<td>Internship/Practicum/Service Learning</td>
<td>(3)</td>
</tr>
</tbody>
</table>

May be taken more than once for credit

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 141</td>
<td>Psychology of Alcohol and Drug Abuse</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 215</td>
<td>Basic Counseling Skills</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 232</td>
<td>Abnormal Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 240</td>
<td>Alcohol and Substance Abuse Evaluation</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 260</td>
<td>Family Systems Theory</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 140</td>
<td>Sociology of Alcohol and Substance Abuse</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Multi-Disciplinary Requirement (12 cr)

As part of the multi-disciplinary requirement, students must take at least 12 credit hours in upper division courses (300 level or higher) from Humanities (including any upper-division course in HUM, HIST, ENG, and PHIL, Psychology, or Pueblo Indian Studies. At least three of these hours must be in Pueblo Indian Studies (or, alternatively, HIST 360).

Additional Electives for Crime and Justice Emphasis (16 cr)

The remaining 16 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. No more than four hours of HPER may count toward the degree.

TOTAL CREDITS: 120
SELF-DESIGN EMPHASIS (85 CR)

This program is designed for students whose interests don’t fit into other programs on campus or who wish to major in more than one subject. In the Self Design emphasis, students create their own individualized degree plan, which must be approved by their advisor.

**Group A: Integrating Core and Senior Project (9 cr)**

Students in the Self-Design emphasis take an integrating core designed to help create an individualized degree plan and Senior Project:

- HSS 288 Foundations of Integrated Studies (3)
- HSS 389 Senior Project I (3)
- HSS 48 Senior Project II (3)

**Group B: Concentrations (33 cr)**

Students should complete a primary and secondary concentration and complete a minimum of 40 hours of upper-division coursework.

*Primary Concentration:* 18 hours within any discipline or thematic interest. The courses must be approved by the academic advisor and relate to the Senior Project.

*Secondary Concentration:* 15 hours within any discipline. The courses should relate to knowledge or themes found in the Primary Concentration or Senior Project.

**Group C: Electives (43 cr)**

Students must have at least 40 hours of upper-division coursework to graduate, and electives may be used to fulfill that requirement. The following comparative and interdisciplinary courses are recommended as possible upper-division electives:

- HSS 311 Readings in the Social Sciences (4)
- HSS 320 Genesis of Mathematics and Science (4)
- HSS 414 Humanity and Creativity (4)
- HSS 421 Themes in the Humanities (4)
- HSS 450 Readings in Crime and Justice (4)
- ENG 390 Topics in Comparative Literature (3)
- HUM 324 Epic Literature as Psychological Insight (3)
- HUM 460 Psychology of Myth (3)
- PHIL 300 Comparative Metaphysics (3)
- PSY 410 Comparative Perspectives in Psychology (3)

**TOTAL CREDITS: 120**
Undergraduate Minor
HUMANITIES

To obtain a minor, students must complete eighteen (18) credit hours with a grade of “C” or better in disciplines related to the humanities. Six credit hours must be taken at Northern New Mexico College to meet residency requirements.

1. At least one course from the following selection:
   - HUM 103 The Search for Meaning (3)
   - HIST 101 Western Civilization I (3)
   - HIST 102 Western Civilization II (3)
   - PHIL 110 Introduction to Philosophical Problems (3)
   - ENG 230 World Literature I (3)
   - ENG 231 World Literature II (3)

2. At least one course from one of the following:
   - HUM 200 Comparative Religion (3)
   - HUM 294 World Mythology (3)
   - HUM 390 Topics in the Study of Religion (3)
   - HUM 460 Mythic Ways of Knowing (3)
   - PHIL 300 Comparative Metaphysics (3)

3. At least 12 hours of upper division courses in History, Philosophy, or Humanities.

Undergraduate Minor
PSYCHOLOGY

REQUIREMENTS FOR THE MINOR IN PSYCHOLOGY (18 CR)

To obtain a minor, students must complete eighteen (18) credit hours of psychology courses with a grade of “C” or better. Six credit hours must be taken at Northern New Mexico College to meet residency requirements.

1. Students must take the following:
   - PSY 105 General Psychology
   - PSY 290 Developmental Psychology
   - PSY 215 Theories of Personality and Counseling Applications
   - PSY 232 Abnormal Psychology

2. At least 12 hours of upper division courses must be taken in psychology.
Undergraduate Minor
PUEBLO INDIAN STUDIES

Pueblo Indian Studies is committed to providing a historical foundation by integrating the unique cultural perspectives of pueblo nations and its people. Pueblo Indian Studies is situated among the academic fields of Indigenous Studies and Native American Studies that are committed to providing the context and critical thinking skills that best protect the integrity of indigenous peoples. The minor in Pueblo Indian Studies not only stresses sound academic preparation in the classroom but also encourages students to interact and conduct meaningful research with tribal governments, organizations, and communities with whom Northern continues to form strong partnerships.

The minor in Pueblo Indian Studies provides students a foundation to pursue and connect BA and BS degree programs in areas such as Biology, Business, Education, Environmental Science, Fine Arts and the Humanities.

The Pueblo Indian Studies minor requires completion of 18 credits. A minimum of nine credits must be lower-division as well as nine credits in upper-division. A minimum grade of a “C” is required. No pass/fail non-credit courses may be applied to the minor.

All 200 level courses have a prerequisite of ENG 109N or adequate score on Course Placement Evaluation. All 300 and 400 courses have a prerequisite of PIS 200 and ENG 111.

REQUIREMENTS

1. The following courses are required:
   - PIS 200 Introduction to Pueblo Indian Studies (3)
   - PIS 245 Special Topics in Tribal Languages (3)

2. At least one course from the following:
   - PIS 240 Research Topics in Pueblo Indian Studies (3)
   - PIS 242 Pueblo Indian Women’s Lives (3)
   - PIS 252 Pueblo Indian History (3)
   - PIS 256 Pueblo Indian Government (3)
   - PIS 258 Indian Gaming (3)
   - PIS 265 Native American Literature I (3)
   - PIS 266 Native American Literature II (3)

3. Nine (9) credit hours must be selected from the following 300 or 400 Pueblo Indian Studies courses:
   - PIS 346 Tourism and the Arts in New Mexico Pueblos (3)
   - PIS 370 Pueblo Indians and Education (3)
   - PIS 372 Pueblo Health Concepts and Practices (3)
   - PIS 381 Spirit of Place: Native Senses of Place (3)
   - PIS 386 Special Topics in Pueblo Indian Studies (3)
   - PIS 458 Advanced Research (3)
   - PIS 483 Tewa Ethnobiology (3)
   - PIS 484 Agricultural Practices of the Pueblo World (3)
   - PIS 488 Pueblo Indian Studies Senior Seminar (3)
Associate of Arts

CRIMINAL JUSTICE

This program is designed to prepare students for entry-level positions in protective services and law enforcement and for transfer into a four-year program such as the Crime and Justice Studies emphasis in the Integrated Studies program here at Northern New Mexico College.

GENERAL EDUCATION (31 CR) SEE PAGES 24-28

Students choosing their Associate of Arts in Criminal Justice must take MATH 145.

PROGRAM REQUIREMENTS (24 CR)

Group A: Criminal Justice Core (18 cr)

All of the following must be taken:

- CJ 111 Introduction to Criminal Justice System (3)
- CJ 132 Introduction to Criminology (3)
- CJ 201 Criminal Law (3)
- or
- CJ 202 Courts and Criminal Justice (3)
- CJ 224 Introduction to Corrections (3)
- CJ 233 Juvenile Justice (3)

Choose one of the following two courses:

- CJ 231 Criminal Investigation (3)
- CJ 228 Forensic Investigation (3)

Group B: Cross-Disciplinary Electives (18 cr)

Select two courses from the following list:

- PHIL 220 Ethics (3)
- PSY 141 Psychology of Alcohol and Drug Abuse (3)
- PSY 215 Basic Counseling Skills (3)
- PSY 232 Abnormal Psychology (3)
- PSY 240 Alcohol and Substance Abuse Evaluation (3)
- SOC 140 Sociology of Alcohol and Drug Abuse (3)

TOTAL CREDITS: 62
Associate of Arts

GENERAL PSYCHOLOGY

Students choosing their Associate of Arts in Criminal Justice must take MATH 145.

GENERAL EDUCATION (31 CR) SEE PAGES 24-28

PROGRAM REQUIREMENTS (24 CR)

<table>
<thead>
<tr>
<th>Course</th>
<th>CR</th>
<th>Title</th>
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<tr>
<td>PSY 215</td>
<td>3</td>
<td>Basic Counseling Skills</td>
</tr>
<tr>
<td>PSY 232</td>
<td>3</td>
<td>Abnormal Psychology</td>
</tr>
<tr>
<td>PSY 260</td>
<td>3</td>
<td>Family Systems Theory and Counseling Applications</td>
</tr>
<tr>
<td>PSY 275</td>
<td>3</td>
<td>Group Process</td>
</tr>
<tr>
<td>PSY 290</td>
<td>3</td>
<td>Developmental Psychology</td>
</tr>
<tr>
<td>PHIL 250</td>
<td>3</td>
<td>Critical Thinking</td>
</tr>
</tbody>
</table>

ELECTIVE REQUIREMENTS

The remaining 6 credits for the Associate of Arts in General Psychology are electives. No more than four hours of HPER may count toward the degree.

TOTAL CREDITS: 62

Associate of Applied Science

POLICE SCIENCE

This program is designed specifically to allow police officers who have completed the New Mexico Law Enforcement Academy to transfer into Northern and then complete an associate degree or BAIS.

When students apply to Northern for this major, they must supply the Registrar a copy of their Law Enforcement Academy certificate of completion in order to obtain credit for the training.

GENERAL EDUCATION (31 CR) SEE PAGES 24-28

Students choosing their Associate of Arts in Criminal Justice must take MATH 145.

NM Law Enforcement Academy Certification

which includes credit for the following courses (31 cr):

<table>
<thead>
<tr>
<th>Course</th>
<th>CR</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CJ 111</td>
<td>4</td>
<td>Introduction to Criminal Justice</td>
</tr>
<tr>
<td>CJ 201</td>
<td>3</td>
<td>Criminal Law</td>
</tr>
<tr>
<td>HPER</td>
<td></td>
<td>Electives [meets graduation requirement]</td>
</tr>
<tr>
<td>SOC 213</td>
<td>3</td>
<td>Deviant Behavior</td>
</tr>
</tbody>
</table>

Law Enforcement Electives (19):

<table>
<thead>
<tr>
<th>Course</th>
<th>CR</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>LE 130</td>
<td>6</td>
<td>Patrol, Communications, and Investigations</td>
</tr>
<tr>
<td>LE 235</td>
<td>3</td>
<td>Traffic Enforcement and Accident Investigation</td>
</tr>
<tr>
<td>LE 236</td>
<td>3</td>
<td>Police Proficiency I</td>
</tr>
</tbody>
</table>
LE 237 Police Proficiency II (3)
LE 238 Police Proficiency III (3)
LE 239 First Responder for Law Enforcement (1)

TOTAL CREDITS: 68

Associate of Arts
PUEBLO INDIAN STUDIES

This program is committed to broadening students’ knowledge in the histories, languages, culture, art, and contemporary situations of Pueblo Indian nations and peoples. It is designed to protect the integrity and identity of the Pueblo populations of New Mexico and Arizona and to create a learning environment conducive to critical and creative thought.

It not only stresses sound academic preparation in the classroom but also encourages students to interact and conduct research with Pueblo Indian governments, organizations, and communities, with whom Northern continues to form strong partnerships.

Completion of this program will provide a foundation for degrees in the social sciences, intercultural and interdisciplinary studies, and for employment in Pueblo Indian enterprises, including Pueblo Indian government offices, casinos, schools, health clinics, etc.

GENERAL EDUCATION (31 CR) SEE PAGES 24-28

PROGRAM REQUIREMENTS (24 CR)

The following six credit hours are required:

PIS 200 Introduction to Pueblo Indian Studies (3)
PIS 245 Special Topics in Tribal Languages (3)

Choose 18 credits from the following courses:

PIS 220 Pueblo arts, Crafts, and Culture (3)
PIS 240 Research Topics in Pueblo Indian Studies (1-6)
PIS 242 Pueblo Indian Women’s Lives (3)
PIS 250 Internship in Tribal Leadership I (3)
PIS 251 Internship in Tribal Leadership II (3)
PIS 252 Pueblo Indian History (3)
PIS 256 Pueblo Indian Government (3)
PIS 258/BA 258 Indian Gaming, Entrepreneurship, Sovereignty & Casinos (3)
PIS 265/ENG 265 Native American Literature I (3)
PIS 266/ENG 266 Native American Literature II (3)

TOTAL CREDITS: 62
Associate of Arts
SUBSTANCE ABUSE COUNSELOR

This program will provide an environment that broadens perspectives, builds self-awareness, and develops effective skills for substance abuse counseling. This degree prepares students for licensing as a Substance Abuse Counselor in New Mexico. The program is also designed for students wishing to complete a baccalaureate degree in the social sciences, including psychology, sociology, or social work, with an emphasis in substance abuse counseling.

GENERAL EDUCATION (31 CR) SEE PAGES 24-28

PROGRAM REQUIREMENTS (24 CR)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 140</td>
<td>Introduction to Substance Abuse Studies</td>
<td>3</td>
</tr>
<tr>
<td>PSY 141</td>
<td>Psychology of Alcohol &amp; Drug Abuse</td>
<td>3</td>
</tr>
<tr>
<td>PSY 215</td>
<td>Basic Counseling Skills</td>
<td>3</td>
</tr>
<tr>
<td>PSY 250</td>
<td>Alcohol &amp; Drug Abuse Assessment, Treatment &amp; Referral</td>
<td>3</td>
</tr>
<tr>
<td>PSY 260</td>
<td>Family Systems Theory and Counseling Applications</td>
<td>3</td>
</tr>
<tr>
<td>PSY 275</td>
<td>Group Process</td>
<td>3</td>
</tr>
<tr>
<td>SOC 140</td>
<td>Sociology of Alcohol &amp; Drug Abuse</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must choose one of the following courses depending on advisor approval:

- PSY 281 Practicum – Substance Abuse Counselors (3)
- HSS 288 Foundations of Integrated Studies (3)

TOTAL CREDITS: 62

Certificate
TRAUMATIC STRESS AIDE

This program provides an educational foundation for students and professionals working in the field of trauma treatment, counseling and social work. The program focuses on posttraumatic stress disorder, including its diagnosis and treatment; on crisis intervention, coping strategies and client stabilization.

Courses noted with an asterisk (*) are eligible for Continuing Education Units (CEUs) awarded through the New Mexico Counseling and Therapy Practice Board.

Upon completion of this program, students will be able to:

- Identify the diagnostic criteria for PTSD.
- Apply therapeutic models of crisis intervention.
- Reference effective community interventions.
- Identify prevention strategies.

CORE REQUIREMENTS: (9.5 CR)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI 109</td>
<td>American Red Cross CPR/First Aid (0.5, 0.5T+OS)</td>
<td></td>
</tr>
<tr>
<td>PSY 230</td>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
</tbody>
</table>
PSY 285  Crisis Intervention (3)
PSY 286  Posttraumatic Stress Disorder, Diagnosis and Treatment (3)

RELATED REQUIREMENTS: (6 CR)

Choose two from the following:

SOC 105  Human Services Professions (3)
PSY 275  Group Process and Counseling (3)*
PSY 286  Grief Counseling Skills (3)
PSY 141  Psychology of Drug and Alcohol Abuse (3)*
SOC 141  Effects of Alcohol and Drug Abuse (3)
PSY 250  Drug and Alcohol Assessment, Referral, and Treatment Methods (3)*
PSY 260  Family Systems Theory (3)*
PSY 281  Practicum in Human Services (3)
PSY 215  Basic Counseling Techniques (3)*
PSY 232  Abnormal Psychology (3)

*Courses eligible for Continuing Education Units (CEUs) awarded through the New Mexico Counseling and Therapy Practice Board.

TOTAL CREDITS: 15.5
Department of Language and Letters

The mission of the Language and Letters Department is to provide an in-depth examination of the relationship between power and language in developing critical and creative thinking skills for thoughtful communication dedicated to engaged citizenship and social change. The Department of Language and Letters provides graduates with critical thinking and writing skills, and the values and ethical background necessary for becoming active, productive, and successful members of society.

Language and Letters offers an Associate of Arts degree in Liberal Arts. Through this program, students gain a solid foundation in the liberal arts with the flexibility to pursue courses of interest, such as English, literature, creative writing, cultural studies, history, psychology, or sociology. This program can lead into a Bachelor’s degree in a wide range of fields or into the Bachelor of Integrated Studies program here at Northern New Mexico College.

Language and Letters also houses many core courses of general education, such as English, Speech, First Year Experience, and Spanish courses. Our faculty members are dedicated to supporting students’ academic growth as they sharpen their ability to communicate clearly and develop their own unique voices.

To support student success, the Writing Center offers free tutoring. Here, students can work individually with tutors on reading and writing assignments with the goal of gaining confidence and mastering essential reading and writing skills.

Language and Letters celebrates creativity through our literary journal, Trickster. Students, staff, faculty, and community members are welcome to submit poetry, fiction, nonfiction, and art for possible publication. Students may also join our Trickster Student Club and serve on our student editorial board for valuable experience with the process of creating and editing a literary journal.

For more information on Language and Letters and our programs, contact Department Chair, Lori Franklin, (747-2215 or Administrative Assistant, Rachel Begay (747-2229).

Lori Franklin, MA Chair 747.2215 lorig@nnmc.edu

Pamela Lapcevic, MA Developmental Studies 747.2219 plapcevic@nnmc.edu

J.B. Moore Writing Center Director 747.2216 jbmoore@nnmc.edu

Patricia Trujillo, PhD English 747.5448 patriciatrujillo@nnmc.edu

Heather Winterer, PhD English 747.2247 hwinterer@nnmc.edu

Rachel Begay Admin. Assistant 747.2229 rbegay@nnmc.edu
**Associate of Arts**  
**LIBERAL ARTS**

This program provides a strong academic foundation for successful transfer to various bachelor degrees, such as the Bachelor of Arts in Integrated Studies at Northern.

This degree fosters exploration of differing perspectives and fields of study and provides development of essential skills of critical thinking, communication, and creativity, and supports awareness of community and diversity.

**GENERAL EDUCATION (38 CR) SEE PAGES 24-28**

Area I. Communications (9 cr)

Area II. Mathematics (3 cr)

Area III. Laboratory Sciences (8 cr)

Area IV. Social/Behavioral Sciences (6-9 cr)

Area V. Humanities and Fine Arts (6-9 cr)

Area VI. First Year Experience (3 cr)

FYE 101 First Year Experience (3)

**PROGRAM REQUIREMENTS (24 CR)**

Foundations in the Liberal Arts (12 cr)

LLLA 101 Foundations in Liberal Arts

ENG 120 Introduction to Literature or a 200 level literature course

ENG 221 Creative Writing or a 200 level writing course

Language SPAN course or PIS 245

Electives (12 cr)

*Must be taken from at least three different disciplines.*

**TOTAL CREDITS: 62**
Department of Math and Physical Sciences

The Department of Mathematics and Physical Sciences provides fundamental knowledge in mathematics engaging the student in problem solving, analytical and logical thinking through the basic method of inquiry. The department is committed to equipping students with the mathematical tools needed for its application to diverse fields.

Many of the courses in the associate program offered by this department are designed to transfer to four-year programs.

Note: In 2014, Northern completed a review of the total credit hours required to earn an associate and bachelor’s degree, leading to a reduction of required hours to 60 and 120 respectively for most degrees. Due to accreditation requirements and other industry regulations, some degrees may require additional hours.

David Torres, PhD  Chair  747.2174  davytorres@nnmc.edu
Claudia Aprea, PhD  Geophysics  747.2268  cmaprea@nnmc.edu
Ajit Hira, PhD  Physics  747.5419  hira@nnmc.edu
Ana Vasilic, PhD  Applied Mathematics  747.2231  ana.vasilic@nnmc.edu

Bachelor of Science
MATHEMATICS

ADMISSION REQUIREMENTS:
1) Completion of the General Education Common Core, plus an additional 13 credit hours which must include Calculus I
2) A cumulative GPA of at least 2.50.

GENERAL EDUCATION (38 CR) SEE PAGES 24-28

Area I. Communications (9 cr)
Area II. Mathematics (3 cr)
Area III. Laboratory Sciences (8 cr)
Area IV. Social/Behavioral Sciences (6-9 cr)
Area V. Humanities and Fine Arts (6-9 cr)
   Second Language (3)
Area VI. First Year Experience (3 cr)
   FYE 101 First Year Experience (3)
PROGRAM REQUIREMENTS (37 CR)

Required Supporting Courses in Physics and Chemistry (8 cr)

CHEM 121/L General Chemistry I with Lab (4)
and
CHEM 122/L General Chemistry II with Lab (4)

or

PHYS 121/L Applied Physics I with Lab (4)
and
PHYS 122/L Applied Physics II with Lab (4)

or

CHEM 121/L General Chemistry I with Lab (4)
and
PHYS 121/L Applied Physics I with Lab (4)

Required supporting course in Computer Science (4 cr)

EECE 152L Computer Programming (4)

CORE CURRICULUM (25 CR)

MATH 162 Calculus I (4)
MATH 163 Calculus II (4)
MATH 264 Calculus III (4)

MATH 375 Numerical Computing (3) (WIC)

or

MATH 275 Intro to Numerical Computing (3)

MATH 314 Linear Algebra with Applications (3)

or

MATH 294 Intro to Linear Algebra with Applications (3)

MATH 316 Applied Ordinary Differential Equations (3)

or

MATH 296 Intro to Applied Ordinary Differential Equations (3)

MATH 401 Advanced Calculus I (4)

MAJOR (24 CR)

Applied Mathematics (21 cr)

MATH 311 Vector Analysis (3)
MATH 312 Partial Differential Equations for Engineering (3)
MATH 313 Complex Variables for Engineering (3)
MATH 327 Discrete Structures (3)
MATH 345 Elements of Applied Statistics and Probability Theory (3)
MATH 395 Practicum in Mathematics (3)
MATH 466 Mathematical Methods in Science and Engineering (3)

Choose one of the following (3):

MATH 402 Advanced Calculus II (3)
MATH 441 Probability (3)
MATH 464 Applied Matrix Theory (3)

CONCENTRATIONS
Along with your major, you may complete a concentration if you wish. For the BS in Mathematics, we suggest one of the following four concentrations.

No Concentration (3 cr)
Upper division class in mathematics, science, physics, or engineering.

General Engineering (20 cr)
ENGR 110 Introduction to Engineering (2)
ME 160L Mechanical Engineering Design (3)
ME 202 Engineering Statics (3)
EECE 203L Circuit Analysis I (3)
ME 301 Thermodynamics (3)
ME 306 Dynamics (3)
ME 317 Fluid Mechanics (3)

Information Technology (18 cr)
EECE 132 Computer Networks I (3)
EECE 231 Intermediate Programming (3)
IT 250 Introduction to Databases (3)
EECE 330 Computer Networks II (3)
EECE 342 Wireless and Mobil Computing (3)
EECE 440 Advanced Computer Networks (3)

Chemistry (19 cr)
CHEM 121/L General Chemistry I with Lab (4) *
CHEM 122/L General Chemistry II with Lab (4) *
CHEM 301/L Organic Chemistry I with Lab (4)
CHEM 302/L Organic Chemistry II with Lab (4)
CHEM 311 Physical Chemistry (3)

*No course can count more than once toward a degree at Northern.
If you pursue this concentration, you will not have taken CHEM 121/L and 122/L as part of the “supporting courses” on page 102.

Physics (20 cr)
PHYS 215/L Engineering Physics with Lab (4)
PHYS 262/L General Physics with Lab (4)
PHYS 331 Thermodynamics and Statistical Methods (3)
PHYS 302 Optics (3)
PHYS 330 Introduction to Modern Physics (3)
PHYS 405 Electricity and Magnetism (3)

Should you choose not to pursue a concentration, you must complete enough approved upper-division (300 or above) math, chemistry, engineering, or physics courses in
order to fulfill our requirement of at least 40 credits of upper-division coursework.

In order to fulfill the graduation requirement of 120 credits for the program, you will have to enroll in an additional 1-3 credits of approved electives depending on the concentration area that is chosen and 21 credits of electives if a concentration is not chosen

TOTAL CREDITS: 120

Associate of Science
MATHEMATICS

GENERAL EDUCATION (38 CR) SEE PAGES 24-28

Area I. Communications (9 cr)
Area II. Mathematics (3 cr)
   MATH 150 College Algebra (3)
Area III. Laboratory Sciences (8 cr)
Area IV. Social/Behavioral Sciences (6-9 cr)
Area V. Humanities and Fine Arts (6-9 cr)
Area VI. First Year Experience (3 cr)
   FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (25 CR)
   MATH 145 Introduction to Probability and Statistics (3)
   MATH 155 Trigonometry and Pre-Calculus (4)
   MATH 162 Calculus I (4)
   MATH 163 Calculus II (4)
   MATH 264 Calculus III (4)
   MATH 294 Intro to Linear Algebra with Applications (3)

or
   MATH 296 Intro to Applied Ordinary Differential Equations (3)
   MATH 275 Intro to Numerical Computing (3)

TOTAL CREDITS: 63
Northern’s College of Business Administration (CoBA) offers baccalaureate, associate and certificate programs designed to provide practice-oriented training and skill development for students who aspire to a successful career in business.

Our bachelor’s degree (BBA) programs with concentrations in Accounting, Management and project Management, and our Associate of Applied Science in Office Administration (AAS) are accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

The Associate of Applied Science in Barbering (AAS) and in Cosmetology (AAS) meet the New Mexico Board of Barbers and Cosmetology licensure requirements.

Note: In 2014, Northern completed a review of the total credit hours required to earn an associate and bachelor’s degree, leading to a reduction of required hours to 60 and 120 respectively for most degrees. Due to accreditation requirements and other industry regulations, some degrees may require additional hours.

Victoria Erhart, MBA  
victoria.erhart@nnmc.edu  
Office Administration  
747.5472

Thomas Javarinis, PhD  
thomas.javarinis@nnmc.edu  
Accounting  
747.2281

Patrick Mellon, MBA  
patrick.mellon@nnmc.edu  
Management  
747.2181

Simon Vaz, MBA, Ed.S.  
simon.vaz@nnmc.edu  
Project Management  
747.5422

Betty Espinoza, AAS  
bettyespinoza@nnmc.edu  
Barbering/Cosmetology  
747.5472

Gloriadell Gonzales, Certificate  
gloriadell_m_gonzales@nnmc.edu  
Barbering/Cosmetology  
747.5471

BBA ADMISSION REQUIREMENTS

Admission into the BBA program at Northern can occur in one of two ways:

1. As an AABA graduate from Northern’s BA Department or from any ACBSP accredited college as long as the coursework at that college is equivalent to that of Northern’s AABA curriculum. A BA Department advisor can determine the equivalence and approve admission.
2. As an admitted student at Northern who has:
   (a) completed at least 45 credit hours of the coursework from an accredited college including 35 credit hours of the General Education Common Core
   (b) attained an overall 2.5 GPA in all college coursework
   (c) completed satisfactorily 15 credit hours in the following courses or their equivalents at other colleges:
   
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 205</td>
<td>Business Statistics</td>
</tr>
<tr>
<td>BA 220</td>
<td>Principles of Accounting I</td>
</tr>
<tr>
<td>BA 221</td>
<td>Principles of Accounting II</td>
</tr>
<tr>
<td>ECON 200</td>
<td>Macroeconomics</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Microeconomics</td>
</tr>
</tbody>
</table>
   
   (d) submitted and have had accepted an application for admission form with a letter of intent declaring a BBA major (or major field or course plan) to an academic advisor in Northern’s BA Department.

**BBA GRADUATION REQUIREMENTS**

To graduate with the degree of BBA, the student must meet the following requirements:

1. Completion of all admission requirements with a grade of “C” or better and an overall GPA of 2.5 and admission into the BBA program
2. Completion of all required coursework in one of the BBA majors with a grade “C” or better and an overall GPA of 2.5
3. Completion of at least 30 credit hours from the NNMC BA Department, 24 hours of which must be from upper division courses including BA 485 (Internship)
4. Completion of 120 credits

**Associate of Arts**

**BUSINESS ADMINISTRATION (AABA)**

The Associate of Arts Degree in Business Administration is an ACBSP accredited terminal degree for those graduates who intend to enter the workplace with a sound fundamental knowledge of economics, accounting, management, business technology and marketing. It is designed for students who intend to pursue a business career at the technical level. The AABA is a transfer degree program which can lead to a baccalaureate with two additional years of full-time study in the BA Department at NNMC.

**GENERAL EDUCATION (38 CR) SEE PAGES 24-28**

**Area I. Communications (9 cr)**

**Area II. Mathematics (3 cr)**

**Area III. Laboratory Sciences (8 cr)**

**Area IV. Social/Behavioral Sciences (6-9 cr)**

**Area V. Humanities and Fine Arts (6-9 cr)**

**Area VI. First Year Experience (3 cr)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>FYE 101</td>
<td>First Year Experience (3)</td>
</tr>
</tbody>
</table>
BUSINESS CORE (24 CR)

- BA 205   Business Statistics (3)
- BA 240   Principles of Management (3)
- BA 221   Accounting Principles I (3)
- BA 222   Accounting Principles II (3)
- BA 251   Principles of Marketing (3)
- BA 261   Business Technology (3)
- ECON 200 Macroeconomics (3)
- ECON 201 Microeconomics (3)

TOTAL CREDITS: 62

Bachelor of
BUSINESS ADMINISTRATION (BBA)

The BBA degree is awarded to those students who satisfactorily complete all course work in one of three major fields of study—Management, Accounting, or Project Management. It is designed for students who intend to pursue a business career at the professional level.

ACCOUNTING Major

Coursework in this major is designed to prepare students for employment opportunities that exist in public accounting practice, business, government, and not for profit organizations. Course requirements include:

GENERAL EDUCATION (38 CR) SEE PAGES 24-28

- Area I. Communications (9 cr)
- Area II. Mathematics (3 cr)
- Area III. Laboratory Sciences (8 cr)
- Area IV. Social/Behavioral Sciences (6-9 cr)
- Area V. Humanities and Fine Arts (6-9 cr)
- Second Language (3)
- Area VI. First Year Experience (3 cr)
  - FYE 101 First Year Experience (3)

BUSINESS CORE (24 CR)

- BA 205   Business Statistics (3)
- BA 240   Principles of Management (3)
- BA 221   Accounting Principles I (3)
- BA 222   Accounting Principles II (3)
- BA 251   Principles of Marketing (3)
COMMON DEGREE REQUIREMENTS (21 cr)

- BA 300 Business Law (3)
- BA 310 Principles of Finance (3)
- BA 313 Organizational Behavior (3) (WIC)
- BA 330 Principles of Project Management (3)
- BA 462 International Business & Management (3)
- BA 485 Internship (6)

ACCOUNTING COURSES (24 cr)

- BA 304 Intermediate Accounting I (3)
- BA 305 Intermediate Accounting II (3)
- BA 306 Intermediate Accounting III (3)
- BA 324 Federal Tax Accounting I (3)
- BA 352 Accounting Information Systems (3)
- BA 405 Accounting for Not-For-Profit Organizations (3)
- BA 445 Cost Accounting (3)
- BA 446 Audit Theory and Practice (3)

ELECTIVES (13 cr)

Electives may be chosen from any NNMC College or department subject to advisor consultation. A minimum of one must be at 300 level or above.

TOTAL CREDITS: 120

MANAGEMENT Major

Coursework in this major is focused on more advanced management training in core business processes such as finance, human resources (HR) management, marketing, and corporate strategy. Course requirements include:

GENERAL EDUCATION (38 CR) SEE PAGES 24-28

Area I. Communications (9 cr)
Area II. Mathematics (3 cr)
Area III. Laboratory Sciences (8 cr)
Area IV. Social/Behavioral Sciences (6-9 cr)
Area V. Humanities and Fine Arts (6-9 cr)
Second Language (3)

Area VI. First Year Experience (3 cr)
    FYE 101 First Year Experience (3)
BUSINESS CORE (24 CR)

BA  205  Business Statistics (3)
BA  240  Principles of Management (3)
BA  221  Accounting Principles I (3)
BA  222  Accounting Principles II (3)
BA  251  Principles of Marketing (3)
BA  261  Business Technology (3)
ECON 200  Macroeconomics (3)
ECON 201  Microeconomics (3)

Common Degree Requirements (21 cr)

BA  300  Business Law (3)
BA  310  Principles of Finance (3)
BA  313  Organizational Behavior (3) (WIC)
BA  330  Principles of Project Management (3)
BA  462  International Business & Management (3)
BA  485  Internship (6)

Management Courses (18 cr)

BA  353  Operations Management (3)
BA  354  E-Commerce (3)
BA  360  Human Resource Management (3)
BA  408  Corporate Finance (3)
BA  432  Strategic Management (3)
BA  456  Marketing Management (3)

Electives (19 cr)

Electives may be chosen from any NNMC College or department, subject to advisor consultation. One must be at 300 level or above.

TOTAL CREDITS: 120

PROJECT MANAGEMENT Major

This major is designed to meet the professional development needs of individual program and project responsibilities. Project management is applicable in a wide range of business activities as it involves the application of knowledge, skills, tools and techniques shaped by the specifications and requirements of a particular project.

GENERAL EDUCATION (38 CR) SEE PAGES 24-28

Area I. Communications (9 cr)

Area II. Mathematics (3 cr)

Area III. Laboratory Sciences (8 cr)
Area IV. Social/Behavioral Sciences (6-9 cr)

Area V. Humanities and Fine Arts (6-9 cr)
Second Language (3)

Area VI. First Year Experience (3 cr)
FYE 101 First Year Experience (3)

BUSINESS CORE (24 CR)

BA 205 Business Statistics (3)
BA 240 Principles of Management (3)
BA 221 Accounting Principles I (3)
BA 222 Accounting Principles II (3)
BA 251 Principles of Marketing (3)
BA 261 Business Technology (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)

COMMON DEGREE REQUIREMENTS (21 CR)

BA 300 Business Law (3)
BA 310 Principles of Finance (3)
BA 313 Organizational Behavior (3) (WIC)
BA 330 Principles of Project Management (3)
BA 462 International Business & Management (3)
BA 485 Internship (6)

PROJECT MANAGEMENT COURSES (18 CR)

BA 334 Organizational Management (3)
BA 335 Project Planning and Controls (3)
BA 336 Project Communications and Stakeholder Management (3)
BA 433 Project Quality and Risk Management (3)
BA 437 Project Procurement and Contracts (3)
BA 438 Project Leadership and HR Management (3)

ELECTIVES (19 CR)
Electives may be chosen from any NNMC College or Department, subject to advisor consultation. One must be at 300 level or above.

TOTAL CREDITS: 120
Associate of Applied Science
OFFICE ADMINISTRATION

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

GENERAL EDUCATION (22 CR)

Area I. Communications (6 cr)
   ENG 111 Composition I (3)
   SPCH 130 Public Speaking (3)

Areas II and III. Mathematics/Computers/Laboratory Science (6 cr)
   BCIS 200 Business Computer Applications (3)
   OA 117 Business Math (3)

Area IV. Social/Behavioral Sciences (3 cr)
   Elective (3) Choose from Anthropology, Economics, Geography, Political Science, Psychology, or Sociology.

Area V. Humanities and Fine Arts (3 cr)
   Second Language (3)

Area VI. First Year Experience (3 cr)
   FYE 101 First Year Experience (3)

HPER (1 cr)
   Elective (1)

PROGRAM REQUIREMENTS (40 CR)

Office Administration (13 cr)
   OA 115 Record/Information Management (3)
   OA 118 Professional Development (3)
   OA 135 Introduction to Accounting (3)
   OA 240 Introduction to Microsoft Project (3)
   OA 266 Microsoft Office Specialist Training (1)

   Prerequisites: BCIS 249 or BCIS 265 or BCIS 225 or BCIS 226

Business Computing Information Systems (12 cr)
   BCIS 249 Microsoft Word (3)
   BCIS 265 Microsoft Access (3)
   BCIS 225 Excel (3)
   BCIS 226 PowerPoint (3)

Business Administration (15 cr)
   BA 220 Introduction to Business (3)
   BA 236 Quickbooks (3)
   BA 240 Principles of Management (3)
   BA 250 Business Communications (3)
   BA 261 Business Technology (3)

TOTAL CREDITS: 62
Certificate
ADMINISTRATIVE ASSISTANT

This program provides you with the basic to advanced skills you need to work in the Windows environment. Our practical hands-on approach will provide you with the software skill set required for an administrative position.

GENERAL EDUCATION (7 CR)

Communications (4 cr)
- ENG 109N Basic Composition II or higher-level course (4)

Mathematics (3 cr)
- OA 117 Business Math (3)

PROGRAM REQUIREMENTS (26 CR)

- BA 250 Business Communications (3)
- BCIS 200 Business Computer Applications (3)
- BCIS 225 Excel (3)
- OA 118 Professional Development (3)
- OA 236 Administrative Procedures (3)
- OA 103 Introduction to Keyboarding (1)
- OA 240 Introduction to Microsoft Project (3)
- OA 266 Microsoft Office Specialist Training (1)
- BCIS 249 Microsoft Word (3)
- BCIS 265 Access (3)

TOTAL CREDITS: 33

Certificate
BOOKKEEPER

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

GENERAL EDUCATION (8 CR)

Communications (4 cr)
- ENG 109N Basic Composition II or higher-level course (4)

Mathematics (3 cr)
- OA 117 Business Math (3)

Health, Physical Education & Recreation (1 cr)
- Elective (1)

PROGRAM REQUIREMENTS (15 CR)

- BCIS 200 Business Computer Applications (3)
Certificate
ENTREPRENEURSHIP

This program will prepare you to start your own entrepreneurial ventures, to work on management teams for entrepreneurial ventures, or to apply entrepreneurial skills to an existing business.

GENERAL EDUCATION (7 CR)

Communications (4 cr)
ENG 109N Basic Composition or higher-level course (4)

Mathematics (3 cr)
OA 117 Business Math (3)

PROGRAM REQUIREMENTS (18 CR)

BA 128 Introduction to Entrepreneurship (3)
BA 221 Accounting Principles I (3)
BA 214 Small Business Management (3)
BA 241 Integrated Management (3)
BA 254 Introduction to E-commerce (3)
BA 236 Quickbooks (3)

TOTAL CREDITS: 25
Certificate
HOSPITALITY, TOURISM, and RESTAURANT MANAGEMENT

This is a professional development program organized around the particular sectors of the hospitality industry: tourism, hospitality, and casino management in which you will improve your skills and knowledge for entry-level positions.

GENERAL EDUCATION (7 CR)
Communications (4 cr)
ENG 109N Basic Composition II or higher-level course (4)

Mathematics (3 cr)
OA 117 Business Math (3)

PROGRAM REQUIREMENTS (18 CR)
HTRM 130 Introduction to Management in the Hospitality Industry (3)
HTRM 133 Casino Management (3)
HTRM 135 Hotel Management (3)
HTRM 140 Food and Beverage Production Analysis (3)
HTRM 142 Resort and Casino Marketing and Merchandising (3)
HTRM 210 Internship (3)

TOTAL CREDITS: 25
BARBERING

The Barbering/Cosmetology program accepts students in the Fall and Spring terms only. Requirements include:

1. Final admission standing in the College as a degree-seeking student.
2. Applicants must achieve a Course Placement Score placing them into ENG 109N or show evidence that they have completed ENG 109N and have completed OA 117 Business Math.
3. After meeting criteria 1 and 2, arrange for an appointment with Cosmetology/Barbering for an admission interview prior to being accepted into the program. Call 505.747.2473 for this appointment.
4. Complete the registration process required by the New Mexico State Board of Barbers and Cosmetologists upon acceptance into the program.

The program provides cosmetologists/barbers with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure (63 credit hours, 1600 clock hours for cosmetologists and 48 credit hours, 1200 clock hours for barbers). It also expands these skills with the addition of general education courses. These are not transfer programs.

ASSOCIATE OF APPLIED SCIENCE
BARBERING

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (48 credit hours, 1200 clock hours) and expands those skills with the addition of general education courses. This is not a transfer program.

GENERAL EDUCATION (22 CR)

Area I. Communications (6 cr)

ENG 111 Composition I (3)
Prerequisite: ENG 109N (3) or adequate score on Course Placement Evaluation

SPCH 130 Public Speaking (3)
Prerequisite: ENG 109N (3) or adequate score on Course Placement Evaluation

Areas II and III. Mathematics/Computers/Laboratory Sciences (6 cr)

BCIS 200 Business Computer Applications (3 cr)
OA 117 Business Math (3)

Area IV. Social/Behavioral Sciences (3 cr)

Elective (3) Choose from Anthropology, Economics, Geography, Political Science, Psychology, or Sociology.
Prerequisite: ENG 109N (3) or adequate score on Course Placement Evaluation

Area V. Humanities and Fine Arts (3 cr)

PHIL 220 Ethics (3)
Prerequisite: ENG 109N (3) or adequate score on the Course Placement Evaluation
Area VI. First Year Experience (3 cr)
   FYE 101 First Year Experience (3)

HPER (1 cr)
   Elective (1)

PROGRAM REQUIREMENTS (48 CR)
   Note: The prerequisite for any Barbering course is completion of ENG 108N or adequate scores on the Course Placement Evaluation
   BARB 110 Barbering I (17)
   Prerequisite: BARB 110
   BARB 120 Barbering II (16)
   Prerequisite: BARB 110
   BARB 210 Barbering III (15)
   Prerequisite: BARB 120

TOTAL CREDITS: 70

Certificate
BARBERING

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (48 credit hours, 1200 clock hours). The program also expands those skills with the addition of General Education courses.

GENERAL EDUCATION (7 CR)

Communications (4)
   ENG 109N Basic Composition II (4) or a higher level course

Mathematics (3)
   OA 117 Business Math (3)

PROGRAM REQUIREMENTS (48 CR)
   BARB 110 Barbering I (17)
   BARB 120 Barbering II (16)
   BARB 210 Barbering III (15)

TOTAL CREDITS: 55
COSMETOLOGY

The Cosmetology/Barbering program accepts students in the Fall and Spring terms only. Requirements include:
1. Final admission standing in the College as a degree-seeking student
2. Applicants must achieve a Course Placement Score placing them into ENG 109N or show evidence that they have completed ENG 109N, and have completed OA 117 Business Math.
3. After meeting criteria 1 and 2, arrange for an appointment with Cosmetology/Barbering for an admission interview prior to being accepted into the program. Call 505.747.2473 for this appointment.
4. Completion of the registration process required by the New Mexico State Board of Barbers and Cosmetologists upon acceptance into the program.

The program provides cosmetologists/barbers with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure (63 credit hours, 1600 clock hours for cosmetologists and 48 credit hours, 1200 clock hours for barbers). It also expands these skills with the addition of General Education courses. These are not transfer programs.

Associate of Applied Science
COSMETOLOGY

The program provides cosmetologists/barbers with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure (63 credit hours, 1600 clock hours for cosmetologists and 48 credit hours, 1200 clock hours for barbers). It also expands these skills with the addition of General Education courses. These are not transfer programs.

GENERAL EDUCATION (22 CR)

Area I. Communications (6 cr)
ENG 111 Composition I (3)
Prerequisite: ENG 109N (3) or adequate score on Course Placement Evaluation
SPCH 130 Public Speaking (3)
Prerequisite: ENG 109N (3) or adequate score on Course Placement Evaluation

Areas II and III. Mathematics/Computers/Laboratory Science (6)
BCIS 200 Business Computer Applications (3)
OA 117 Business Math (3 cr)

Area IV. Social/Behavioral Sciences (3 cr)
Elective (3) Choose from Anthropology, Economics, Geography, Political Science, Psychology, or Sociology.
Prerequisite: ENG 109N (3) or adequate score on Course Placement Evaluation

Area V. Humanities and Fine Arts (3 cr)
PHIL 220 Ethics (3)
Prerequisite: ENG 109N (3) or adequate score on the Course Placement Evaluation
Area VI. First Year Experience (3 cr)
   FYE  101   First Year Experience (3)

HPER (1 cr)
   Elective (1)

PROGRAM REQUIREMENTS (63 CR)
   COSM 110   Cosmetology I (17)
   COSM 120   Cosmetology II (16)
   COSM 210   Cosmetology III (15)
   COSM 220   Cosmetology IV (15)

TOTAL CREDITS: 85

Certificate
COSMETOLOGY

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (63 credit hours, 1600 clock hours) and expands those skills with the addition of General Education courses.

GENERAL EDUCATION (7 CR)

Communications (4)
   ENG 109N   Basic Composition II (4) or a higher level course

Mathematics (3)
   OA 117   Business Math (3)

PROGRAM REQUIREMENTS (63 CR)
   COSM 110   Cosmetology I (17)
   COSM 120   Cosmetology II (16)
   COSM 210   Cosmetology III (15)
   COSM 220   Cosmetology IV (15)

TOTAL CREDITS: 70
# College of EDUCATION

**Interim Dean: Sandra Rodriguez, PhD**  
505.747.2194  sandra.rodriguez@nnmc.edu

The College of Education at Northern New Mexico College is accredited based on the Council for the Accreditation of Educator Preparation standards (CAEP, www.ncate.org). We are committed to preparing high quality teachers and advancing the profession in partnership with educational institutions and communities in the region and beyond.

We offer Associate of Arts and Bachelor of Arts degrees in Early Childhood Education and Elementary Education, and endorsements in Bilingual Education and Teachers of English to Speakers of Other Languages (TESOL). Through the Alternative Licensure Program, the College of Education offers Post Baccalaureate certificates in Elementary Education, Secondary Education, and Special Education.

The College of Education at Northern is housed in the Richard C. Martinez, Teacher Education Center on the Española Campus. For general inquiries or applications, contact us at COE@nnmc.edu or (505) 747-5431.

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roseli Cavalcante, PhD</td>
<td>747.5463</td>
<td><a href="mailto:rcavalcante@nnmc.edu">rcavalcante@nnmc.edu</a></td>
</tr>
<tr>
<td>Education Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christina Esquibel, Ed.S</td>
<td>747.2242</td>
<td><a href="mailto:christina@nnmc.edu">christina@nnmc.edu</a></td>
</tr>
<tr>
<td>Education Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruth Hidalgo, PhD</td>
<td>747.5462</td>
<td><a href="mailto:ruth_hidalgo@nnmc.edu">ruth_hidalgo@nnmc.edu</a></td>
</tr>
<tr>
<td>Education Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolores Martinez-Salazar</td>
<td>747.5431</td>
<td><a href="mailto:dms@nnmc.edu">dms@nnmc.edu</a></td>
</tr>
<tr>
<td>Administrative Assistant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Admission to the Associate of Arts in Early Childhood Education and Elementary Education programs

Students must declare either an Associate of Arts in Early Childhood Education or an Associate of Arts in Elementary Education in order to be officially accepted into a program of study and advised accordingly by the College of Education.

Associate of Arts
EARLY CHILDHOOD EDUCATION

The Early Childhood Education Program at Northern New Mexico College is part of the articulated Universal Catalogue of Courses for Early Childhood Education in the State of New Mexico. The program offers instruction and practical experience in working with young children and their families.

The course objectives are taken from the New Mexico Public Education’s Common Core Competencies for early childhood professionals. The core competencies are designed to describe what early childhood professionals should know and be able to do at the conclusion of this program.

Upon completion of this program students will be able to demonstrate the New Mexico Public Education entry level Common Core Competencies for early childhood professionals and be prepared to teach students birth-grade three. This program also provides a seamless transition to Northern New Mexico College’s Bachelor Degree in Early Childhood Education.

GENERAL EDUCATION (38 CR)

Area I. Communications (9 cr)

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

Area II. Mathematics (3 cr)

- MATH 150 College Algebra (3)

Area III. Laboratory Sciences (8 cr)

- BIOL 110/L Current Topics in Biology with lab (4)

  Select one four credit hour elective course from the Area III list shown on page 25.

Area IV. Social/Behavioral Sciences (6 cr)

  Select two elective courses from the following disciplines: Government, Economics and/or Sociology as listed on page 26.

Area V. Humanities (9 cr)

- ART 105 Introduction to Art (3)
- HIST 161 History of the U.S. to 1877 (3)
- HIST 162 History of the U.S. from 1877 (3)
- HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 260 History of New Mexico (3)
Second Language (3 cr)

Area VI. First Year Experience (3 cr)
FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (29 CR)
ECE 202 Child Growth, Development and Learning (3)
ECE 218 Health, Safety, and Nutrition (2)
ECE 220 Professionalism (2)
ECE 222 Introduction to Language, Literacy and Reading (3)
ECE 225 Curriculum Development-Birth through Age 4 (3)
ECE 226 Family and Community Collaboration (3)
ECE 238L Lab-Practicum-Birth through Age 4 (2)
Co-requisite ECE 225
ECE 254 Curriculum Development & Implementation
Age 3 through Grade 3 (3)
ECE 264L Lab-Practicum – Age 3 through Grade 3 (2)
Co-requisite ECE 254
ECE 285 Guiding Young Children (3)
ECE 295 Assessment of Children and Evaluation of Programs (3)

TOTAL CREDITS: 67

Associate of Arts
ELEMENTARY EDUCATION

The Elementary Education program prepares educators to work in diverse educational settings in grades kindergarten through eight. The curriculum is aligned to the New Mexico State’s Transfer Module and Northern New Mexico College’s General Education Common Core Offerings. This program provides a seamless transition to Northern New Mexico College’s Bachelor Degree in Elementary Education.

GENERAL EDUCATION (44 CR)

Area I. Communications (9 cr)
ENG 111 Composition I (3)
ENG 112 Composition II (3)
SPCH 130 Public Speaking (3)

Area II. Mathematics (3 cr)
MATH 150 College Algebra (3)

Area III. Laboratory Sciences (8 cr)
BIOL 110/L Current Topics in Biology with lab (4)
Select one four credit hour course from the Area III on page 25.
Area IV. Social/Behavioral Sciences (6 cr)

Select two electives from the following disciplines: Government, Economics, Anthropology and/or Sociology as listed on page 26.

Area V. Humanities (15 cr)

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<th>Course</th>
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<th>Credits</th>
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<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>3</td>
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<tr>
<td>ART 208</td>
<td>History of NM Art &amp; Architecture</td>
<td>3</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of the U.S. to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of the U.S. from 1877</td>
<td>3</td>
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<tr>
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<td>Western Civilization I</td>
<td>3</td>
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<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>3</td>
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<tr>
<td>HIST 220</td>
<td>Southwestern Women's History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>3</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>3</td>
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<td>CHIC 110</td>
<td>Introduction to Chicano Studies</td>
<td>3</td>
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<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
<td>3</td>
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<td>ENG 270</td>
<td>Children's Literature</td>
<td>3</td>
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<tr>
<td>HSS 222</td>
<td>Teaching in Diverse Communities</td>
<td>3</td>
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<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>3</td>
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<td>PIS 252</td>
<td>Pueblo Indian History</td>
<td>3</td>
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<td>PIS 265</td>
<td>Native American Literature I</td>
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<td>PIS 266</td>
<td>Native American Literature II</td>
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<td></td>
<td>Second Language</td>
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Area VI. First Year Experience (3 cr)

<table>
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<tr>
<td>FYE 101</td>
<td>First Year Experience</td>
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SUPPORTIVE COURSES (6 CR)

Select two elective humanities courses from the following:

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ART 208</td>
<td>History of NM Art &amp; Architecture</td>
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<td>CHIC 110</td>
<td>Introduction to Chicano Studies</td>
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<td>ENG 262</td>
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<td>ENG 270</td>
<td>Children's Literature</td>
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<td>HIST 220</td>
<td>Southwestern Women's History</td>
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<td>HIST 230</td>
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<td>HIST 250</td>
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<td>PIS 252</td>
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<td>PIS 265</td>
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<td>PIS 266</td>
<td>Native American Literature II</td>
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PROGRAM REQUIREMENTS (16 CR)

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<tr>
<td>ED 201</td>
<td>Foundations of Education</td>
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<td>ED 213L</td>
<td>Lab I</td>
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</tr>
<tr>
<td>ED 220</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ED 215L</td>
<td>Lab II</td>
<td>1</td>
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<tr>
<td>ED 216</td>
<td>Science and Math I</td>
<td>3</td>
</tr>
<tr>
<td>ED 222</td>
<td>Math for Educators I</td>
<td>3</td>
</tr>
<tr>
<td>ED 226</td>
<td>Strategies for Successful Classrooms (2)</td>
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</table>

**TOTAL CREDITS: 60**

**Bachelor’s of Arts**

**EARLY CHILDHOOD EDUCATION**

NNMC offers an Early Childhood Education Bachelor’s degree leading to a New Mexico Early Childhood Teacher License.

This competency-based program is a part of the New Mexico Early Childhood Higher Education Articulation and will prepare students to teach children age 3 through grade 3. Graduates of the program will be able to provide high-quality care and education to young children through experiential learning and developmentally appropriate practices.

**ADMISSION CRITERIA**

1. Admission to the College in regular status (i.e., all transcripts have been received),
2. Good standing at NNMC,
3. Completion of at least 67 credits of coursework toward an Associate of Arts in Early Childhood Education,
4. Cumulative GPA of at least 2.50,
5. Passing score on the Essential Academic Skills (I, II, III) Assessment required by the State of New Mexico. This assessment should be passed in the last semester of A.A. in Early Childhood Education coursework.

**APPLICATION PROCESS**

1. Students must declare a Bachelor of Arts in Early Childhood Education to be officially accepted into a program of study and advised accordingly by the College of Education.
2. Completed BA Program application: a) obtained at www.nnmc.edu, or at the COE Administrative Office, Teacher Education Center, Room 201.
3. Letter of Intent: a one page typed letter stating a) your reasons for wanting to become a teacher, b) experience, and c) personal strengths.
4. Personal Philosophy of Education Statement: a one-page typed statement that describes your beliefs about a) education, b) learning, and c) working with students.
6. Signed Assurance form: a) obtained at www.nnmc.edu, or at COE Administrative Office, Teacher Education Center, Room 201.
7. Copies of all college transcripts.
8. Completed application materials will be reviewed by the College of Education and teacher candidates will be advised accordingly.

9. An interview will be required.

PERSONAL INTERVIEW

Once your application materials are received and prior to acceptance into the BA Program, you will be interviewed by the College of Education Interview Committee.

TRANSFER STUDENTS

Applicants who transfer from other institutions must have been granted admission in regular status (i.e., all transcripts have been received) prior to applying to the BA Program.

TRANSFER CREDITS

Up to 12 credits of professional preparation coursework will be considered on a case-by-case basis.

NEW MEXICO ASSESSMENTS

Teacher Candidates must provide proof of passing all of the required State of New Mexico teacher assessments before enrolling in ECE 479 Student Teaching.

ASSESSMENT OF CANDIDATE LEARNING

Teacher candidates must maintain a specific GPA determined by the College of Education to remain in good standing in the program. In addition, your progress will be evaluated by: 1) providing proof of passing all of the required State of New Mexico teacher assessments, 2) an entry-level teacher, competency-based collection of artifacts; and 3) practicum and student teaching observations and self-assessments.

Courses in which the teacher candidates earns a grade of C- and below do not count towards graduation or certification and do not meet criteria for satisfying prerequisites.

GENERAL EDUCATION (54 CR)

Area I. Communications (9 cr)

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

Area II. Mathematics (6-7 cr)

| MATH 150 | College Algebra (3) |

Select one:

| MATH 145 | Introduction to Probability and Statistics (3) |
| MATH 155 | Trigonometry and Pre-Calculus (3) |
| MATH 162 | Calculus (4) |

Area III. Laboratory Sciences (12 cr)

| BIOL 110/L | Current Topics in Biology with lab (4) |

Select two four credit hour elective course from the Area III list shown on page 25.
Area IV. Social/Behavioral Sciences (9 cr)

Select three elective courses from the following disciplines: Government, Economics and/or Sociology as listed on page 26.

Area V. Humanities (15 cr)

- ART 105 Introduction to Art (3)
- ART 208 History of NM Art & Architecture (3)
- HIST 161 History of the U.S. to 1877 (3)
- HIST 162 History of the U.S. from 1877 (3)
- HIST 101 Western Civilization I (3)
- HIST 102 Western Civilization II (3)
- HIST 260 History of New Mexico (3)
- HIST 220 Southwestern Women’s History (3)
- HIST 230 Chicano Experience in the US (3)
- HIST 250 American Indian History (3)
- CHIC 110 Introduction to Chicano Studies (3)
- ENG 262 Literature of the Southwest (3)
- ENG 270 Children’s Literature (3)
- HSS 222 Teaching in Diverse Communities (3)
- PIS 200 Introduction to Pueblo Indian Studies (3)
- PIS 252 Pueblo Indian History (3)
- PIS 265 Native American Literature I (3)
- PIS 266 Native American Literature II (3)
- Second Language (3)

Area VI. First Year Experience (3 cr)

- FYE 101 First Year Experience (3)

EARLY CHILDHOOD EDUCATION FOUNDATIONAL COURSES (29 CR)

- ECE 202 Child Growth, Development and Learning (3)
- ECE 218 Health, Safety, and Nutrition (2)
- ECE 220 Professionalism (2)
- ECE 222 Introduction to Language, Literacy and Reading (3)
- ECE 225 Curriculum Development-Birth through Age 4 (3)
- ECE 226 Family and Community Collaboration (3)
- ECE 238L Lab-Practicum-Birth through Age 4 (2)

Co-requisite ECE 225

- ECE 254 Curriculum Development & Implementation Age 3 through Grade 3 (3)
- ECE 264L Lab-Practicum – Age 3 through Grade 3 (2)

Co-requisite ECE 254

- ECE 285 Guiding Young Children (3)
- ECE 295 Assessment of Children and Evaluation of Programs (3)
PROFESSIONAL PREPARATION REQUIREMENTS (37 CR)

ECE 302 Research in Child Growth and Development (3)
ECE 303 Family, Language and Culture (3)
ECE 304 Young Children with Diverse Abilities (3)
ECE 475 Teaching and Learning Math and Science (4)
ECE 476 Teaching and Learning Reading and Writing (3)
ECE 477 Teaching and Learning Social Studies, Fine Arts and Movement (3)
ECE 478 Teaching and Learning Practicum (3)
ECE 499 Topics in Early Childhood Education (3)

CAPSTONE

ECE 479L Student Teaching (12)
ECE 480 Seminar (3)

TOTAL CREDITS: 120

Bachelor of Arts

EARLY CHILDHOOD EDUCATION STUDIES (TRACK)
(ECE-BA/NON-ECE-LICENSURE PATHWAY)

Our Early Childhood Education Studies program is a non-licensure pathway of study leading to a Bachelor of Arts (BA) degree.

The BA program is aligned with our Bachelor of Art in Early Childhood Education. It provides a strong background for students who want to pursue areas in which a strong knowledge of early childhood education and child development is desired, but a licensure is not required.

This program is centered on knowledge and skills that are critical for professionals in order to ensure success among children of culturally and linguistically diverse populations.

This competency-based program is a part of the New Mexico Early Childhood Higher Education Articulation and will prepare students to teach children age 3 through grade 3. Graduates of the program will be able to provide high-quality care and education to young children through experiential learning and developmentally appropriate practices.

ADMISSION CRITERIA

1. Admission to the College in regular status (i.e., all transcripts have been received),
2. Good standing at NNMC,
3. Completion of at least 67 credits of coursework toward an Associate of Arts in Early Childhood Education,
4. Cumulative GPA of at least 2.50
APPLICATION PROCESS

1. **Students must declare a Bachelor of Arts in Early Childhood Education** to be officially accepted into a program of study and advised accordingly by the College of Education.

2. **Completed BA Program application**: a) obtained at www.nnmc.edu, or at the COE Administrative Office, Teacher Education Center, Room 201.

3. **Letter of Intent**: a one page typed letter stating a) your reasons for wanting to become a teacher, b) experience, and c) personal strengths.

4. **Personal Philosophy of Education Statement**: a one-page typed statement that describes your beliefs about a) education, b) learning, and c) working with students.

5. **Signed Assurance form**: a) obtained at www.nnmc.edu, or at COE Administrative Office, Teacher Education Center, Room 201.

6. **Copies of all college transcripts**.

7. **Completed application materials** will be reviewed by the College of Education and teacher candidates will be advised accordingly.

8. **An interview will be required**.

PERSONAL INTERVIEW

Once your application materials are received and prior to acceptance into the BA Program, you will be interviewed by the College of Education Interview Committee.

TRANSFER STUDENTS

Applicants who transfer from other institutions must have been granted admission in regular status (i.e., all transcripts have been received) prior to applying to the BA Program.

TRANSFER CREDITS

Up to 12 credits of professional preparation coursework will be considered on a case-by-case basis.

ASSESSMENT OF CANDIDATE LEARNING

Teacher candidates must maintain a specific GPA determined by the College of Education to remain in good standing in the program. In addition, your progress will be evaluated by: 1) an entry-level teacher, competency-based collection of artifacts; and 2) practicum and student teaching observations and self-assessments.

Courses in which the teacher candidates earns a grade of C- and below do not count towards graduation or certification and do not meet criteria for satisfying prerequisites.

GENERAL EDUCATION (54 CR)

**Area I. Communications (9 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
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<tr>
<td>ENG 112</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>3</td>
</tr>
</tbody>
</table>

[END OF DOCUMENT]
Area II. Mathematics (6-7 cr)

MATH 150 College Algebra (3)
Elective/Lower Division Mathematics
Select one elective math course (3-4)
MATH 145 College Introduction to Probability and Statistics (3)
MATH 155 Trigonometry and Pre-Calculus (4)
MATH 162 Calculus I (4)

Area III. Laboratory Sciences (12 cr)

BIOL 110/L Current Topics in Biology with lab (4)
Select two additional four credit hour elective course from Area III shown on page 25.

Area IV. Social/Behavioral Sciences (9 cr)

Select three elective courses from the following disciplines: Government, Economics and/or Sociology as listed on page 26.

Area V. Humanities (15 cr)

ART 105 Introduction to Art (3)
ART 208 History of NM Art and Architecture (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 220 Southwestern Women’s Literature (3)
HIST 230 Chicano Experience in the Us (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
CHIC 110 Introduction to Chicano Studies (3)
ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
HSS 222 Teaching in Diverse Communities (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
PIS 252 Pueblo Indian History (3)
PIS 265 Native American Literature I (3)
PIS 266 Native American Literature II (3)

Second Language (3 cr)

Area VI. First Year Experience (3 cr)

FYE 101 First Year Experience (3)

EARLY CHILDHOOD EDUCATION FOUNDATIONAL COURSES (29 CR)

ECE 202 Child Growth, Development and Learning (3)
ECE 218 Health, Safety, and Nutrition (2)
ECE 220 Professionalism (2)
ECE 222 Introduction to Language, Literacy and Reading (3)
ECE 225 Curriculum Development-Birth through Age 4 (3)
ECE 226 Family and Community Collaboration (3)
ECE 238L Lab-Practicum—Birth through Age 4 (2)
   Co-requisite ECE 225
ECE 254 Curriculum Development & Implementation
   Age 3 through Grade 3 (3)
ECE 264L Lab-Practicum – Age 3 through Grade 3 (2)
   Co-requisite ECE 254
ECE 285 Guiding Young Children (3)
ECE 295 Assessment of Children and Evaluation of Programs (3)

UPPER DIVISION REQUIREMENTS (37 CR)
ECST 302 Research in Child Growth and Development (3)
ECST 303 Family, Language and Culture (3)
ECST 304 Young Children with Diverse Abilities (3)
ECST 475 Teaching and Learning Math and Science (4)
ECST 476 Teaching and Learning Reading and Writing (3)
ECST 477 Teaching and Learning Social Studies, Fine Arts
   and Movement (3)
ECST 478 Teaching and Learning Practicum (3)

CAPSTONE
ECST 479L Capstone Practicum (12)
ECST 480 Seminar (3)

TOTAL CREDITS: 120

Bachelor of Arts
ELEMENTARY EDUCATION

The Elementary Education program is designed so that teacher candidates may earn
a baccalaureate degree in Elementary Education completely at Northern. Upon suc-
cessful completion of the BA program and passing scores on the required State of New
Mexico teacher assessments, teacher candidates will be eligible to apply for a teacher
license through the New Mexico Public Education Department. This program meets
the New Mexico Public Education Department’s (PED) Entry-Level Teacher Compet-
tencies and the Interstate New Mexico Teacher Assessment and Support Consortium
(INTASC) Standards. This program prepares teacher candidates to work in diverse
educational settings in grades kindergarten through eight. Teacher candidates can
choose from one of the following three (3) majors:

Bilingual Education—work effectively in the classroom with diverse bilingual
students, and engage collaboratively with colleagues, families and communities for
student success.

TESOL (Teaching English to Speakers of Other Languages)—teach English to
non-English speakers.

Humanities and Social Sciences—specialize in some middle school content areas.
ADMISSION CRITERIA

1. Admission to the College in regular status (i.e., all transcripts have been received),
2. Good standing at NNMC,
3. Completion of at least 60 credits of coursework toward an Associate of Arts in Elementary Education,
4. Cumulative GPA of at least 2.50,
5. Passing score on the Essential Academic Skills (I, II, III) Assessment required by the State of New Mexico. This assessment should be passed in the last semester of A.A. in Elementary Education course work

APPLICATION PROCESS

1. Students must declare a Bachelor of Arts in Education to be officially accepted into a program of study and advised accordingly by the College of Education.
2. Completed BA Program application: a) obtained on www.nnmc.edu website, or at COE Administrative Office, Teacher Education Center, Room 201.
3. Letter of Intent: a one page typed letter stating a) your reasons for wanting to become a teacher, b) experience, and c) personal strengths.
4. Personal Philosophy of Education Statement: a one-page statement that describes your beliefs about a) education, b) learning, and c) working with students.
5. Proof of a passing score on the Essential Academic Skills (I, II, III) Assessment required by the State of New Mexico.
6. Signed Assurance form: a) obtained at www.nnmc.edu, or at COE Administrative Office, Teacher Education Center, Room 201.
7. Copies of all college transcripts.
8. Completed application materials will be reviewed by the College of Education and teacher candidates will be advised accordingly.
9. An interview will be required.

PERSONAL INTERVIEW

Once your application materials are received and prior to acceptance into the BA Program, you will be interviewed by the College of Education Interview Committee.

TRANSFER STUDENTS

Applicants who transfer from other institutions must have been granted admission in regular status (i.e., all transcripts have been received) prior to applying to the BA Program.

TRANSFER CREDITS

Up to 12 credits of professional preparation coursework will be considered on a case-by-case basis.

NEW MEXICO ASSESSMENTS

Teacher Candidates must provide proof of passing all of the required State of New Mexico teacher assessments before enrolling in ED 479 Student Teaching.
ASSESSMENT OF CANDIDATE LEARNING

Teacher candidates must maintain a specific GPA determined by the College of Education to remain in good standing in the program. In addition, your progress will be evaluated by: 1) providing proof of passing all of the required State of New Mexico teacher assessments, 2) an entry-level teacher, competency-based collection of artifacts; and 3) practicum and student teaching observations and self-assessments.

Courses in which the teacher candidates earns a grade of C- and below do not count towards graduation or certification and do not meet criteria for satisfying prerequisites.

GENERAL EDUCATION (54-55)

Area I. Communications (9 cr)
- ENG 111 Composition I (3)
- ENG 112 Composition II (3)
- SPCH 130 Public Speaking (3)

Area II: Mathematics (6-7 cr)
- MATH 150 College Algebra (3)
Select one of the following:
- MATH 145 Introduction to Probability and Statistics (3)
- MATH 155 Trigonometry and Pre-Calculus (4)
- MATH 162 Calculus I (4)

Area III: Laboratory Sciences (12 cr)
- BIOL 110/L Current Topics in Biology with lab (4)
Select one four credit elective course from the Area III on page 25.

Area IV: Social/Behavioral Sciences (9 cr)
Select three elective courses from the following disciplines: Government, Economics and/or Sociology on page 26.

Area V: Humanities (15 cr)
- ART 105 Introduction to Art (3)
- ART 208 History of NM Art & Architecture (3)
- HIST 161 History of the U.S. to 1877 (3)
- HIST 162 History of the U.S. from 1877 (3)
- HIST 101 Western Civilization I (3)
- HIST 102 Western Civilization II (3)
- HIST 260 History of New Mexico (3)
- HIST 220 Southwestern Women’s History (3)
- HIST 230 Chicano Experience in the US (3)
- HIST 250 American Indian History (3)
- CHIC 110 Introduction to Chicano Studies (3)
- ENG 262 Literature of the Southwest (3)
- ENG 270 Children’s Literature (3)
- HSS 222 Teaching in Diverse Communities (3)
- PIS 200 Introduction to Pueblo Indian Studies (3)
PIS 252  Pueblo Indian History (3)
PIS 265  Native American Literature I (3)
PIS 266  Native American Literature II (3)
Second Language (3)

Area VI. First Year Experience (3 cr)
FYE 101  First Year Experience (3)

PROFESSIONAL PREPARATION REQUIREMENTS (45 CR)

LOWER DIVISION COURSES
ED 201  Foundations of Education (3)
ED 213  Lab I (1)
ED 220  Educational Psychology (3)
ED 215  Lab II (1)
ED 226  Strategies for Successful Classrooms (2)
ED 216  Science & Math I (3)
ED 222  Math for Educators I (3)

UPPER DIVISION COURSES
ED 450  Pedagogy and Learning (3) (WIC)
ED 410  Teaching and Diagnosis of Reading (3)
ED 411  Lab III (1)
ED 460  Teaching Reading and Writing (Elem.) (3)
ED 475  Curriculum Methods & Materials for Special Education (3)
ED 495  Assessment and Evaluation of Student Learning (3)

CAPSTONE
ED 479L  Student Teaching (12)
ED 480  Student Teaching Seminar (1)

MINOR REQUIREMENTS
Choose one of the following minors: (24 CR)

BILINGUAL EDUCATION (24 cr)
SPAN 101  Spanish I (3)*
SPAN 102  Spanish II (Prerequisite SPAN 101) (3)*
EDBE 403  Foundations of Bilingual/ESL Multicultural Education (3)
EDBE 305  Spanish Literacy for Bilingual Education (3)**
EDBE 306  Spanish for the Bilingual Classroom (3)**
EDBE 406  Methods and Materials of Teaching Bilingual/ESL (3)
EDBE 412  Formal/Informal Assessments (3)
EDBE 416  Second Language Acquisition (3)
EDBE 481  Linguistics and Phonetics for the Bilingual Teacher (3)**
EDBE 482  Spanish Language and Folklore of New Mexico for the Bilingual Teacher (3) *
*SPAN 101/102 or 6 SPAN from CLEP Testing are prerequisites for all EDBE Courses.
**Courses taught in Spanish.
***Successful passing score on New Mexico Spanish proficiency exam

**TESOL (Teaching English to Speakers of Other Languages) (24 cr)**

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<th>Credits</th>
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<tr>
<td>EDTE 403</td>
<td>Foundations of Bilingual/ESL Multicultural Education</td>
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</tr>
<tr>
<td>EDTE 406</td>
<td>Methods and Material of Teaching Bilingual/ESL</td>
<td>3</td>
</tr>
<tr>
<td>EDTE 408</td>
<td>Approaches to Teaching English Literacy Skills</td>
<td>3</td>
</tr>
<tr>
<td>EDTE 412</td>
<td>Formal/Informal Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EDTE 414</td>
<td>Introduction to Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>EDTE 416</td>
<td>Second Language Acquisition</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Language electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS: 123-124**

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**Alternative Licensure Program (Certificate)**

**ELEMENTARY, SECONDARY, or SPECIAL EDUCATION**

The College of Education is accredited by the New Mexico Public Education Department. These programs of study lead to teacher licensure for individuals who already hold a degree (bachelor’s, master’s, or doctorate) from a regionally accredited college or university. Teacher candidates can choose from one of the following courses of study:

**Elementary Education** (K-8th grades) work in diverse educational settings in grades kindergarten through eight.

**Secondary Education** (7th-12th grades) work in diverse educational settings in grades seven through twelve.

**Special Education** (K-12th grades) work with students with special needs and acquire strategies that are effective for all learners in grades kindergarten through twelve.

**ADMISSION TO THE ALTERNATIVE LICENSURE PROGRAM**

In order to be accepted into the ALP Program, the teacher candidate must be admitted to NNMC and have official transcripts from all colleges sent to the Office of Admissions.

The second step is to submit an application packet to Northern New Mexico College of Education, Teacher Education Center, Room 201, which includes the following:

1. **Proof of admission** to Northern New Mexico College, i.e. student ID/banner ID (Students must declare an ALP Certificate Program on their application),
2. **Completed Alternative Licensure Program application** a) found in the ALP Handbook, www.nnmc.edu, or at COE Administrative Office, Teacher Education Center, Room 201,
3. **Letter of Intent**: a one page typed letter stating a) reasons for wanting to become a teacher, b) experience, and c) personal strengths,
4. Philosophy of Education: a one-page statement that describes beliefs about a) education, b) learning, and c) working with students,
5. Two (2) letters of recommendation,
6. Transcript(s) of highest degree conferred,
7. Copy of favorable background check,
8. Signed Assurance form a) found in ALP Handbook, www.nnmc.edu, or at COE Administrative Office, Teacher Education Center, Room 201,
9. Completed application materials will be reviewed by the College of Education and teacher candidates will be advised accordingly. An interview will be scheduled. 10. An interview will be scheduled.

FOR ALTERNATIVE ELEMENTARY (K-8) you must have one of the following:
   - Bachelor’s Degree (from an accredited college or university) including 30 semester hours in a combination of language arts, mathematics, science, history, fine & performing arts and modern, classical & native language, OR
   - Master’s Degree (from an accredited college or university) including 12 graduate hours in a combination of language arts, mathematics, science, history, fine & performing arts and modern, classical & native language, OR
   - Doctor’s Degree (from an accredited college or university) in elementary education.

FOR ALTERNATIVE SECONDARY (7-12) you must have one of the following:
   - Bachelor’s Degree (from an accredited college or university) including 30 semester hours in a teaching field, OR
   - Master’s Degree (from an accredited college or university) including 12 graduate hours in a teaching field, OR
   - Doctor’s Degree (from an accredited college or university) in the teaching field.

FOR ALTERNATIVE SPECIAL EDUCATION (K-12) you must have one of the following:
   - Bachelor’s Degree (from an accredited college or university) including 30 semester hours in a combination of language arts, mathematics, science, history, fine & performing arts and modern, classical & native language, OR
   - Master’s Degree (from an accredited college or university) including 12 graduate hours in a combination of language arts, mathematics, science, history, fine & performing arts and modern, classical & native language, OR
   - Doctor’s Degree (from an accredited college or university) in special education.

TRANSFER CREDITS

Up to 6 credits of professional preparation coursework will be considered on a case-by-case basis.

NEW MEXICO ASSESSMENTS

After admission into the ALP Program, and during the first semester of enrollment, teacher candidates must provide a passing score on the Essential Academic Skills Assessment (I, II, III) required by the State of New Mexico. In the last semester
of course work, the teacher candidate must provide proof of a passing score on the remaining required State of New Mexico teacher assessments respective to their program. The College of Education’s ALP Office must receive copies from the teacher candidate of their assessment results in order to provide them a letter of completion.

ASSESSMENT OF CANDIDATE LEARNING

Teacher candidates must earn a B or better in all courses to remain in good standing in the program. In addition, students’ progress will be evaluated by: 1) providing proof of passing all of the required State of New Mexico teacher assessments respective to their program, 2) an entry-level teacher competency-based collection of artifacts portfolio; and 3) practicum and student teaching observations and self-assessments.

ELEMENTARY (K-8)

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<tr>
<td>ED 401</td>
<td>Foundations of Education</td>
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<tr>
<td>ED 412</td>
<td>Teaching and Diagnosis of Reading (Elem)</td>
<td>3</td>
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<tr>
<td>ED 452</td>
<td>Pedagogy and Human Learning</td>
<td>3</td>
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<tr>
<td>ED 464</td>
<td>Teaching Reading and Writing (Elem)</td>
<td>3</td>
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<tr>
<td>ED 493</td>
<td>The Integrated Elementary Classroom</td>
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<td>ED 495</td>
<td>Assessment and Evaluation of Student Learning</td>
<td>3</td>
</tr>
<tr>
<td>ED 496</td>
<td>Supervised Field Experience Seminar (Elem/Sec)</td>
<td>1</td>
</tr>
<tr>
<td>ED 496L</td>
<td>Supervised Field Experience Lab (Elem/Sec)</td>
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TOTAL CREDITS: 20

SECONDARY (7-12)

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<tr>
<td>ED 401</td>
<td>Foundations of Education</td>
<td>3</td>
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<tr>
<td>ED 452</td>
<td>Pedagogy and Human Learning</td>
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<td>ED 462</td>
<td>Reading and Writing Across the Curriculum (Sec)</td>
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<td>ED 474</td>
<td>Methods and Materials in Secondary Education</td>
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<tr>
<td>ED 495</td>
<td>Assessment &amp; Evaluation of Student Learning</td>
<td>3</td>
</tr>
<tr>
<td>ED 496</td>
<td>Supervised Field Experience Seminar (Elem/Sec)</td>
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</tr>
<tr>
<td>ED 496L</td>
<td>Supervised Field Experience Lab (Elem/Sec)</td>
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TOTAL CREDITS: 18

SPECIAL EDUCATION (K-12)

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<td>SPED 401</td>
<td>Foundations of Education</td>
<td>3</td>
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<tr>
<td>SPED 455</td>
<td>The Special Education Program: IEP’s and Assessments</td>
<td>4</td>
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<tr>
<td>SPED 465</td>
<td>Reading for Special Learners</td>
<td>3</td>
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<tr>
<td>SPED 475</td>
<td>Curriculum Methods and Materials for Special Education</td>
<td>3</td>
</tr>
<tr>
<td>SPED 485</td>
<td>Teaching Reading in Special Education</td>
<td>3</td>
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<tr>
<td>SPED 497</td>
<td>Supervised Field Experience Seminar</td>
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</tr>
<tr>
<td>SPED 497L</td>
<td>Supervised Field Experience Lab</td>
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</table>

TOTAL CREDITS: 20
Notes:
College of ENGINEERING and TECHNOLOGY

The College of Engineering and Technology offers Engineering Technology degrees and Career and Technical Education (CTE). The following degrees are offered in the Engineering field: Post Baccalaureate Certificate in Information Engineering Technology, Bachelor of Engineering (BEng) degrees in Information Engineering Technology/IET and Electromechanical Engineering Technology/EMET, as well as Associate of Engineering (AEng) degrees in Information Technology, Software Engineering, and Pre-Engineering. The following degrees are offered in CTE: Associate in Applied Science (AAS) in Electrical Technology, and Renewable Energy as well as a Certificate in Electrical Technology.

Sadia Ahmed, PhD  
Interim Chair  
IET 747.5016  sadia.ahmed@nnmc.edu

Steve Cox, PhD  
EMET 747.5424  steve.cox@nnmc.edu

Bryan Malone, DCS  
IET 747.2264  bryan.malone@nnmc.edu

Ashis Nandy, PhD  
EMET 747.2249  ashis@nnmc.edu

Tyagi Ramakrishnan, PhD  
EMET 747.5415  tyagi.ramakrishnan@nnmc.edu

ADMISSION REQUIREMENTS FOR ASSOCIATE OF CTE PROGRAMS

All students admitted to NNMC will be admitted to the Associate Degree of Applied Science Program if they declare the degree on the Degree Declaration form.

ADMISSION REQUIREMENTS FOR ASSOCIATE OF ENGINEERING PROGRAMS

All students admitted to NNMC will be admitted to the Associate Degree of Engineering Program if they declare the degree on the Degree Declaration form.

ADMISSION REQUIREMENTS FOR BACHELOR OF ENGINEERING PROGRAMS

All students that attempt admission for any of the Bachelor of Engineering Programs must fulfill the following requirements:

(a) Have completed the degree declaration form at the registrar office;
(b) I) INFORMATION ENGINEERING TECHNOLOGY

Have completed the following courses with a grade average of 2.5, and a minimum grade of C for each course:

ENGR 122L  Introductory Mathematics for Engineering Applications II
CS 201  Math Foundation of Computer Science
EECE 152L Computer Programming  
EECE 231 Intermediate Programming  
EECE 132 Computer Networks I  
IT 250 Introduction to Databases

II) ELECTROMECHANICAL ENGINEERING TECHNOLOGY

Have completed the following courses with a grade average of 2.5, and a minimum grade of C for each course:

ENGR 122L Introductory Mathematics for Engineering Applications II  
ENGR 217L Engineering Physics III  
DRFT 100 Computer Aided Drafting  
MET 201 Applied Mechanics I  
EET 200L Electrical Systems I

(c) Have received, when all the above requirements have been fulfilled, a letter of admission to the bachelor program from the Faculty Academic Advisor or Dean.

Note: If a student does not fulfill the admission requirements for the Bachelor Programs, the student will still be eligible to finish the degree requirements for an Associate of Engineering Degree.

ADMISSION REQUIREMENTS FOR THE POST BACCALAUREATE ENGINEERING CERTIFICATE

All students that attempt admission for any of the Post Baccalaureate Engineering Programs must fulfill the following minimum requirements:

1. Have earned a bachelor's degree in the engineering field
2. Have completed the online admission application form
3. Have earned a minimum 3.0 GPA in the bachelor degree
4. Have submitted three letters of recommendation from faculty or previous/current employers.

Although not currently required, we encourage students to submit Graduate Record Examination (GRE) scores along with the application.

Note: Admission is competitive and completion of the above requirements does not suffice for admission to the program. The College of Engineering and Technology is ultimately responsible for granting admission to a Post Baccalaureate Certificate.

ADVISEMENT REQUIREMENT FOR ALL ENGINEERING STUDENTS

All declared engineering students are required to receive mandatory advisement prior to registration every semester. A mandatory advisement hold will be lifted only after a student has met with his/her advisor. New students will be advised by the Dean of the College of Engineering and Technology the first time and then will be assigned to a faculty academic advisor.
Students are advised not to attempt upper division coursework (300 and 400-level classes) unless they have earned a GPA of 2.50 or better in all coursework taken at the 100 and 200-level.

GRADUATION REQUIREMENTS FOR ASSOCIATE OF ENGINEERING STUDENTS

The College of Engineering and Technology requires that all the students enrolled in an Associate of Engineering degree fulfill all of the following requirements before they can graduate:

1. Have been admitted to the NNMC Associate of Engineering Program
2. Have fulfilled all NNMC graduation requirements
3. An overall GPA of at least 2.50 in all coursework

GRADUATION REQUIREMENTS FOR BACCALAUREATE STUDENTS

The College of Engineering and Technology requires that all Baccalaureate students fulfill the following requirements for graduation:

1. Have been admitted to the NNMC Engineering Baccalaureate Program
2. Have fulfilled all NNMC graduation requirements
3. An overall GPA of at least 2.50 in all coursework
4. Have a minimum of 100 hours of community/college service *

*Mentoring, tutoring, internships and research projects are examples of available opportunities for students to fulfill this requirement. Before students begin working on any activity towards this requirement, they need approval from their academic advisor. Students can discuss these and any other community service opportunities with their academic advisor and/or Dean.

GRADUATION REQUIREMENTS FOR POST BACCALAUREATE STUDENTS

The College of Engineering and Technology requires that all Post Baccalaureate students fulfill the following requirements for graduation:

1. Have fulfilled all NNMC graduation requirements
2. A minimum overall GPA of 3.0 for graduation and no more than one C+ or below grade in the coursework.
PROGRAMS in ENGINEERING

Associate in Engineering in INFORMATION ENGINEERING TECHNOLOGY

The curriculum for the Associate in Engineering (AEng) in Information Engineering Technology is designed for those engineering students who intend to launch a career in the design, installation, maintenance, and management of computer networks used for critical data entry, transfer, retrieval, and management.

Coursework in the program is practice-oriented and prepares students to work in a variety of computer-intensive environments, such as technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services. The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles in such occupations as network designer and administrator, project manager, datacenter engineer, and developer of business applications or computer communications engineer, test and integration manager or technologist in business applications.

The graduate of this curriculum could be a computer network specialist, and will be broadly versed in mathematics, physics, computer science, and business fundamentals.

The program objectives are the following:

1. Graduates will be situated in growing entry-level careers involving support of Information Technology Systems.
2. Graduates will have demonstrated involvement in high-level technical roles.

Completion of this program should result in the following student outcomes:

1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to function on multidisciplinary teams
3. An ability to communicate effectively
4. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
5. Knowledge of contemporary issues
6. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

GENERAL EDUCATION (30 CR)

Area I. Communications (9 cr)

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ENG 111</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>ENG 116</td>
<td>Professional and Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>
Area II. Mathematics (3 cr)
   MATH 145 Introduction to Probability & Statistics (3)

Area III. Laboratory Sciences (9 cr)
   ENGR 215 Physics for Engineers I (2)
   ENGR 217L Physics for Engineers III (3)
   Elective Laboratory Science (4)

   You must select a course from the following list:
   ASTR 110/L Intro to Astronomy with Lab (4)
   PHYS 122/L Applied Physics II with lab (4)
   PHYS 215/L Engineering Physics I with lab (4)
   PHYS 216/L Engineering Physics II with lab (4)
   CHEM 121/L General Chemistry I with Lab (4)
   ES 112/L Introduction to Environmental Science with Lab (4)
   BIOL 110/L Current Topics in Biology with Lab (4)
   GEOL 101/L Physical Geology with Lab (4)

Area IV. Social/Behavioral Sciences (3 cr)
   ECON 201 Microeconomics (3)

Area V. Humanities and Fine Arts (3 cr)
   Elective (3) Choose elective from Area IV on page 26.

Area VI. First Year Experience (3 cr)
   FYE 101 First Year Experience (3)

SUPPORT COURSES (4 CR)
   ENGR 121L Introductory Math for Engineering Applications I (2)
   ENGR 122L Introductory Math for Engineering Applications II (2)

PROGRAM REQUIREMENTS (26 CR)

Electrical, Electronic, and Computer Engineering (21 cr)
   EECE 105L Microcomputer Systems (3)
   EECE 132 Computer Networks I (3)
   EECE 152L Computer Programming I (3)
   EECE 230 Introduction to Routing and Switching (3)
   EECE 231L Intermediate Programming I (3)
   CS/EECE/IT Elective (6)

Information Technology (3 cr)
   IT 250 Introduction to Databases (3)

Support Technologies (2 cr)
   ENGR 110L Introduction to Engineering (2)

TOTAL CREDITS: 60
SUGGESTED SEQUENCE OF COURSES

First Semester (16 cr)
- FYE 101 First Year Experience (3)
- ENGR 110L Introduction to Engineering (2)
- ENGR 121L Introductory Math for Engineering Applications 1 (2)
- EECE 132 Computer Networks I (3)
- ENGR 215 Physics for Engineers 1 (2)
- Elective Laboratory Science (4)

Second Semester (14 cr)
- ENG 111 Composition I (3)
- EECE 152L Computer Programming I (3)
- ENGR 122L Introductory Math for Engineering Applications II (2)
- EECE 230 Introduction to Routing and Switching (3)
- EECE/CS/IT Elective (3)

Third Semester (15 cr)
- EECE 105L Microcomputer Systems (3)
- ENG 116 Professional and Technical Communication (3)
- ENGR 217L Physics for Engineers III (3)
- SPCH 130 Public Speaking (3)
- IT 250 Introduction to Databases (3)

Fourth Semester (15 cr)
- ECON 201 Microeconomics (3)
- EECE 231 Intermediate Programming (3)
- CS/EECE/IT Elective (3)
- HFA Elective (3)

Associate in Engineering
PRE-ENGINEERING

This program will prepare you for a bachelor’s degree in engineering. You will obtain both a general background in mathematics and the physical sciences, and an introduction 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 foundation on which to build a career through additional education or work experience.

The program objectives are the following:

1. Graduates will have demonstrated knowledge and skills to pursue an engineering bachelor program.
2. Graduates will have demonstrated involvement in high-level technical roles.
Completion of this program should result in the following student outcomes:
1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to function on multidisciplinary teams
3. An ability to communicate effectively
4. The broad education necessary for understanding the impact of engineering solutions in a global, economic, environmental, and societal context. Knowledge of contemporary issues
5. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

GENERAL EDUCATION (30 CR)

Area I. Communications (9 cr)
- ENG 111 Composition I (3)
- ENG 116 Professional and Technical Communication (3)
- SPCH 130 Public Speaking (3)

Area II. Mathematics (4 cr)
- ENGR 121L Introductory Math for Engineering Applications I (2)
- ENGR 122L Introductory Math for Engineering Applications II (2)

Area III. Laboratory Sciences (8 cr)
- ENGR 215 Physics for Engineers I (2)
- ENGR 216 Physics for Engineers II (3)
- ENGR 217L Physics for Engineers III (3)

Area IV. Social/Behavioral Sciences (3 cr)
Select one class from the following list:
- ECON 201 Microeconomics (3)
- ECON 200 Macroeconomics (3)

Area V. Humanities and Fine Arts (3 cr)
- Elective (3)  Choose electives from Area IV on page 26.

Area VI. First Year Experience (3 cr)
- FYE 101 First Year Experience (3)

SUPPORT COURSES (8)
- MATH 162E Calculus I (4)
- MATH 163E Calculus II (4)

PROGRAM REQUIREMENTS (22 CR)

Engineering (22 cr)
- ENGR 110L Introduction to Engineering (2)
- EECE 152L Computer Programming I (3)
- DRFT 100 Computer Aided Drafting I (4)
MET 201 Applied Mechanics (3)
EET 200/L Electrical Systems I (2)
EET 201/L Digital Systems (2)
Engineering/Technical Elective (6)

TOTAL CREDITS: 60

SUGGESTED SEQUENCE OF COURSES

First Semester (16 cr)
- ENGR 121L Introductory Mathematics for Engineering Applications I (2)
- ENGR 215 Physics for Engineers I (2)
- DRFT 100 Computer Aided Drafting I (4)
- ENGR 110 Introduction to Engineering (2)
- Engineering/Technical Elective (3)
- FYE 101 First Year Experience (3)

Second Semester (14 cr)
- ENGR 122L Introductory Mathematics for Engineering Applications II (2)
- MET 201 Applied Mechanics I (3)
- EECE 152L Computer Programming I (3)
- ENG 111 Composition I (3)
- Engineering/Technical Elective (3)

Third Semester (16 cr)
- HFA Elective (3)
- MATH 162E Calculus I (4)
- ENG 116 Professional and Technical Communication (3)
- ENGR 216L Physics for Engineers II (3)
- ENGR 217L Physics for Engineers III (3)

Fourth Semester (14 cr)
- ECON 201/200 Microeconomics or Macroeconomics (3)
- SPCH 130 Public Speaking (3)
- EET 200L Electrical Systems I (2)
- EET 201L Digital Systems (2)
- MATH 163E Calculus II (4)

Associate in Engineering in
SOFTWARE ENGINEERING

The curriculum in the Associate Degree in Engineering (AEng) in Software Engineering is designed for those who intend to launch a career in the testing, installation, and maintenance of computer software modules and systems.

Coursework in the program is hands-on oriented and prepares students to work in a variety of computer-intensive environments that involve engineering support:
technical organizations, small or large businesses, manufacturing companies, and data-directed services.

The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles in such occupations as software technician, computer systems technician, data applications or computer technician, or as a test and integration assistant. Graduates of this program will be a software engineering technician versed in mathematics, physics, computer science, software development, and business fundamentals.

The program objectives are the following:
1. Graduates will have demonstrated knowledge and skills to pursue an engineering bachelor program.
2. Graduates will have demonstrated involvement in high-level technical roles.

Completion of this program should result in the following student outcomes:
1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to function on multidisciplinary teams
3. An ability to communicate effectively
4. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
5. A knowledge of contemporary issues
6. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

GENERAL EDUCATION (30 CR)

Area I. Communications (9 cr)
- ENG 111 Composition I (3)
- ENG 116 Professional and Technical Communication (3)
- SPCH 130 Public Speaking (3)

Area II. Mathematics (3 cr)
- MATH 145 Introduction to Probability & Statistics (3)

Area III. Laboratory Sciences (9 cr)
- ENGR 215 Physics for Engineers I (2)
- ENGR 217L Physics for Engineers III (3)
- Elective Laboratory Science (4)

You must select a course from the following list:
- ASTR 110/L Intro to Astronomy with Lab (4)
- PHYS 122/L Applied Physics II with lab (4)
- PHYS 215/L Engineering Physics I with lab (4)
- PHYS 216/L Engineering Physics II with lab (4)
- CHEM 121/L General Chemistry I with Lab (4)
- ES 112/L Introduction to Environmental Science with Lab (4)
- BIOL 110/L Current Topics in Biology with Lab (4)
- GEOL 101/L Physical Geology with Lab (4)
Area IV. Social/Behavioral Sciences (3 cr)
   ECON 201 Microeconomics (3)

Area V. Humanities and Fine Arts (3 cr)
   Elective (3) Choose electives from Area V on page 27.

Area VI. First Year Experience (3 cr)
   FYE 101 First Year Experience (3)

SUPPORT COURSES (4 CR)
   ENGR 121L Introductory Math for Engineering Applications I (2)
   ENGR 122L Introductory Math for Engineering Applications II (2)

PROGRAM REQUIREMENTS (26 CR)

Computer Science (6 cr)
   CS 201 Mathematical Foundations of Computer Science (3)
   IT 250 Introduction to Databases (3)

Electrical, Electronic, and Computer Engineering (18 cr)
   EECE 105L Microcomputer Systems (3)
   EECE 132 Computer Networks I (3)
   EECE 152L Computer Programming I (3)
   EECE 231L Intermediate Programming I (3)
   CS/EECE/IT Elective (6)

Support Technologies (2 cr)
   ENGR 110L Introduction to Engineering (2)

TOTAL CREDITS: 60

SUGGESTED SEQUENCE OF COURSES

First Semester (16 cr)
   FYE 101 First Year Experience (3)
   ENGR 110L Introduction to Engineering (2)
   ENGR 121L Introductory Math for Engineering Applications I (2)
   ENGR 215 Physics for Engineers I (2)
   EECE 152L Computer Programming I (3)
   Elective Laboratory Science (4)

Second Semester (14 cr)
   ENGR 122L Introductory Mathematics for Engineering Applications II (2)
   MET 201 Applied Mechanics I (3)
   EECE 152L Computer Programming I (3)
   ENG 111 Composition I (3)
   Engineering/Technical Elective (3)
Third Semester (15 cr)

EECE 105L Microcomputer Systems (3)
ENG 116 Professional and Technical Communication (3)
ENGR 217L Physics for Engineers III (3)
MATH 145 Introduction to Probability and Statistics (3)
IT 250 Introduction to Databases (3)

Fourth Semester (15 cr)

ECON 201 Microeconomics (3)
SPCH 130 Public Speaking (3)
EECE 231 Intermediate Programming (3)
CS/EECE/IT Elective (3)
HFA Elective (3)

Bachelor of Engineering (BEng)
INFORMATION ENGINEERING TECHNOLOGY

The Bachelor of Engineering in Information Engineering Technology Program is accredited by the Engineering Technology Accreditation Commission (ETAC) of ABET, www.abet.org. Accreditation is proof that the quality of an academic program meets the standards of the profession.

The curriculum of the Bachelor of Engineering (BEng) in Information Engineering Technology is designed for those students who intend to launch a career in the design, installation, maintenance, and management of computing technologies. Coursework in the program is practice-oriented and prepares students to work in a variety of computer-intensive environments, such as technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services.

The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles such as network and datacenter engineer, software developer, database manager, project manager, and technologist in business applications. The graduate of this curriculum will be versed in mathematics, physics, computer science, and business fundamentals, giving him/her the fundamental knowledge for further graduate studies in Computer Science, Computer Engineering, or Telecommunication Systems.

Failure to maintain an overall GPA of 2.00 or better in all coursework will be sufficient cause for being dropped from the program.

The program objectives are the following:

1. Graduates will be situated in growing careers involving design, development, and support of Information Technology Systems.
2. Graduates will perform effectively individually and in teams.
3. Graduates will have demonstrated involvement in high-level technical and leadership roles.
4. Graduates will have accumulated technical expertise to remain globally competitive.

Completion of this program should result in the following student outcomes:

1. An appropriate mastery of the knowledge, techniques, skills, and modern tools of their disciplines
2. An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering, and technology
3. An ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes
4. An ability to apply creativity in the design of systems, components, or processes appropriate to program educational objectives
5. An ability to function effectively on teams
6. An ability to identify, analyze, and solve technical problems
7. An ability to communicate effectively
8. A recognition of the need for, and an ability to, engage in lifelong learning
9. An ability to understand professional, ethical, and social responsibilities
10. A respect for diversity and knowledge of contemporary professional, societal, and global issues
11. A commitment to quality, timeliness, and continuous improvement
12. The application of Computer and network hardware, operating systems, system and network administration, programming languages, applications software, and databases in the building, testing, operation, and maintenance of hardware and software systems
13. The application of electrical, electronic, telecommunications, and digital signal propagation fundamentals in the building, testing, operation and maintenance of hardware and software systems
14. The ability to design, implement, maintain, and provide for the security of facilities involved with the processing and transfer of information
15. The ability to apply project management techniques to facilities that process and transfer information
16. The ability to apply discrete mathematics, and probability and statistics in the support of facilities that process and transfer information

Students are advised not to attempt upper division coursework (300 and 400-level classes) unless they have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 100 and 200-level.

GENERAL EDUCATION (39 CR)

Area I. Communications (9 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 116</td>
<td>Professional and Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>
Area II. Mathematics (3 cr)

MATH 145 Introduction to Probability and Statistics (3)

Area III. Laboratory Sciences (9 cr)

ENGR 215 Physics for Engineers I (2)
ENGR 217L Physics for Engineers III (3)
Elective Laboratory Science (4)

You must select a course from the following list:
ASTR 110/L Intro to Astronomy with Lab (4)
PHYS 122/L Applied Physics II with lab (4)
PHYS 215/L Engineering Physics I with lab (4)
PHYS 216/L Engineering Physics II with lab (4)
CHEM 121/L General Chemistry I with Lab (4)
ES 112/L Introduction to Environmental Science with Lab (4)
BIOL 110/L Current Topics in Biology with Lab (4)
GEOL 101/L Physical Geology with Lab (4)

Area IV. Social/Behavioral Sciences (6–9 cr)

ECON 201 Microeconomics (3)
Elective (3-6)* Choose electives from Area IV on page 26.

Area V. Humanities and Fine Arts (6–9 cr)

Second Language (3)
Electives (3-6) Choose electives from Area V on page 27.

Area VI. First Year Experience (3 cr)

FYE 101 First Year Experience (3)

SUPPORT COURSES (8 CR)

MATH 162E Calculus I (4)
MATH 163E Calculus II (4)

PROGRAM REQUIREMENTS (73 CR)

Computer Science (3)

CS 201 Math Foundations of Computer Science (3)

Electrical, Electronic, and Computer Engineering (32 cr)

EECE 105L Microcomputer Systems I (3)
EECE 132 Computer Networks I (3)
EECE 152L Computer Programming I (3)
EET 201L Digital Systems (2)
EECE 230 Introduction to Routing and Switching (3)
EECE 231L Intermediate Programming (3)
EECE 329 Human Computer Interaction (3)
EECE 330 Computer Networks II (3)
EECE 351 Advanced Programming I (3)
EECE 355 Web Engineering (3)
EECE 440 Advanced Computer Networks (3)
Information Technology (15 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IT 250</td>
<td>Introduction to Databases (3)</td>
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<tr>
<td>IT 350</td>
<td>Database Management (3)</td>
</tr>
<tr>
<td>IT 410</td>
<td>Information Assurance/Security (3)</td>
</tr>
<tr>
<td>IT 490</td>
<td>IT Capstone I (3) (WIC)</td>
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<tr>
<td>IT 491</td>
<td>IT Capstone II (3)</td>
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Business (4 cr)

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<th>Course</th>
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<tbody>
<tr>
<td>ENGR 480</td>
<td>Engineering Management and Project Management (4)</td>
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</table>

Support Technologies (19 cr)

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<th>Course</th>
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<tr>
<td>ENGR 110L</td>
<td>Introduction to Engineering (2)</td>
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<tr>
<td>ENGR 121L</td>
<td>Introductory Math for Engineering Applications I (2)</td>
</tr>
<tr>
<td>ENGR 122L</td>
<td>Introductory Math for Engineering Applications II (2)</td>
</tr>
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</table>

Electives EECE/CS/IT/MATH/ENGR courses (at least 10 upper division) (13)

TOTAL CREDITS: 120

SUGGESTED SEQUENCE OF COURSES

HFA = Humanities & Fine Arts (Area V)
SBS = Social/Behavioral Science (Area IV)

First Semester (16)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FYE 101</td>
<td>First Year Experience (3)</td>
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<tr>
<td>ENGR 110L</td>
<td>Introduction to Engineering (2)</td>
</tr>
<tr>
<td>ENGR 121L</td>
<td>Introductory Math for Engineering Applications I (2)</td>
</tr>
<tr>
<td>ENGR 215</td>
<td>Physics for Engineers I (2)</td>
</tr>
<tr>
<td>EECE 132</td>
<td>Computer Networks I (3)</td>
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</table>

Second Semester (14)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>Composition I (3)</td>
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<tr>
<td>EECE 152L</td>
<td>Computer Programming I (3)</td>
</tr>
<tr>
<td>ENGR 122L</td>
<td>Introductory Math for Engineering Applications II (2)</td>
</tr>
<tr>
<td>EECE 230</td>
<td>Introduction to Routing and Switching (3)</td>
</tr>
<tr>
<td>CS/EECE/IT/MATH/ENGR Elective lower or upper division</td>
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Third Semester (15)

<table>
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<th>Course</th>
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<tr>
<td>EECE 105L</td>
<td>Microcomputer Systems (3)</td>
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<tr>
<td>ENG 116</td>
<td>Professional and Technical Communication (3)</td>
</tr>
<tr>
<td>ENGR 217L</td>
<td>Physics for Engineers III (3)</td>
</tr>
<tr>
<td>MATH 145</td>
<td>Introduction to Probability and Statistics (3)</td>
</tr>
<tr>
<td>IT 250</td>
<td>Introduction to Databases (3)</td>
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Fourth Semester (15)

<table>
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<tr>
<td>SPCH 130</td>
<td>Public Speaking (3)</td>
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<tr>
<td>ECON 201</td>
<td>Microeconomics (3)</td>
</tr>
</tbody>
</table>
EECE 231 Intermediate Programming (3)
CS/EECE/IT/MATH/ENGR Elective lower or upper division (3)
HFA Elective (3)

Fifth Semester (16)
MATH 162E Calculus I (4)
CS 201 Math Foundations of Computer Science (3)
EECE 329 Human Computer Interaction (3)
EECE 330 Computer Networks II (3)
IT 350 Database Management (3)

Sixth Semester (16)
MATH 163E Calculus II (4)
EET 201L Digital Systems (2)
EECE 355 Web Engineering (3)
ENGR 480 Engineering Management and Project Management (4)
CS/EECE/IT/MATH/ENGR Elective 3XX/4XX (3)

Seventh Semester (15)
EECE 440 Advanced Computer Networks (3)
IT 490 Capstone I (3)
SBS Elective (3)
Foreign Language (3)
EECE/CS/IT/MATH/ENGR Elective 3XX/4XX (3)

Eighth Semester (13)
EECE 351 Advanced Programming (3)
IT 410 Information Assurance/Security (3)
IT 491 Capstone II (3)
SBS/HFA Elective (3)
CS/EECE/IT/MATH/ENGR Elective 3XX/4XX (1)

Bachelor of Engineering (BEng)
ELECTROMECANICAL ENGINEERING TECHNOLOGY

The Bachelor of Engineering in Electromechanical Engineering Technology (BEng. EMET) program is offered in response to a growing demand from industrial and consulting companies for engineering staff members with a wide range of technical knowledge. At Northern, this program will provide a clear pathway towards a bachelor degree for students completing Career and Technical Education associates in Drafting, Electricity and Renewable Energy and Pre-engineering.

The primary aim of the BEng. EMET program is to provide graduates with the knowledge and skills necessary to apply current methods and technology to the development, design, operation, and management of electro-mechanical systems, particularly in those industries where automated systems are prevalent. The program
will offer a concentration in Solar Energy and will provide the knowledge and skills for this technical field.

Students are advised not to attempt upper division coursework (300 and 400-level classes) unless you have earned a GPA of 2.5 or better in all coursework taken at the 100 and 200-level. Failure to maintain an overall GPA of 2.0 or better in all coursework will be sufficient cause for being dropped from the program.

The program objectives are the following:

1. Graduates will be situated in growing careers involving design, development, and support of Electro-Mechanical Engineering Systems.
2. Graduates will demonstrate involvement in significant technical roles and beginning leadership roles.
3. Graduates will perform effectively both individually and in teams and demonstrate oral and written communication skills in the working environment.
4. Graduates will continue personal and professional growth to remain globally competitive and develop a beginning understanding of business and ethical aspects of work.
5. Graduates will demonstrate an ability to creatively use science and technology to solve problems.

Completion of this program should result in the following student outcomes:

1. An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities;
2. An ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;
3. An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;
4. An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;
5. An ability to function effectively as a member or leader on a technical team;
6. An ability to identify, analyze, and solve broadly-defined engineering technology problems;
7. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature;
8. An understanding of the need for and an ability to engage in self-directed continuing professional development;
9. An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;
10. A knowledge of the impact of engineering technology solutions in a societal and global context;
11. A commitment to quality, timeliness, and continuous improvement;
12. Use computer-aided drafting or design tools to prepare graphical representations of electromechanical systems;
13. Use circuit analysis, analog and digital electronics, basic instrumentation, and
computers to aid in the characterization, analysis, and troubleshooting of electromechanical systems;

14. Use statics, dynamics (or applied mechanics), strength of materials, engineering materials, engineering standards, and manufacturing processes to aid in the characterization, analysis, and troubleshooting of electromechanical systems;

15. Use appropriate computer programming languages for operating electromechanical systems;

16. Use electrical/electronic devices such as amplifiers, motors, relays, power systems, and computer and instrumentation systems for applied design, operation, or troubleshooting electromechanical systems;

17. Use advanced topics in engineering mechanics, engineering materials, and fluid mechanics for applied design, operation, or troubleshooting of electromechanical systems.

18. Use basic knowledge of control systems for the applied design, operation, or troubleshooting of electromechanical systems;

19. Use differential and integral calculus, as a minimum, to characterize the static and dynamic performance of electromechanical systems; and

20. Use appropriate management techniques in the investigation, analysis, and design of electromechanical systems.

GENERAL EDUCATION (39 CR)

Area I. Communications (9 cr)

ENG 111 Composition I (3)
ENG 116 Professional and Technical Communication (3)
SPCH 130 Public Speaking (3)

Area II. Mathematics (4 cr)

MATH 162E Calculus I For Engineers (4)

Area III. Laboratory Sciences (8 cr)

ENGR 215 Physics for Engineers I (2)
ENGR 216L Physics for Engineers II (3)
ENGR 217L Physics for Engineers III (3)

Area IV. Social/Behavioral Sciences (6 or 9 cr)

Select one class from the following list:
ECON 201 Microeconomics (3)
ECON 200 Macroeconomics (3)
Electives (3-6) Choose electives from Area IV on page 26.

Area V. Humanities and Fine Arts (6 or 9 cr)

Second Language Elective (3)
Electives (3-6)
Choose electives from Area V on page 27.

Area VI. First Year Experience (3 cr)

FYE 100 First Year Experience (3)
SUPPORT COURSES (8 CR)
ENGR 121L Introductory Math for Engineering Applications I (2)
ENGR 122L Introductory Math for Engineering Applications II (2)
MATH 163E Calculus II for Engineers (4)

PROGRAM REQUIREMENTS (76 CR)
Electromechanical Engineering Technology Courses (69 cr)
ENGR 110L Introduction to Engineering (2)
DRFT 100 Computer Aided Drafting I (4)
EECE 152 Computer Programming I (3)
MET 201 Applied Mechanics I (3)
MET 301 Applied Mechanics II (2)
MET 302 Strength and Properties of Materials (3)
MET 310 Manufacturing Processes and Automation (3)
EET 200/L Electrical Systems I with Lab (2)
EET 201L Digital Systems I (2)
EET 300/L Electrical Systems II with Lab (4)
EET 400/L Control Systems and Instrumentation with Lab (4)
EMET 400 Advanced Electro-Mechanical Design (3)
MET 303 Thermodynamics (3)
MET 317 Fluid Mechanics (3)
EMET 402 Robotics (3)
MET 421 Heat Transfer (3)
ENGR 480 Engineering Management and Project Management (4)
EMET 490 Capstone I (3)
Lower/Upper Division Engineering or Technical Elective (15)

Solar Energy Concentration (7 cr)
EMET 454 Solar Thermal Applications and Energy Storage (4)
EECE 472 Photovoltaic Devices (3)

TOTAL CREDITS: 123

SUGGESTED SEQUENCE OF COURSES
First Semester (16 cr)
ENGR 121L Introductory Mathematics for Engineering Applications I (2)
ENGR 215 Physics for Engineers I (2)
ENGR 110L Introduction to Engineering (2)
DRFT 100 Computer Aided Drafting I (4)
Elective Lower Division Engineering or Tech (3)
FYE 101 First Year Experience (3)

Second Semester (14 cr)
EECE 152L Computer Programming I (3)
<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<td>Fall 18</td>
<td>ENGR 122L</td>
<td>Introductory Mathematics for Engineering Applications II</td>
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<td>MET 201</td>
<td>Applied Mechanics I</td>
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<tr>
<td></td>
<td>Elective</td>
<td>Lower Division Engineering or Tech</td>
<td>3</td>
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<tr>
<td></td>
<td>Elective</td>
<td>Lower Division Engineering or Tech</td>
<td>3</td>
</tr>
<tr>
<td>Third Semester (16 cr)</td>
<td>ENG 111</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td></td>
<td>MATH 162E</td>
<td>Calculus I for Engineers</td>
<td>4</td>
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<tr>
<td></td>
<td>ENGR 216L</td>
<td>Physics for Engineers II</td>
<td>3</td>
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<tr>
<td></td>
<td>ENGR 217L</td>
<td>Physics for Engineers III</td>
<td>3</td>
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<tr>
<td></td>
<td>HFA</td>
<td>Elective</td>
<td>3</td>
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<tr>
<td>Fourth Semester (16 cr)</td>
<td>EET 200L</td>
<td>Electrical Systems I</td>
<td>2</td>
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<tr>
<td></td>
<td>EET 201L</td>
<td>Digital Systems</td>
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<tr>
<td></td>
<td>MATH 163E</td>
<td>Calculus II for Engineers</td>
<td>4</td>
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<tr>
<td></td>
<td>ENG 116</td>
<td>Professional and Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>SBS</td>
<td>Elective</td>
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<tr>
<td></td>
<td>MET 301</td>
<td>Applied Mechanics II</td>
<td>2</td>
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<td>Fifth Semester (16 cr)</td>
<td>MET 300</td>
<td>Thermodynamics</td>
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<td></td>
<td>EET 300/L</td>
<td>Electrical Systems II with Lab</td>
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<td></td>
<td>MET 302</td>
<td>Strength and Properties of Materials</td>
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<td></td>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
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<tr>
<td></td>
<td>Elective</td>
<td>Lower/Upper Division Engineering or Tech</td>
<td>3</td>
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<tr>
<td>Sixth Semester (17 cr)</td>
<td>EET 400/L</td>
<td>Control Systems and Instrumentation with Lab</td>
<td>4</td>
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<td>MET 317</td>
<td>Fluid Mechanics</td>
<td>3</td>
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<td></td>
<td>ECON 201/200</td>
<td>Microeconomics or Macroeconomics</td>
<td>3</td>
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<tr>
<td></td>
<td>ENGR 480</td>
<td>Engineering Management and Project Management</td>
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<td>Elective</td>
<td>Lower/Upper Division Engineering or Tech</td>
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<tr>
<td>Seventh Semester (15 cr)</td>
<td>MET 310</td>
<td>Manufacturing Processes and Automation</td>
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<tr>
<td></td>
<td>EMET 400</td>
<td>Advanced Electro-Mechanical Design</td>
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<tr>
<td></td>
<td>EECE 472</td>
<td>PV Devices</td>
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<td></td>
<td>EMET 402</td>
<td>Robotics</td>
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<td>MET 421</td>
<td>Heat Transfer</td>
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<tr>
<td>Eighth Semester (13 cr)</td>
<td>EMET 454</td>
<td>Solar Thermal Applications and Energy Storage</td>
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<td>HFA/SBS</td>
<td>Elective</td>
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<tr>
<td></td>
<td>Elective</td>
<td>Second Language</td>
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<tr>
<td></td>
<td>EMET 490</td>
<td>Capstone I</td>
<td>3</td>
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</tbody>
</table>
Post Baccalaureate Certificate in
INFORMATION ENGINEERING TECHNOLOGY

The curriculum for the Post Baccalaureate Certificate in Engineering in Information Technology is a practice-oriented professional program, meant to extend students’ undergraduate education. The program will provide high-quality and affordable education to engineers who want to master their knowledge in networks used for critical data entry, transfer, retrieval, and management of information systems.

Coursework in the program is practice-oriented and prepares students to work as leaders in a variety of computer-intensive environments, such as technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services. Coursework in the program consists of gateway courses towards pursuit of a master’s program in the field.

Completion of this program should result in the following student outcomes:

1. Graduates will have gained the theoretical and hands-on experience needed to pursue a Master’s Program in the field.
2. Graduates will encompass a deeper understanding of management solutions for professionals in information systems and information technology.
3. Graduates will excel in highly technical leadership roles.

Completion of this program should result in the following student outcomes:

1. An ability to apply knowledge of Information Engineering Technologies
2. An ability to function on multidisciplinary teams
3. An ability to communicate effectively
4. The ability to design, implement, provide, and supervise the security of facilities involved with the processing and transfer of information

PROGRAM REQUIREMENTS

Electrical, Electronic, and Computer Engineering (3 cr)

EECE 547 Routing and Switching (3)

Information Technology (9 cr)

IT 510 Information Assurance and Security (3)
IT 530 Network Administration (3)
IT 599 Topics in IT (3)

Support Technology (3 cr)

ENGR 578 Engineering Ethics (3)

TOTAL CREDITS: 15
PROGRAMS in
CAREER and TECHNICAL EDUCATION

Associate of Applied Science
ELECTRICAL TECHNOLOGY

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 (27 CR)

Area I. Communications (9 cr)
- ENG 111 Composition I (3)
- ENG 116 Professional and Technical Communication (3)
- SPCH 130 Public Speaking (3)

Areas II and III. Mathematics/Computers/Laboratory Science (9 cr)
- ENGR 110L Introduction to Engineering (2)
- ENGR 115 Basic Math for Engineering Applications (4)

Choose one of the following electives:
- BCIS 102 Computer Literacy (3)
- EECE 111 Introduction to Web Design (3)

Area IV. Social/Behavioral Sciences (3 cr)
- Elective (3)  You must select courses from the approved list on page 26.

Area V. Humanities and Fine Arts (3 cr)
- Elective (3)  You must select courses from the approved list on page 27.

Area VI. First Year Experience (3 cr)
- FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (33 CR)

Electrical (33)
- ELEC 110 Introduction to Solar Electricity (1)
- ELEC 110L Introduction to Solar Electricity Lab (2)
- ELEC 140 Electrical Theory I (3)
- ELEC 141 Electrical Code I (3)
- ELEC 142L Residential Wiring Lab (6)
- ELEC 150 Electrical Theory II (3)
- ELEC 151 Electrical Code II (3)
- ELEC 152L Commercial Wiring Lab (6)
- ELEC 160 Motor Controls (3)
- ELEC 160L Motor Controls Lab (3)

TOTAL CREDITS: 60
SUGGESTED SEQUENCE OF COURSES

First Semester (14 cr)
- ENG 111 Composition I (3)
- FYE 101 First Year Experience (3)
- ENGR 110L Introduction to Engineering (2)
- ELEC 140 Electrical Theory I (3)
- ELEC 110 Introduction to Solar Energy (1)
- ELEC 110L Introduction to Solar Energy Lab (2)

Second Semester (16 cr)
- ENGR 115 Basic Math for Engineering Apps (4)
- ELEC 150 Electrical Theory II (3)
- ELEC 141 Electrical Code I (3)
- ELEC 142L Residential Wiring Lab (6)

Third Semester (15 cr)
- Elective Computer courses (3)
- HFA Elective (3)
- ELEC 151 Electrical Code II (3)
- ELEC 152L Commercial Wiring Lab (6)

Fourth Semester (15 cr)
- SPCH 130 Public Speaking (3)
- ELEC 160 Motors Controls (3)
- ELEC 160L Motors Controls Lab (3)
- SBS Elective (3)
- ENG 116 Professional and Technical Communication (3)

Certificate
ELECTRICAL TECHNOLOGY

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 (7-8 CR)

Communications (4 cr)
- ENG 108N Basic Composition I (4)

Mathematics (3-4 cr)
- MATH 100N (4) or a higher level math course (3)

PROGRAM REQUIREMENTS (24 CR)
- ELEC 140 Electrical Theory I (3)
- ELEC 141 Electrical Code I (3)
ELEC 142L Residential Wiring Lab (6)
ELEC 150 Electrical Theory II (3)
ELEC 151 Electrical Code II (3)
ELEC 152L Commercial Wiring Lab (6)

TOTAL CREDITS: 31-32

Associate of Applied Science
RENEWABLE ENERGY

This program will provide you with the skills necessary to enter environmental fields – the renewable energy, alternative technology, and construction industries. You will be capable of entering at supervisory or management internship levels or have the skills to establish a small, related business.

GENERAL EDUCATION (28 CR)
Area I. Communications (9 cr)
   ENG 111 Composition I (3)
   ENG 116 Professional and Technical Communication (3)
   SPCH 130 Public Speaking (3)

Areas II and III. Mathematics/Computers/Laboratory Science (10 cr)
   ENGR 110 Introduction to Engineering (2)
   ENGR 120L Introduction to Mathematics for Engineering Applications (4)

Choose one of the following electives:
   PHYS 121/L Applied Physics I with lab (4)
   PHYS 215/L Engineering Physics I with lab (4)

Area IV. Social/Behavioral Sciences (3 cr)
   Elective (3) Select courses from the approved list on page 26.

Area V. Humanities and Fine Arts (3 cr)
   Elective (3) Select courses from the approved list on page 27.

Area VI. First Year Experience (3 cr)
   FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (33-35 CR)
General (3 cr)
   RE 103 Renewable Energy Introduction and Overview (3)

Solar Heating (8 cr)
   ADOB 107 Passive Solar Heating (3)
   RE 108 Active Solar Heating (3)
   RE 108L Active Solar Heating Lab (2)
Renewable Electric and Electronics (20 cr)

- ELEC 100/L Introduction to Solar Electricity/Lab (3)
- ELEC 140 Electrical Theory I (3)
- ELEC 141 Electrical Code I (3)
- ELEC 150 Electrical Theory II (3)
- ELEC 151 Electrical Code II (3)
- ELEC 190 Solar and Wind Systems in the Electric Code (2)
- RE 111 Beginning Photovoltaic Installation (3)

Renewable Electric and Electronics Electives (2-4)

Choose one of the following electives:

- RE 127 Geothermal Systems for Heat and Power (4)
- RE 128 Biomass Systems for Heat, Power, and Cogeneration (4)
- RE 129 Trends and Emerging Energy Sources (2)
- RE 160 Renewable Electric Power Systems (3)
- RE 207 Wind Electric System Design and Installation (4)
- RE 208 Photovoltaic System Design and Installation (4)
- RE 212 Advanced Photovoltaic Installation (3)

TOTAL CREDITS: 61-63

SUGGESTED SEQUENCE OF COURSES

First Semester (14 cr)

- ENG 111 Composition I (3)
- FYE 101 First Year Experience (3)
- ENGR 110L Introduction to Engineering (2)
- ELEC 140 Electrical Theory I (3)
- RE 103 Renewable Energy Introduction and Overview (3)

Second Semester (16 cr)

- ELEC 110 Introduction to Solar Energy (1)
- ELEC 110L Introduction to Solar Energy Lab (2)
- ENGR 115 Basic Math for Engineering Apps (4)
- ELEC 150 Electrical Theory II (3)
- ELEC 141 Electrical Code I (3)
- ADOB 107 Passive Solar Heating (3)

Third Semester (15 cr)

- ELEC 151 Electrical Code II (3)
- ELEC 190 Solar and Wind Systems in Electric Code (2)
- ENG 116 Professional and Technical Communication (3)
- PHYS Elective (4)
- RE 111 Beginning Photovoltaic Installation (3)
Fourth Semester (16-18 cr)

- SPCH 130 Public Speaking (3)
- RE Elective (2-4)
- RE 108 Active Solar Heating (3)
- RE 108L Solar Energy Lab (2)
- SBS Elective (3)
- HFA Elective (3)
Notes:
College of NURSING and HEALTH SCIENCES

Dean: Ellen Trabka, MSN
505.747.2209, etrabka@nnmc.edu

The College of Nursing & Health Sciences offers certificates and degrees in the areas of Allied Health, and Nursing. Degrees offered include: Associate of Applied Science in Allied Health, Certificate of Practical Nursing, Associate of Applied Science in Nursing, and Bachelor of Science in Nursing (RN to BSN).

ASSOCIATE DEGREE NURSING PROGRAM

Ana X. Gutiérrez Sisnersos, PhD, MALAS, APRN, PMHCNS-BC, CCM, AHN-BC
malinallix@nnmc.edu

Interim Program Director/ Clinical Coordinator 747.2256

Sarah Bogar, MSN, CNM, RN
sarah.bogar@nnmc.edu

Faculty 747.2208

Theresa Lopez, MSN, RNC, CNE
talopez@nnmc.edu

Faculty 747.2282

Veronica O’Halloran, MSN, RNC
vohalloran@nnmc.edu

Faculty 747.2283

Anne Reines, MSN, RN
anne.reines@nnmc.edu

Faculty 747.2250

Susan Wayne, MSN, CFNP, RN
swayne@nnmc.edu

Faculty 747-2220

Simulation Coordinator

Gretchen Williams, MSN, RN
gretchen.williams@nnmc.edu

Faculty 747-2284

RN TO BSN NURSING PROGRAM

Joan Hodge, MSN, RN
joan.hodge@nnmc.edu

Associate Director/Faculty 747-2278

Ana X. Gutiérrez Sisnersos, PhD, MALAS, APRN, PMHCNS-BC, CCM, AHN-BC
malinallix@nnmc.edu

Faculty 747.2256

Susan Wayne, MSN, CFNP, RN
swayne@nnmc.edu

Faculty 747-2220
Associate of Applied Science
ALLIED HEALTH

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 Nurse Aide.

GENERAL EDUCATION (32 CR)

Area I. Communications (6 cr)

ENG 111 Composition I (3)

Choose one of the following courses:

ENG 112 Composition II (3)
ENG 116 Professional and Technical Communication (3)
SPCH 130 Public Speaking (3)

Area II and III. Mathematics (3 cr)

Choose one of the following courses:

MATH 130 Intermediate Algebra (3)
MATH 145 Introduction to Probability and Statistics (3)
MATH 150 College Algebra (3)

Area III. Laboratory Sciences (8 cr)

BIOL 237/L Human Anatomy & Physiology I with lab (4)
BIOL 238/L Human Anatomy & Physiology II with lab (4)

Area IV. Social/Behavioral Sciences (6 cr)

PSY 105 General Psychology (3)
SOC 101 Introduction to Sociology (3)

Area V. Humanities (6 cr)

Electives (6)

Area VI. First Year Experience (3 cr)

FYE 101 First Year Experience (3)

PROGRAM REQUIREMENTS (30 CR)

BCIS 102 Computer Literacy (3)
HSCI 103 Introduction to Health Care Professions (3)
NURS 100/L Nurse Aide with lab (5)
HSCI 125 Medical Terminology (2)
HSCI 204 Nutrition (3)
PSY 290 Developmental Psychology (3)
SPAN 230 Spanish for the Health Professions (3)
Electives: HSCI or Laboratory Science electives (8)

TOTAL CREDITS: 62
Associate Degree in Nursing Program (ADN)

Northern offers a rigorous, evidence-based five semester associate degree in nursing curriculum. The ADN program is approved by the State of New Mexico Board of Nursing (Certificate #36-401) and nationally accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Road NE Suite 850, Atlanta, Georgia 30326, 404-975-5000, www.acenursing.org

Northern’s Associate Degree in Nursing (ADN) Program is a full-time program of nursing studies with a licensed practical nurse (LPN) step-out option. The mission of the ADN program is to provide an affordable, quality, community-based nursing education that prepares registered nurses to provide safe, quality patient centered care to individuals and populations across the lifespan.

The ADN program has only one curriculum for all students accepted into the program. Once a student has completed the required pre-requisite courses and has been formally accepted into the program, the nursing curriculum is delivered over four semesters. Graduates of the ADN program obtain an Associate of Applied Science Degree in Nursing.

There is a Practical Nurse Certificate option after successful completion of the first three semesters of nursing course work. During the third semester of nursing courses, students may opt to take one additional nursing course (NURS 119) and receive a Practical Nurse Certificate. Students are then eligible to take the PN National Council Licensure Examination (NCLEX-PN). Students may exit the program at this time or continue on with the fourth semester nursing courses.

Upon successful completion of the second year nursing courses (level II) students receive an Associate of Applied Science Degree in Nursing and are eligible to take the RN National Council Licensure Examination exam (NCLEX-RN).

Graduates of the ADN program are prepared to continue toward completion of a Bachelor of Science in Nursing.

Admission to Northern does not ensure admission to the ADN program. Program capacity requires limited enrollment. Applicants are rank-ordered based on cumulative points earned on selection criteria.

The ADN program is demanding and requires a full-time commitment, extensive study time outside the classroom, and occasional travel outside the area. Because of the rigorous nature of the program, limited employment is recommended.

Due to the rapidly changing nature of the health care system as well as state-mandated changes, the ADN program faculty review and revise the curriculum on an ongoing basis. Changes can be anticipated regarding admission requirements, course requirements, and program policies. Students are advised to seek initial and ongoing advisement from the program director or a nursing faculty advisor.

EMPLOYMENT OPPORTUNITIES

Graduates from the ADN program are prepared to enter nursing practice at the advanced beginner level. Areas of employment include acute care facilities, long-term care, home health care, physician’s offices, clinics, schools, and other settings.
ADDITIONAL REQUIREMENTS RELATING TO LICENSURE

The New Mexico State Board of Nursing has restrictions for licensure and may deny, revoke, or suspend any license applied for upon grounds of particular felony violations. Northern assumes no responsibility for the denial of licensure by the New Mexico Board of Nursing or any state Board of Nursing.

Federal law requires health care agencies to conduct criminal background checks on their employees. This requirement is also mandated for nursing students placed in these health care facilities for clinical training. Behaviors which may be cause for a student being ineligible for clinical placement include, but are not limited to, the following: physical or sexual abuse, theft, illegal use of weapons, and illegal use or possession of controlled substances.

ADMISSION REQUIREMENTS FOR THE ADN PROGRAM

1. Graduation from high school or HSE/GED®
2. Cumulative GPA of 2.50 or higher
3. A minimum total individual score of 67% on the KAPLAN pre-admission examination.
4. A minimum individual score of 73% in reading on the KAPLAN pre-admission examination.
5. A minimum individual score of 55% in science on the KAPLAN pre-admission examination.
6. Submission of a completed nursing application packet by April 30th for fall admission consideration.
7. Completion of the following pre-requisite course work by the end of the spring semester prior to anticipated entry into the ADN program with a grade of “C-” or better:
   - CHEM 110/L (4) or BIOL 210/L (4) or any other BIOL (4)
   - BIOL 237/L (4)
   - PSY 105 (3)
   - ENG 111 (3)

Note:

• Anatomy and Physiology Courses must be completed within five (5) years prior to entry into the ADN program.
• All nursing students are expected to have basic computer skills including word processing and internet access.
• All nursing students must have and maintain current American Heart Association Basic Life Support (CPR) certification and current immunizations prior to participating in clinical nursing courses.
• Requirements for KAPLAN admission test scores, both total and content-specific, are subject to change.
• Formal application and acceptance into the nursing program is required before students may enroll in any NURS-prefixed courses listed in the program requirements, with the exception of NURS 245 Pathophysiology and NURS100/L Nurse Aide. Support courses may be taken before entry into the program.
TRANSFER STUDENTS

Students transferring to the Associate Degree in Nursing Program are subject to the same admission and progression requirements as all nursing students. The Registrar and nursing faculty will evaluate transcripts, course syllabi, and course outlines to determine eligibility and placement status. Potential students must have completed all transfer courses with a grade of “C” or better. Students must complete their last 15 credit hours at Northern in order to graduate.

For more information please contact:
Jasmine Serrano, Administrative Assistant
College of Nursing and Health Sciences
jasmine.serrano@nnmc.edu, 505.747.2207

Certificate
PRACTICAL NURSING

Students who complete the pre-requisites and the first three semesters of nursing course work for the ADN Program as well as NURS 119 Role Transition-PN have the option to petition for the Certificate in Practical Nursing. Students may exit the program at this time or continue on to completion of the fourth semester of nursing course work.

GENERAL EDUCATION (24 CR)

Area I. Communications (3 or 6 cr)

Required: (3)

ENG 111 Composition I (3)

An additional 3 credits must be taken either in Communications or Humanities and Fine Arts

Area II and III. Mathematics/Computers/Lab Science (12 cr)

Choose a minimum of 4 credits from the following:

Biology (4)
Chemistry (4)
Microbiology (4)

Required (8):

BIOL 237/L Human Anatomy & Physiology I with Lab (4)
BIOL 238/L Human Anatomy & Physiology II with Lab (4)

Area IV. Social/Behavioral (6 cr)

PYS 105 General Psychology (3)
PYS 290 Developmental Psychology (3)

Area V. Humanities and Fine Arts (0 or 3 cr)

3 credits of Humanities and Fine Arts may be taken in place of the additional 3 credits in Communications
PROGRAM REQUIREMENTS (34 CR)

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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>NURS 106</td>
<td>Pharmacology</td>
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<tr>
<td>NURS 113</td>
<td>Nursing Fundamentals</td>
<td>(4)</td>
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<td>NURS 113L</td>
<td>Nursing Fundamentals Lab</td>
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<td>NURS 114L</td>
<td>Health Assessment</td>
<td>(2)</td>
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<tr>
<td>NURS 125</td>
<td>Medical/Surgical Nursing I</td>
<td>(3)</td>
</tr>
<tr>
<td>NURS 125L</td>
<td>Medical/Surgical Nursing I Clinical</td>
<td>(3)</td>
</tr>
<tr>
<td>NURS 214</td>
<td>Psychiatric/Mental Health Nursing</td>
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<tr>
<td>NURS 214L</td>
<td>Psychiatric/Mental Health Nursing Clinical</td>
<td>(1)</td>
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<tr>
<td>NURS 217</td>
<td>Maternal/Newborn Nursing</td>
<td>(2)</td>
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<tr>
<td>NURS 217L</td>
<td>Maternal/Newborn Nursing Clinical</td>
<td>(1)</td>
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<tr>
<td>NURS 218</td>
<td>Pediatric Nursing</td>
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<tr>
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<td>NURS 225</td>
<td>Medical/Surgical Nursing II</td>
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<td>NURS 225L</td>
<td>Medical/Surgical Nursing II Clinical</td>
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<td>NURS 119</td>
<td>Role transition-PN</td>
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TOTAL CREDITS: 58

SEQUENCE OF COURSES

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<th>Semester 1 (Fall) 15 cr</th>
<th>Semester 2 (Spring) 16 cr</th>
<th>Semester 3 (Fall) 14 cr</th>
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<tr>
<td>NURS 113/L (6)</td>
<td>NURS 125/L (6)</td>
<td>NURS 217/L (3)</td>
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<td>NURS 106 (3)</td>
<td>NURS 214/L (3)</td>
<td>NURS 218/L (3)</td>
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<td>NURS 114L (2)</td>
<td>PSY 290 (3)</td>
<td>NURS 225/L (6)</td>
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<td>BIOL 238/L (4)</td>
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<td>NURS 119 (2)</td>
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Associate Degree

NURSING Curriculum

Students who pursue the Associate Degree in Nursing will receive an Associate of Applied Science in Nursing degree.

Associate of Applied Science (AAS)

NURSING

GENERAL EDUCATION (24 CR)

Area I. Communications (3 or 6 cr)

Required: (3)

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>Composition I</td>
<td>(3)</td>
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</table>

An additional 3 credits must be taken either in Communications or Humanities and Fine Arts

Area II and III. Mathematics/Computers/Lab Science (12 cr)

Choose a minimum of 4 credits from the following:

- Biology (4)
Chemistry (4)
Microbiology (4)

Required (8):

BIOL 237/L Human Anatomy & Physiology I with Lab (4)
BIOL 238/L Human Anatomy & Physiology II with Lab (4)

Area IV. Social/Behavioral (6 cr)

PYS 105 General Psychology (3)
PYS 290 Developmental Psychology (3)

Area V. Humanities and Fine Arts (0 or 3 cr)

3 credits of Humanities and Fine Arts may be taken in place of
the additional 3 credits in Communications

PROGRAM REQUIREMENTS (44 CR)

NURS 106 Pharmacology (3)
NURS 113 Nursing Fundamentals (4)
NURS 113L Nursing Fundamentals Lab (2)
NURS 114L Health Assessment (2)
NURS 125 Medical/Surgical Nursing I (3)
NURS 125L Medical/Surgical Nursing I Clinical (3)
NURS 214 Psychiatric/Mental Health Nursing (2)
NURS 214L Psychiatric/Mental Health Nursing Clinical (1)
NURS 217 Maternal/Newborn Nursing (2)
NURS 217L Maternal/Newborn Nursing Clinical (1)
NURS 218 Pediatric Nursing (2)
NURS 218L Pediatric Nursing Clinical (1)
NURS 225 Medical/Surgical Nursing II (3)
NURS 225L Medical/Surgical Nursing II Clinical (3)
NURS 235 Medical/Surgical Nursing III (3)
NURS 235L Medical/Surgical Nursing III Clinical (3)
NURS 240 Role Transition/RN (2)
NURS 245 Pathophysiology (4)

TOTAL CREDITS: 68

SEQUENCE OF COURSES

YEAR I LEVEL I

Fall Semester (15 cr)  Spring Semester (16 cr)
NURS 113/L (6)       NURS 125/L (6)
NURS 106 (3)          NURS 214/L (3)
NURS 114L (2)         NURS 245 (4)
BIOL 238/L (4)        PSY 290 (3)
YEAR II LEVEL II

Fall Semester (12 cr)  Spring Semester (11 cr)
NURS 217/L (3)  NURS 235/L (6)
NURS 218/L (3)  NURS 240 (2)
NURS 225/L (6)  Humanities or Communications (3)

RN to BSN
NURSING PROGRAM

The RN to BSN Nursing Program is designed for and limited to individuals who are licensed as registered nurses (RN) in the United States. This Program is designed to articulate with many two-year Associate Degree Nursing (ADN) programs. The RN to BSN Program prepares registered nurses to assume leadership roles as an integral nurse at the bedside, within an organization, in the community, and in the profession.

The Program provides a unique and innovative nursing curriculum that is based upon the Theory of Integral Nursing. Through its integrative care focus, this Program prepares nurses to provide holistic, intentional, relationship-centered care that addresses individual and collective health.

The Program requires 120-122 credit hours for graduation. Thirty-four credits of lower-division courses, to include nursing courses from an Associate Degree in Nursing program, may be applied toward the BSN degree. Students must then complete a total of forty credits of upper-division courses: 32 nursing credits and 8 elective credits with a Nursing (NURS) prefix, Integrative Health Studies (IHS) prefix, or other approved upper division course(s).

GENERAL EDUCATION (38 CR)

Area I. Communications (9 cr)
   ENG 111 Composition I (3)
   SPCH 130 Public Speaking (3)

   Choose one of the following courses:
   ENG 112 Composition II (3)
   ENG 116 Professional and Technical Communication (3)

Area II. Mathematics (3 cr)
   MATH 145 Introduction to Probability & Statistics (3)

Area III. Laboratory Science (12 cr)
   BIO 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)
### Area IV. Social/Behavioral Sciences (6-9 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

*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 cr) of the Humanities and Fine Arts courses.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101/L</td>
<td>Physical Anthropology with Lab</td>
<td>4</td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Introduction to Social/Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 110</td>
<td>Indian Cultures of the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 207</td>
<td>Cultures of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>ECON 200</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 111</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>HSS 311</td>
<td>Readings in the Social Sciences</td>
<td>4</td>
</tr>
<tr>
<td>HSS 414</td>
<td>Humanity and Creativity*</td>
<td>4</td>
</tr>
<tr>
<td>HSS 421</td>
<td>History, Literature, Art, and Philosophy</td>
<td></td>
</tr>
<tr>
<td>PSCI 110</td>
<td>The Political World</td>
<td></td>
</tr>
<tr>
<td>PSCI 120</td>
<td>Contemporary Political Issues</td>
<td></td>
</tr>
<tr>
<td>PSCI 200</td>
<td>American Politics</td>
<td></td>
</tr>
<tr>
<td>PSCI 210</td>
<td>State and Local Government</td>
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<tr>
<td>PSCI 212</td>
<td>The American Presidency</td>
<td></td>
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<tr>
<td>PSY 105</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 210</td>
<td>Theories of Personality</td>
<td>3</td>
</tr>
<tr>
<td>PSY 229</td>
<td>Adolescent Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 230</td>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>PSY 232</td>
<td>Abnormal Behavior</td>
<td>3</td>
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<tr>
<td>PSY 270</td>
<td>Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 213</td>
<td>Deviant Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SOC 216</td>
<td>Ethnic and Intercultural Relations</td>
<td>3</td>
</tr>
<tr>
<td>SOC 220</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOC 225</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
</tbody>
</table>

*Plus, topic courses with student advisor’s approval*

### Area V. Humanities and Fine Arts (6-9 cr)

*Required: Second Language (3 cr)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>(3)</td>
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</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td></td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td></td>
</tr>
<tr>
<td>ART 208</td>
<td>History of NM Art &amp; Arch. I</td>
<td></td>
</tr>
<tr>
<td>ART 211</td>
<td>History of Art II</td>
<td></td>
</tr>
<tr>
<td>DAN 240</td>
<td>Dance Appreciation</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Course Name</td>
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</tr>
<tr>
<td>ENG 270</td>
<td>Children's Literature</td>
<td></td>
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<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
<td></td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td></td>
</tr>
<tr>
<td>ENG 266</td>
<td>Native American Literature II</td>
<td></td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td></td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td></td>
</tr>
<tr>
<td>ENG 294</td>
<td>Mythology</td>
<td></td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td></td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td></td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1887</td>
<td></td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1887</td>
<td></td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td></td>
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<tr>
<td>HIST 220</td>
<td>Southwestern Women's History</td>
<td></td>
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<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td></td>
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<tr>
<td>HIST 250</td>
<td>American Indian History</td>
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<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td></td>
</tr>
<tr>
<td>HUM 101</td>
<td>Humanities I</td>
<td></td>
</tr>
<tr>
<td>HUM 102</td>
<td>Humanities I</td>
<td></td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td></td>
</tr>
<tr>
<td>HUM 311</td>
<td>Readings in the Social Sciences</td>
<td></td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity</td>
<td></td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, art, and Philosophy</td>
<td></td>
</tr>
<tr>
<td>MUS 103</td>
<td>Music History &amp; Literature I</td>
<td></td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td></td>
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<tr>
<td>MUS 218</td>
<td>Music History &amp; Literature II</td>
<td></td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td></td>
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<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
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<tr>
<td>PHIL 150</td>
<td>Critical Thinking</td>
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<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td></td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td></td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td></td>
</tr>
<tr>
<td>THE 130</td>
<td>History of Theatre</td>
<td></td>
</tr>
</tbody>
</table>

*Plus, topic courses with student advisor's approval.*

**REQUIRED LOWER-DIVISION COURSEWORK**

Thirty-four credits of lower-division courses, to include nursing courses from ADN program, will be applied toward the BSN degree.

**SUPPORT COURSES (7-9 CR)**

Four (4) to six (6) credits of Pathophysiology (can be lower-or upper division courses).

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI 204</td>
<td>Nutrition (3)</td>
</tr>
</tbody>
</table>
RN TO BSN PROGRAM CURRICULUM

A minimum of 40 credits of upper-division courses must be completed, to include 32 credits of required upper-division nursing courses and 8 credits of upper division electives.

NURS 400 Nursing in Transition and NURS 401 Integral Nursing Theory must be the first two courses taken in the curriculum. They may be taken concurrently with the following courses: NURS 410 An Integral Approach to Evidence-Based Practice; NURS 420 Integral Health Assessment; NURS 430 Complementary and Alternative Therapies in Nursing; NURS 440 Health Issues, Policy and Politics in Health Care; NURS 450 Community and Global Health I. NURS 480 Integral Nursing Capstone Course is the last course taken in the program.

- NURS 400 Nursing in Transition (2)
- NURS 401 Integral Nursing Theory (3)
- NURS 410 An Integral Approach to Evidence-Based Practice (3)
- NURS 420 Integral Health Assessment (3)
- NURS 430 Complementary and Alternative Therapies in Nursing (3)
- NURS 440 Health Issues, Policy and Politics in Health Care (3)
- NURS 450 Community and Global Health I (3)
- NURS 451 Community and Global Health II (4)
- NURS 460 Integral Communication and Teaching (2)
- NURS 470 Transformational Leadership in Nursing (4)
- NURS 480 Integral Nursing Capstone Course (2)

Electives 8 credits of upper-division electives with a NURS or IHS prefix, or other approved upper division course(s).

TOTAL CREDITS: 120-122
(INCLUDES A TOTAL OF 135 CLINICAL HOURS)
Notes:
Course Descriptions

ANTHROPOLOGY (ANTH)

Note: Each course in this department bears a Prerequisite of ENG 109N or an adequate score on the Course Placement Evaluation.

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. (Fall only) (3, 3T+0S)

110 INDIAN CULTURES OF THE SOUTHWEST You will study the cultures 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. (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. Prerequisite: ENG 109N. (3, 3T+0S)

207 CULTURES OF NEW MEXICO You will study the contemporary cultural and ethnic...
groups of New Mexico, including Native American, Hispanic, Anglo, and others. Prerequisite: ENG 109N.

ART (ART)

All studio courses may be repeated without penalty; however, no course may be counted more than once toward graduation requirements.

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). Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN ART 1113)

107 HISTORY OF ART 1 You will study the development of Western art from pre-historic times to the Renaissance through slides, videos, lectures, readings, discussions, and analysis. Prerequisite: ENG 109N. (3, 3T+0S). Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN ART 1123)

110 DRAWING 1 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 line, value, mass, texture, and shape as applied to still life, landscape, and the human figure. (3, 1T+2S)

120 PAINTING I You will learn acrylic painting techniques, including color and pictorial space, still life, landscape, figure, and the abstract. (3, 1T+2S)

122 ELEMENTS OF DESIGN IN ART You will study traditional two- and three dimensional design elements as they apply to the creation of art in all media. (3, 1T+2S)

160 POTTERY I You will study hand-built and wheel-thrown pottery, learning various hand-building methods for pinch, coil, and slab-constructed 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. (3, 1T+2S)

170 PHOTOGRAPHY I You will learn how to use a 35mm camera. You will also learn basic film exposure, film development, and printing of film. (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. (3, 1T+2S)

200 POTTERY GLAZE MAKING AND STUDIO PRACTICES You will learn to make pottery glazes, how to fire a kiln, and how to maintain a production pottery studio. Prerequisite: ART 160. (1, 0.5T+0.5S)

211 HISTORY OF ART II Continuation of ART 107 in which you will continue your study of Renaissance art to contemporary art through readings, slides, videos, discussions, and analysis. Prerequisite: ENG 109N. (3, 3T+0S). Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN ART 2113)

221 DRAWING II Continuation of ART 110, in which you will study advanced concepts and technical processes. Prerequisite: ART 110. (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 techniques of printmaking used in linocut, woodcut, engraving, dry point, and monotype. You will also study the history of printmaking and presentation of prints. (3, 1T+2S)

235  WATERCOLOR  You will study transparent and opaque watercolor media, with emphasis on creative expression and techniques involving varied subject matter. (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. Prerequisite: ART 160. (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. Prerequisite: ART 170. (3, 1T+2S)

275  POTTERY III  A continuation of ART 260 in which you will study advanced methods for hand-building and wheel throwing of pottery. You will have hands-on experience in kiln loading and glaze making. Prerequisite: ART 260. (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. Prerequisite: ART 180. (3, 1T+2S)

295  PHOTOGRAPHY III  In this continuation of ART 270, which concentrates on advanced black and white printing, you will learn single filter printing, split filter printing, and high key printing. You will use fiber papers and various archival toning processes. Prerequisite: ART 270. (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. Prerequisite: ART 270. (3, 1T+2S)

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. Prerequisite: ENG 109N and MATH 100N. Co-requisite: ASTR 110L. (3, 3T+0S). Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN ASTR 1114 with lab)

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) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN ASTR 1114 with lecture)

BARBERING (BARB)

Prerequisite for any Barbering course is completion of ENG 108N or adequate scores on the Course Placement Evaluation instrument.
BIOLOGY

110  BARBERING I  This course presents an integrated study and overview of the demands of the profession and the self-discipline needed to succeed in the field of barbering. It includes concepts related to professional image, work ethic, professional standards, communication skills, infection control, and industry history. As this course requires both theory and lab, you will perform practical skills on mannequins. The course introduces you to state-required study in theory, facials, hair coloring, chemical texturizing, hair cutting, shampooing, hairstyling, and shaving. Prerequisites: ENG 109, BA 117 (OA 117) (17, 7T+10S)

120  BARBERING II  This course is a continuation of Barbering I. You will perform practical skills on clients, while continuing your study in theory, facials, hair coloring, chemical texturizing, hair cutting, shampooing, hairstyling, and shaving. Prerequisite: BARB 110. (16, 5T+12S)

210  BARBERING III  This course is a continuation of Barbering II. You will perform practical skills on clients, while continuing your study in theory, salon business, facials, hair coloring, chemical texturizing, hair cutting, shampooing, hairstyling, and shaving. Prerequisite: BARB 120. (15, 3T+12S)

222  BARBERING DIRECTED STUDY  This course is an independent clinical practice of all skills and knowledge learned in related courses. It is designed for students to make up missed state-required clock hours. It may be repeated once. Prerequisite: COSM 120 or 210 or 220. (6, 0T+6S)

230  COSMETOLOGY/BARBER REFRESHER  This course is designed for the cosmetologist or barber whose license has expired. You will complete a review of state laws and regulations, take mini-board exams (state laws and practical), and review all required cosmetology/barber course work. Prerequisite: proof of expired cosmetology/barber license. (Summer only) (10, 8T+2S)

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. This course is suitable for non-science majors. Prerequisite: ENG 109N; Co-requisite: BIOL 110L. (3, 3T+0S). Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 1114 with lab)

110L  CURRENT TOPICS IN BIOLOGY LAB  Co-requisite: BIOL 110. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 1114 with lecture)

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. Prerequisites: CHEM 110/L or BIOL 110/L and ENG 111; 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. **Prerequisite:** BIOL 201/L; **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. **Prerequisite:** BIOL 110/L; **Co-requisite:** BIOL 203L. (Spring) (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)

**204 PLANT AND ANIMAL FORM AND FUNCTION** You will study plant structure and growth, transport in plants, plant nutrition, plant reproduction and development, control systems in plants, introduction to animal systems, animal nutrition, circulation of gas exchange, immune systems, control of the internal environment, chemical signals in animals, reproduction, development, nervous systems, and sensory and motor mechanisms. **Prerequisite:** BIOL 110/L. **Co-requisite:** BIOL 204L. (Fall) (3, 3T+0L)

**204L PLANT AND ANIMAL FORM AND FUNCTION LAB** You will engage in laboratory experiences supportive of BIOL 204. **Co-requisite:** BIOL 204. (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. **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. **Co-requisite:** BIOL 237L. (3, 3T+0L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 2114 with lab)

**237L HUMAN ANATOMY AND PHYSIOLOGY I LAB** **Co-requisite:** BIOL 237. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 2114 with lecture).

**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/L; **Co-requisite:** BIOL 238L. (3, 3T+0L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 2124 with lab)

**238L HUMAN ANATOMY AND PHYSIOLOGY II LAB** **Co-requisite:** BIOL 238. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 2124 with lab)
310 **SCIENCE AND SOCIETY** You will examine the principles and practice of modern science and the relationship between science and technology in society. You will also focus on issues of biological science that relate to current political and social challenges and problems, using current topics as a way of understanding how scientific progress impacts culture and society. You will also gain practical experience in learning about the scientific method with observations, evidence, and testing to address general biological and physical questions. **Prerequisite:** 110/L or BIOL 210/L. (4, 4T+0L)

329 **MOLECULAR CELL BIOLOGY** You will learn about basic cellular processes and their control mechanisms, including gene expression, protein synthesis, signal transduction pathways, receptor activation and cell cycle. This course is designed to expand the knowledge base of students who have completed introductory-level courses and to serve as a foundation for 400-level courses in biology. **Prerequisite:** BIOL 204/L. (4, 4T+0L)

360 **PLANT BIOLOGY** You will study plant anatomy, physiology, classification, evolution, and ecology as it deals with both higher and lower plants. **Prerequisite:** BIOL 204/L. **Corequisite:** BIOL 360. (3, 3T+0L)

360L **PLANT BIOLOGY LAB** You will engage in laboratory experiences supportive of BIOL 360. **Corequisite:** BIOL 360. (1, 0T+1L)

371 **INVERTEBRATE BIOLOGY** You will study the major invertebrate groups with emphasis on evolutionary and ecological relationships, as well as the correlation of structure with function. **Prerequisite:** BIOL 204/L; **Corequisite:** 371L. (3, 3T+0S)

371L **INVERTEBRATE BIOLOGY LAB** You will engage in laboratory experiences supportive of BIOL 371. (1, 0T+1L)

372 **ADVANCES IN BIOLOGY DISCUSSION** You will participate in weekly convening of discussions of contemporary research, journal articles, to even ideas or studies done by group participants. This forum thus provides an opportunity to evaluate embryonic or fully-fledged research results, to keep abreast of newly published ideas or books, and to develop or teach communications skills. The focus here is how to lead discussion of a scientific journal article, but our group maintains flexibility by inviting outside seminar speakers, discussing the research of group members, and taking on extended discussion of book-length works, among other activities. **Prerequisite:** Permission of instructor. (3, 3T+0L)

382 **UNDERGRADUATE TEACHING EXPERIENCE** Undergraduate instruction allows students to learn first-hand what teaching is like while also providing valuable experience of a type that very few students get to have. Responsibilities may include laboratory preparation, assistance in the grading of quizzes and reports and the guiding of students in exercises and discussions. As the term progresses, the student usually assumes more responsibilities as appropriate. **Prerequisite:** Permission of instructor. (3, 3T+0L)

386 **VERTEBRATE BIOLOGY** You will study the ecology, behavior, sociology, adaptations, and evolution of the vertebrates. **Prerequisite:** BIOL 204/L or BIOL 238L (4, 4T+0L)

392 **UNDERGRADUATE RESEARCH EXPERIENCE** This is a practical faculty-directed research experience for upper-division biology majors. During the regular semester you will perform 8-10 hours per week of work alongside your mentor in a project with a time frame agreed to by you, the student intern, and the mentor. Arrangements involve all aspects of biological research that can include fieldwork, bench laboratory work, library research, or any combination of these activities. The mentor will actively engage you in sharing the responsibility for the research process. (3, 3T+0L)

398 **INDEPENDENT STUDY** A variable credit theory course for science majors pertaining to a specific topic not available in the regular curriculum. Topics will be developed by
individual faculty members reflecting their special interests and expertise. The course may be repeated for credit. **Prerequisite:** Permission of instructor (1-4, 1-4T+0L)

399 SPECIAL TOPICS A variable credit lecture and/or laboratory course for biology majors pertaining to a specific biological topic not available in the regular curriculum. Topics will be developed by individual faculty members reflecting their special interests and expertise. The course may be repeated for credit. **Prerequisite:** Permission of instructor. (1-4, 1-4T+0L)

406 STREAM ECOLOGY AND FIELD METHODS You will use the scientific method to understand and explain concepts in stream ecology, hydrology, and biology. You will obtain experience in general field methods for stream characterization and sampling in streams of northern New Mexico. **Prerequisites:** BIOL 203/L or ES 125; **Co-requisite:** BIOL 406L (4, 3T+1L)

406L STREAM ECOLOGY AND FIELD METHODS LAB You will engage in laboratory experiences supportive of BIOL 406. (1, 0T+1L)

410 BIOINFORMATICS You will use computers to search biological databases to hunt for genes, discover protein structures, and determine phylogenetic trees from molecular evolution. **Prerequisite:** BIOL 203/L. (Fall) (3, 3T+0L)

412 DEVELOPMENTAL BIOLOGY You will study comparative biology of animal development, with emphasis on regulatory mechanisms. **Prerequisite:** BIOL 204/L and BIOL 349/L. **Co-requisite:** BIOL 412L. (3, 3T+0L)

412L DEVELOPMENTAL BIOLOGY LAB You will engage in laboratory experiences supportive of BIOL 412. (1, 0T+1L)

425 MOLECULAR GENETICS You will study the molecular biology of the gene, including chromosome structure, DNA replication and repair, RNA transcription and translation and the control of these processes, and techniques used to study these processes. **Prerequisite:** BIOL 329. (Spring) (4, 4T+0L)

426 NEUROBIOLOGY You will study the basic structure and function of the nervous system from the level of individual neurons through such complex brain functions as learning and memory, movement, sensation, and personal perception of the environment. **Prerequisites:** BIOL 204/L and BIOL 349/L or BIOL 237/L and 238/L; **Co-requisite:** BIOL 426L. (Spring) (3, 3T+0L)

426L NEUROBIOLOGY LAB During this lab experience, you will use histological slides, gross specimens, and neuro-imaging studies. You will also study neural function using computer-based methods. **Co-requisite:** BIOL 426. (1, 0T+1L)

431 DRUGS AND THEIR ACTIONS You will study the basic principles of pharmacology, including how drugs exert their effects on the body. You will study the major categories of drugs and their actions, including antibiotics, anti-inflammatories, hormones, analgesics, and drugs that affect the central nervous system. **Prerequisites:** BIOL 201/L, BIOL 210/L or BIOL 204/L (4, 4T+0L)

456 IMMUNOLOGY You will study experientially immunoglobulin structure, antigen-antibody reactions, immunity, and hypersensitivity. **Prerequisites:** BIOL 201/L, BIOL 210/L or BIOL 204/L (4, 4T+0L)

472 BIOLOGY SEMINAR You will attend presentations given by faculty and visiting scientists on their research and careers, and students who have conducted research will present their results as well. Graded CR/NC. **Prerequisite:** permission of instructor. (1, 1T+0L)

492 BIOLOGY CAPSTONE PROJECT You will have the culminating learning experience of your studies in biology and will have an opportunity to integrate and apply competencies...
and knowledge gained from coursework and laboratory experiences, and to demonstrate a broad mastery of learning across the curriculum. Graded CR/NC. Prerequisite: permission of the instructor. (3, 3T+0L)

498 INDEPENDENT STUDY A variable credit theory course for science majors pertaining to a specific topic not available in the regular curriculum. Topics will be developed by individual faculty members reflecting their special interests and expertise. This course may be repeated for credit. Prerequisite: permission of instructor. (1-4, 1-4T+0L)

499 SPECIAL TOPICS A variable credit lecture and/or laboratory course for biology majors pertaining to a specific biological topic not available in the regular curriculum. Topics will be developed by individual faculty members reflecting their special interests and expertise. The course may be repeated for credit. Prerequisite: permission of instructor. (1-4, 1-4T+0L)

BUSINESS ADMINISTRATION (BA)

140 INTRODUCTION TO PROJECT MANAGEMENT This course teaches the basics of using Microsoft Project to help you manage projects, keep track of deadlines, resources, task distribution, constraints and contingencies. This is an inter-disciplinary course designed to assist in meeting project deadlines in all fields of study. (Fall) (3, 3T+0S)

205 BUSINESS STATISTICS 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. Prerequisite: MATH 130 or higher. (3,3T+0S)

214 SMALL BUSINESS MANAGEMENT Introduces the challenges of entrepreneurship, including the start-up and operation of a small business. Topics include market research techniques, feasibility studies, site analysis, financing alternatives, and managerial decision making. Prerequisite: ENG 111. (Fall) (3, 3T+0S)

220 INTRODUCTION TO BUSINESS Provides an integrated overview of American business and its operations. Special attention to current business, marketing, finance, accounting, and the legal environment of business. A small-business plan will be formulated. Prerequisite: ENG 109N. (3, 3T+0S) (NM Common Course Number: BUSA 1113, Business Transfer Module)

221 ACCOUNTING PRINCIPLES I Basic accounting theory and practice, with the purpose of providing information for decision making. Preparation, analysis, and interpretation of financial statements. Prerequisite: MATH 100N. (3, 3T+0S)

222 ACCOUNTING PRINCIPLES II This course offers both accounting and non-accounting majors an introduction to managerial accounting. Attention will be focused on the use of accounting data as a basis for decision by management, stockholders, creditors, and other users of financial statements and accounting reports. Prerequisite: BA 221. (3, 3T+0S)

236 QUICKBOOKS Use of prepared integrated business software, QuickBooks, to record business transactions and prepare financial statements for small businesses. Prerequisites: BA 221 or OA 135. (3, 3T+0S)

240 PRINCIPLES OF MANAGEMENT An overview of management principles as these apply to the public, private, and tribal sectors. Special attention to techniques of managerial decision making, the planning process, motivation, leadership, and communication skills. Prerequisite: ENG 109N. (3, 3T+0S) (NM Common Course Number: MGMT 2113, Business Transfer Module)

241 INTEGRATED MANAGEMENT This course provides a management-simulated environment to make critical decisions based on the situations that arise in operating
competitive business enterprises. **Prerequisite:** BA 214 (Spring) (3, 3T+0S)

**250 BUSINESS COMMUNICATIONS** Skill development in business writing with an emphasis on the preparation of letters and reports, and on presenting information in a logical, forceful, and acceptable form. **Prerequisite:** ENG 109N. (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. (3, 3T+0S) (NM Common Course Number: MKTG 2113, Business Transfer Module)

**254 INTRODUCTION TO E-COMMERCE** This course builds on currently accepted business practices to develop a business plan and implementation model for e-commerce. Topics include analysis and synthesis of the planning cycle, cost/benefit analysis, technical systems, and marketing. (Spring) (3, 3T+0S)

**261 BUSINESS TECHNOLOGY** Focuses on how technologies are used to support business needs or initiatives. Course will cover such topics as Customer Relations Management (CRM), Enterprise Resource Planning (ERP), Point of Sale (POS), Accounting Information Systems, E-commerce, Artificial Intelligence (AI), Business Continuity Planning (BCP), risk management, operation security, and/or information security in addition to discussion of ethics as related to technology usage. **Prerequisite:** ENG 111, (3, 3T+0S)

**300 BUSINESS LAW** General legal principles, including the creation of laws, contracts, sales, business, insurance, and other related matters. **Prerequisites:** ENG 111. (3, 3T+0S)

**304 INTERMEDIATE ACCOUNTING I** Accounting principles within a conceptual framework determined by generally accepted accounting principles, financial accounting functions and theory, and recognition and measurement of assets. **Prerequisites:** BA 222. (3, 3T+0S)

**305 INTERMEDIATE ACCOUNTING II** Accounting with the study of current accounting objectives, principles, theory and practice in the preparation, interpretation, and analysis of general purpose financial statements for business entities. Emphasis will be on problems relating to investments, liabilities, and stockholders equity, including EPS. **Prerequisite:** BA 222. (3, 3T+0S)

**306 INTERMEDIATE ACCOUNTING III** Topics in accounting pertaining to public reporting of company financials. Review of recent FASB rules. **Prerequisite:** BA 222. (3, 3T+0S)

**310 PRINCIPLES OF FINANCE** 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 205. (3, 3T+0S)

**313 ORGANIZATIONAL BEHAVIOR (WIC)** Diverse conceptual and theoretical perspectives in organizations, focusing on problems related to perception, motivation, leadership, conflict, stress, influence, decision making, work/family balance, and ethics. **Prerequisite:** BA 240. (3, 3T+0S)

**324 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 221. (3, 3T+0S)

**330 PRINCIPLES OF PROJECT MANAGEMENT** This course provides the foundation for understanding project management from a perspective of managing a single project. This course will cover the aspects of initiating, planning, executing, monitoring/controlling and closing with scenario based information case studies to help understand the course
material. The material covered follows the Project Management Institute's (PMI) Guide to the Project Management Body of Knowledge (PMBOK). (3, 3T+0S)

**334 ORGANIZATIONAL MANAGEMENT** This course provides the foundation for understanding how project-based work is accomplished in contemporary organizations. Organizational model for accomplishing work will be covered including projectized, functional and matrix models. An overview of project program and portfolio management will be covered. The course is completed with the review of various approaches to strategy development, enterprise-level performance measurement, and models for organizational performance improvement (such as Baldrige, ISO, and PMI’s OPM3). **Prerequisite:** BA 330 (3,3T+0S)

**335 PROJECT PLANNING AND CONTROLS** This course covers the process of planning, scheduling, and using control techniques and systems to effectively manage a project. The objective of this course is to furnish the student with the skills and knowledge needed to effectively plan and schedule a project using contemporary computer modeling tools such as Microsoft SharePoint, Microsoft Project and Oracle Primavera. Using a representative tool, you will learn how to use project control systems to monitor, forecast, and solve problems as they occur. You will learn the elements of project planning and ways to set up meaningful control systems that can help as the project manager and team a successfully completed project. The material covered follows the Project Management Institute's; (PMI) Guide to the Project Management Body of Knowledge (PMBOK). **Prerequisite:** BA 330. (3,3T+0S)

**336 PROJECT COMMUNICATIONS AND STAKEHOLDER MANAGEMENT** This course provides communications skills used to delegate responsibilities, motivate teams, solve problems, organize, sell ideas, obtain/provide information, report on performance, manage organizational transition, and implement actions. Studies are provided with practical communications strategies, tools and best practices along with plenty of real life examples of their application in an interactive format, to enhance learning. The material covered follows the Project Management Institute's (PMI) Guide to the Project Management Body of Knowledge (PMBOK). **Prerequisite:** BA 330. (3,3T+0S)

**350 ENTREPRENEURSHIP** Methods of small business management and business formation, with an emphasis on the traditional business functions in a small setting. (3, 3T+0S)

**352 ACCOUNTING INFORMATION SYSTEMS** Current practices and technologies used to design, install, operate, and manage an integrated automated accounting system. Application controls, information security requirements, and integration with other business information systems. **Prerequisite:** BA 222. (3, 3T+0S)

**353 OPERATIONS MANAGEMENT** This course explores the fundamental concepts of operations including productivity, quality control, new product and process development, inventory management, operations strategy, and computer applications. **Prerequisites:** BA 240 and Math 130 or higher. (3, 3T+0S)

**354 E-COMMERCE** Techniques, problems, and solutions in eCommerce. Marketing plan considerations, online catalogs, payment methods, security, outsourcing options, and the technologies behind eCommerce web sites. **Prerequisites:** BA 240, BA 251. (3, 3T+0S)

**360 HUMAN RESOURCES MANAGEMENT** 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 240. (3, 3T+0S)

*Strikethrough indicates courses that are no longer offered.*
BUSINESS ADMINISTRATION

361 ADVANCED MANAGEMENT INFORMATION SYSTEMS The course includes such topics as security, decision support services, system life cycle, social issues of computing, database administration, data mining, data modeling, systems development and emerging technologies. Focus is from the technical manager perspective. Prerequisites: BA 261, BA 354 and IT 350. (3, 3T +0S)

405 ACCOUNTING FOR NON-PROFIT ORGANIZATIONS Accounting and financial reporting for governmental and non-profit organizations, including topics such as fund accounting for governmental organizations and adherence to GASB standards as well as statement preparation and analysis. Prerequisite: BA 222 (Spring) (3, 3T+0S)

408 CORPORATE FINANCE In-depth analysis of financial concepts including valuation capital budgeting, cost of capital, leasing, financial analysis, and working capital management. Prerequisites: BA 221, BA 310. (Spring) (3,3T+0S)

410 MONEY AND BANKING In-depth analysis of modern monetary theory and policy, commercial banking system and depository institutions, global financial system and foreign exchange market. Prerequisites: ECON 200 and BA 310 (Spring) (3, 3T+0S)

411 MANAGERIAL ACCOUNTING You will examine the role of accounting in management decision-making for planning and control. Topics include: interpretation and analysis of financial information, relevant cost analysis; budgeting and responsibility accounting, planning for capital expenditures. Prerequisite: BA 222 (3, 3T, 0L)

429 ADVANCED ACCOUNTING Advanced study of corporate financial analysis and planning, including capital budgeting, cost of funds, and capital structure and valuation. Prerequisites: BA 222 (Accounting Principles II) and BA 310 (Principles of Finance). (3, 3T+0S)

432 STRATEGIC MANAGEMENT Basic concepts, frameworks, and methodologies useful to managers in crafting and executing business strategy, including quality management. Prerequisite: BA 240. (3, 3T+0S)

433 PROJECT QUALITY AND RISK MANAGEMENT This course provides skills needed to implement quality tools, techniques and practices in all phases of the project life cycle and in assessing and managing the risks related to project success. Elements of a systematic approach to risk management are covered including risk identification, qualitative analysis, quantitative analysis, risk planning and monitoring for outcome realization. The material covered follow the Project Management Institute’s; (PMI) Guide to the Project Management Body of Knowledge (PMBOK). Prerequisite: BA 330. (3, 3T+0S)

438 PROJECT LEADERSHIP AND HR MANAGEMENT This course covers the processes of Project Leadership and Human Resource Management into day-to-day project management activities. Models for communications planning, technology, requirements, and methods will be covered. Emphasis will also cover negotiation and acquisition planning and execution, leadership team building, team problem solving, decision making and how to conduct team and individual performance appraisals. The material covered follows the Project Management Institute’s (PMI) Guide to Project Management Body of Knowledge (PMBOK). Prerequisite: BA 330. (3,3T+0S)

445 COST ACCOUNTING Advanced topics in the development and interpretation of accounting information as an aid to management. Includes collecting cost information; cost estimation and allocation; standard costing and variance analysis; activity-based costing and cost-value relationships. Prerequisite: BA 222. (3,3T+0S)

446 AUDITING THEORY AND PRACTICE Accepted principles, practices, and procedures used by public accountants for certifying corporate financial statements. Prerequisite: BA 304 (3,3T+0S)
456  MARKETING MANAGEMENT  The student will gain a comprehensive view and understanding of the role of Marketing Managers in today's dynamic and rapidly changing global marketplace. They must provide their business with a vision for the future; monitor and understand a dynamic market environment; generate strategic options and deliver programs that sustain a measurable competitive advantage. The course focuses on these goals as well as issues that marketing managers are confronted with on a daily basis. It covers the most recent and relevant techniques and processes being applied to the functions of: strategy development; interpreting consumer behavior; market segmentation; B2C and B2B marketing; brand management; marketing communications; customer relationship management (CRM); distribution strategy; product pricing and promotion. The course also addresses the latest technologies in digital marketing and e-commerce. **Prerequisite**: BA 251 and BA 240. (3,3T+0S)

460  LABOR RELATIONS  Labor union history, labor law, collective bargaining, labor-management relations, and the concept of management prerogative with respect to defining jobs, working conditions, and other human resources functions. (3, 3T+0S)

461  ETHICAL AND LEGAL ISSUES IN BUSINESS  Current topics in the areas of law, regulatory controls, and ethical issues, focusing discussions on the implications of these legal situations in management. **Prerequisite**: BA 300. (3, 3T+0S)

462  INTERNATIONAL BUSINESS AND MANAGEMENT  International business and environments by covering topics such as the international monetary system, import-export, growing competition and trading relationships in a global community. **Prerequisites**: BA 240 and Econ 200. (3, 3T+0S)

464  BUSINESS CONTINUITY PLANNING/DISASTER PLANNING  Examine and critique various Business Continuity and Disaster Recovery Planning models and documents. Students will conduct a business impact analysis of one business function. **Prerequisites**: 30 hours of BA courses or instructor permission and BA 354. (3, 3T+0S)

470  MANAGING SCIENCE, ENGINEERING, AND TECHNOLOGY PROJECTS  This course provides the foundations for understanding project management for science, technology, engineering and Math (STEM) projects. This course provides an overview of the management tools and techniques most applicable to those types of projects where outcomes are not always known at the start of the project or where scientific discovery is a significant portion of the planned effort. The material covered is based on the Project Management Institute's (PMI) Guide to Project Management Body of Knowledge. **Prerequisite**: BA 330. (3, 3T+0S)

485  INTERNSHIP  Service learning in field of interest within a job-related environment. **Prerequisite**: You must petition to enroll in this course. (6, 6T+0S)

490  CAPSTONE  Service Learning project in a field of interest within a job-related environment. Course will also include completion of a Major Field Test. **Prerequisites**: completion of at least 18 hours of Common BBA requirements and permission of instructor. (6, 6T+OL)

**BUSINESS COMPUTING INFORMATION SYSTEMS (BCIS)**

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)

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. (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. (1, 1T+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)

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. (1, 1T+0S)

200  BUSINESS COMPUTER APPLICATIONS  The owner/manager approach to the use of microcomputers: systems design, software, business applications, and the Windows environment. (3, 3T+0S)

225  EXCEL  Illustrates the features of Microsoft Excel, a spreadsheet program that organizes data, completes calculations, makes decisions, graphs (charts) data, and develops professional-looking reports. (3, 3T+0S)

226  POWERPOINT  Microsoft PowerPoint is a complete presentation graphics software program that produces a professional-looking presentation. PowerPoint enables informal presentations in a small conference room using overhead transparencies. (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. (3, 3T+0S)

265  MICROSOFT 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. (3, 3T+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 and ENG 109N; Co-requisite: CHEM 110L. (3, 3T+0L). Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN CHEM 1114 with lab)

110L  INTRODUCTION TO CHEMISTRY LAB  Co-requisite: CHEM 110. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN CHEM 1114 with lecture)

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, and ENG 111. Co-requisite: CHEM 121L. (3, 3T+0L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN CHEM 1214 with lab)

121L  GENERAL CHEMISTRY I LAB  Co-requisite: CHEM 121. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN CHEM 1214 with lecture)

122  GENERAL CHEMISTRY II  A continuation of CHEM 121. Prerequisite: CHEM 121/L. Co-requisite: CHEM 122L. (3, 3T+0L) Meets New Mexico Lower Division General Education
CHEMISTRY

Core Curriculum Area III Laboratory Science (NMCCN CHEM 1224 with lab)

122L GENERAL CHEMISTRY II LAB Co-requisite: CHEM 122. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN CHEM 1224 with lecture)

210 INTEGRATED ORGANIC & BIOCHEMISTRY Introductory course designed to meet the entrance requirements in chemistry for students in allied-health fields in which some knowledge of organic chemistry and bio-chemistry is needed. Prerequisite: CHEM 110/L or CHEM 121/L; Co-requisite: CHEM 210L. (3, 3T+0L)

210L INTEGRATED ORGANIC & BIOCHEMISTRY LAB 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. Co-requisite: CHEM 210. (1, 0T+1L)

221 QUANTITATIVE & 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)

301 ORGANIC CHEMISTRY I The study of the compounds of carbon and the relationships among molecular structure, chemical reactivity, physical properties, and spectral features, approached by way of the functional group classification of organic compounds. Prerequisite: CHEM 122/L; Co-requisite: CHEM 301L. (Fall) (3, 3T+0L)

301L ORGANIC CHEMISTRY I LAB Introduction to the techniques involved in the preparation, isolation, purification, and characterization of organic compounds. Co-requisite: CHEM 301. (Fall) (1, 0T+1L)

302 ORGANIC CHEMISTRY II The study of the compounds of carbon and the relationships among molecular structure, chemical reactivity, physical properties, and spectral features, approached by way of the functional group classification of organic compounds. Prerequisite: CHEM 301/L; Co-requisite: CHEM 302L (Spring). (3, 3T+0L)

302L ORGANIC CHEMISTRY II LAB Application of more advanced techniques in the preparation, isolation, purification, and characterization of organ compounds, with special emphasis on the use of spectroscopic techniques to elucidate structure. Co-requisite: CHEM 302. (Spring) (1, 0T+1L)

311 PHYSICAL CHEMISTRY You will study the quantitative principles of chemistry, gases, thermodynamics, quantum systems, equilibrium, kinetics, and spectroscopy. Prerequisites: CHEM 122/L, 221/L, MATH 163, and PHYS 122/L; Co-requisite: CHEM 311. (3, 3T+0L)

311L PHYSICAL CHEMISTRY LAB You will engage in laboratory experiences supportive of CHEM 311. Co-requisite: CHEM 311. (1, 0T+1L)

341 SURVEY OF BIOCHEMISTRY Covers the basic principles of biochemistry, including properties of nucleic acids, proteins, carbohydrates, fats, and lipids, while also introducing the chemistry of metabolic pathways, pH regulation, membranes and receptors, cell organization, enzymes kinetics and mechanisms, hormonal regulation, energy transformations,
chemical reactions in living cells, ATP synthesis and use, and biochemical genetics. Prerequisite: CHEM 210/L or 301/L. (Spring) (3, 3T+0L)

421 BIOCHEMISTRY You will study the fundamentals of general and organic chemistry to understand the complex array of structures and chemical processes that occur in living organisms. Prerequisites: CHEM 301/L, 302/L, and 311/L; Co-requisite: CHEM 421L. (3, 3T+0L)

CHICANA/O STUDIES (CHIC)

110 INTRODUCTION TO CHICANA/O STUDIES This is an introductory survey of the field of Chicana/o Studies and the factors that influence Chicana/o culture. Emphasis is placed on the historical development of the Chicana/o people, including Mesoamerican roots, cultural identification, political activism and contemporary roles and influence in United States culture, society and economy. Prerequisite: ENG 109N or permission of the Instructor. (3, 3T+0S)

COMPUTER SCIENCE (CS)

201 MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE You will study the formal mathematical concepts of computer science, including such topics as elementary logic, induction, algorithmic processes, graph theory, and model of computation. (Fall) Prerequisite: EECE 152L. (3, 3T+0S)

COSMETOLOGY (COSM)

Prerequisite for any Cosmetology course is completion of ENG 108N or adequate scores on the Course Placement Evaluation instrument.

110 COSMETOLOGY I This course presents an integrated study and overview of the demands of the profession and the self-discipline needed to succeed in the field of cosmetology. It includes concepts related to professional image, work ethic, professional standards, communication skills, infection control, and industry history. As this course requires both theory and lab, you will perform practical skills on mannequins. The course introduces you to state-required study in theory, facials, hair coloring, chemical texturizing, haircutting, shampooing, hairstyling, manicuring, and pedicuring. Prerequisites: Eng 109, BA 117 (OA 117) (17, 7T+10S)

120 COSMETOLOGY II This course is a continuation of Cosmetology I. You will perform practical skills on mannequins, while continuing your study in theory, facials, hair coloring, chemical texturizing, haircutting, shampooing, hairstyling, manicuring, and pedicuring. Prerequisite: COSM 110. (16, 5T+11S)

210 COSMETOLOGY III This course is a continuation of Cosmetology II. You will perform practical skills on mannequins and clients, while continuing your study in theory, salon business, facials, hair coloring, chemical texturizing, haircutting, shampooing, hairstyling, manicuring and pedicuring. Prerequisite: COSM 120. (15, 3T+12S)

220 COSMETOLOGY IV This course is a continuation of Cosmetology III. You will perform practical skills on clients, while continuing your study in theory, salon business, facials, hair coloring, chemical texturizing, haircutting, shampooing, hairstyling, and shaving. You will study State Board Regulations and prepare for state and national exams. Prerequisite: COSM 120. (15, 3T+12S)

222 COSMETOLOGY DIRECTED STUDY This course is an independent clinical practice of all skills and knowledge learned in related courses. It is designed for students to make-up
missed state-required clock hours. It may be repeated once. **Prerequisite**: COSM 120 or 210 or 220. (6, 0T+6S)

230 **COSMETOLOGY/BARBER REFRESHER** This course is designed for the cosmetology or barber whose license has expired. You will complete a review of state laws and regulations, take mini-board exams (state laws and practical), and review all required cosmetology/barber course work. **Prerequisite**: proof of expired cosmetology/barber license. (Summer only) (10, 8T+2S)

### CRIMINAL JUSTICE (CJ)

Note: Each course in this program has a prerequisite of ENG 109N or an adequate score on the Course Placement Evaluation.

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. (3, 3T+0S)

132 **INTRODUCTION TO CRIMINOLOGY** You will explore 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** You will study the 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. (3, 3T+0S)

211 **INTRODUCTION TO LAW ENFORCEMENT** You will study the 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. (3, 3T+0S)

228 **FORENSIC INVESTIGATIONS** You will study 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** You will study the 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, types and degrees of evidence, and rules governing admissibility. (3, 3T+0S)
233 JUVENILE JUSTICE PROCEDURES You will explore the subsystem in the United States criminal justice system that deals with persons under the age of eighteen that have committed a crime and are tried in juvenile courts. The course addresses philosophy and procedures of juvenile courts as well as juvenile correctional institutions and community programs for juvenile offenders. (3, 3T+0S)

320 THEORIES OF CRIME This course is designed to acquaint students with the major criminological theories within the fields of criminology and criminal justice. The goal of this course is to provide the student with a comprehensive understanding of the criminological research related to major systems of social control, offenders, offending, victimology, juvenile justice, and the social contexts of crime. In particular, this course will examine biological, psychological, and sociological theories that attempt to predict why people commit crimes or what are the consequences of living in family contexts where crime or criminality occur. In addition to the social context related to various theories, and how each theory proposes to explain crime, this course will address how theory and research translate into real-life action or crime policy. (3, 3T+0S)

321 RESEARCH DESIGN This course presents the method of scientific research, using active learning and hands-on experiences, to include an emphasis in theory and in learning the basic skill of research methodology such as experimental design, quasi-experimental design. There will be a module on ethics of research. The goal of this class is for the student to have acquired the skills necessary to conduct research in an independent research project. Offered only in the Fall. Students planning to graduate in May should take this course in the Fall before their projected Spring graduation. Prerequisites: ENG 111, PSY 150. Cross listed with PSY 321. (3, 3T+0S)

400 SPECIAL TOPICS Students may enroll in this course more than once for credit as its content and focus will be on varied specialized fields in the discipline of social justice, such as the history, theory, practice and legal environments, police organization, discretion, and subculture with specific interest in recent developments. Such topics may include terrorism, border patrol, sexual trafficking, globalized crime, etc. Prerequisite: ENG 111. (3, 3T+0S)

410 COMPARATIVE PERSPECTIVES IN CRIME AND JUSTICE Students may enroll in this course twice for credit as its content and focus will be on varied specialized fields in the areas of criminal law, criminal procedures, prosecution, defense, and court procedures and decision-making. Prerequisite: ENG 111. (3, 3T+0S)

421 INDEPENDENT RESEARCH PROJECT Each student will implement, interpret, and report on individually designed research projects. Prerequisite: CJ 321. Offered only in the Spring. Students planning to graduate in May should take this course in the Spring of their projected Spring graduation. Cross-listed with PSY 421. (3, 3T+0S)

450 READINGS IN CRIME AND JUSTICE In this upper division seminar, taught in the conversational method, students will examine in a comparative context the issues of crime, punishment/incarceration, and notions of justice through reading landmark works in crime and justice, including literature, art, history, and philosophy of law from different eras and cultures. Cross-Listed with HSS 450. Prerequisite: ENG 112. (3, 3T+0S)

488 INTERNSHIP/PRACTICUM/SERVICE LEARNING In this course, with the assistance of the advisor for the program, students would undertake an independent study, paid or unpaid internship, volunteer in a criminal justice setting, or obtain service learning credits for the work they are already accomplishing in a law, justice or enforcement setting. Approval/permission by department chair is required. (3-12)
### DANCE (DANC)

Any DANC activity course may be used to satisfy graduation requirements for Health, Physical Education, and Recreation.

All studio courses may be repeated without penalty; however, no course may be counted more than once toward graduation requirements.

110 **FITNESS FOR DANCERS** This course is an aerobic dance class that integrates stretching, conditioning, and various types of dance styles, that may include Zumba®, into an exercise form for optimal performance for dancers. (2, 1T+1S)

126 **MODERN DANCE** Fundamentals of movement and its application to aesthetic communication. (2, 1T+1S)

139 **FOLKLORICO DANCE I** You will study the historical and cultural roots, traditions, and basic techniques and styles of various regional dances: Mexican Folk, Spanish Colonial, and contemporary dances of the Chicano/Latino experience. This course will challenge you to expand your cultural understanding through movement. (2, 1T+1S)

149 **BALLET I** Fundamental work in vocabulary, techniques, and styles of ballet for the adult beginner. (2, 1T+1S)

150 **HIP-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 hip-hop. As you learn the hip-hop dance movement, you will strengthen your ability to choreograph and execute a group performance. (2, 1T+1S)

169 **FLAMENCO DANCE I** Develops the fundamentals of techniques and styles of Flamenco Dancing. (2, 1T+1S)

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)

182 **SALSA DANCE I** A vigorous Latin dance style performed to music blending various Latin rhythms. Students will gain knowledge or basic dance fundamentals and techniques, as well as discuss the history of the salsa dance style. (2, 1T+1S)

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. *Prerequisite*: DANC 150. (2, 1T+1S)

269 **FLAMENCO DANCE II** Continues DANC 169, adding the development of techniques and styles at the intermediate level. *Prerequisite*: DANC 169. (2, 1T+1S)

282 **SALSA DANCE II** A continuation of Salsa Dance I, introducing more advanced techniques of Salsa dance for the intermediate level student. *Prerequisite*: DANC 182 (2,1T+1S)

### DRAFTING (DRFT)

100 **COMPUTER AIDED DRAFTING I** You will develop basic drafting skills using computer-aided drafting software including lettering, scales, line types, line weight, 2- and 3-view orthographic projection, dimensioning, and sectioning. (4, 3T+1S)

### EARLY CHILDHOOD EDUCATION (ECE)

Note: Unless shown otherwise, program has a prefix of ECE.

202 **CHILD GROWTH, DEVELOPMENT AND LEARNING** This basic course in the growth, development, and learning of young children, prenatal through age eight, provides students...
with the theoretical foundation for becoming competent early childhood professionals. The course includes knowledge of how young children grow, develop and learn. Major theories of child development are integrated with all domains of development, including biological-physical, social, cultural, emotional, cognitive and language. The adult’s role in supporting each child’s growth, development and learning is emphasized. (Fall) (3, 3T+0L)

218 HEALTH, SAFETY, AND NUTRITION This course provides information related to standards and practices that promote children’s physical and mental well-being, sound nutritional practices, and maintenance of safe learning environments. It includes information for developing sound health and safety management procedures for indoor and outdoor learning environments for young children. The course examines the many scheduling factors that are important for children’s total development, healthy nutrition, physical activity, and rest. (Summer) (2, 2T+0L)

220 PROFESSIONALISM This course provides a broad-based orientation to the field of early care and education. Early childhood history, philosophy, ethics and advocacy are introduced. Basic principles of early childhood systems are explored. Multiple perspectives on early care and education are introduced. Professional responsibilities such as cultural responsiveness and reflective practice are examined. (2, 2T+0L)

222 INTRODUCTION TO LANGUAGE, LITERACY AND READING This course is designed to prepare early childhood professionals for promoting children’s emergent literacy and reading development. Through a developmental approach, the course addresses ways in which early childhood professionals can foster young children’s oral language development, phonemic awareness, and literacy problem solving skills, fluency, vocabulary, and comprehension. This course provides the foundation for early childhood professionals to become knowledgeable about literacy development in young children. Instructional approaches and theory-based and research-based strategies to support the emergent literacy and reading skills of native speakers and English language learners will be presented. (3, 3T+0L)

225 CURRICULUM DEVELOPMENT–BIRTH THROUGH AGE 4 The beginning curriculum course places play at the center of curriculum in developmentally appropriate early childhood programs. It addresses content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSP is included. Curriculum development is all areas, including literacy, numeracy, the arts, health, science, social skills, and adaptive learning for children, birth through age four, is emphasized. Co-requisite: ECE 238. (3, 3T+0L)

226 FAMILY AND COMMUNITY COLLABORATION This course examines the involvement of families and communities from diverse cultural and linguistic backgrounds in early childhood programs. Ways to establish collaborative relationships with families in early childhood settings is discussed. Families’ goals and desires for their children will be supported through culturally responsive strategies. (3, 3T+0L)

238L LAB–PRACTICUM–BIRTH THROUGH AGE 4 The field-based component of this course will provide experiences that address curriculum content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSPs is included. Curriculum development in all areas, including literacy, numeracy, the arts, health science, social skills, and adaptive learning for children birth through age four, is emphasized. As assigned by the instructor, you will be engaged in specific responsibilities for 75 hours in field and/or lab experiences. You must have a background check on file with the College of Education. Co-requisite: ECE 225 (Fall). (2, 0T+2L)
EARLY CHILDHOOD EDUCATION

254 CURRICULUM DEVELOPMENT AND IMPLEMENTATION AGE 3 THROUGH GRADE 3 The curriculum course focuses on developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills, is emphasized. Information on adapting content areas to meet the needs of children with special needs and development of IEPs is included. Co-requisite: ECE 264. (3,3T+0L)

264L LAB–PRACTICUM-AGE 3 THROUGH GRADE 3 The filed-based component of this course will provide experiences that address developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills is emphasized. Information on adapting content areas to meet the needs of children with special needs and the development of IEPs is included. As assigned by the instructor, you will be engaged in specific responsibilities for 75 hours in field and/or lab experiences. You must have a background check on file with the College of Education. Co-requisite: ECE 254. (2,0T+2L)

285 GUIDING YOUNG CHILDREN This course explores various theories of child guidance and the practical applications of each. It provides developmentally appropriate methods for guiding young children and effective strategies and suggestions for facilitating positive social interactions. Strategies for preventing challenging behaviors through the use of environment, routines and schedule will be presented. Emphasis is placed on helping children become self-responsible, competent, independent, and cooperative learners and including families as part of the guidance approach. (3, 3T+0L)

295 ASSESSMENT OF CHILDREN AND EVALUATION OF PROGRAMS This basic course familiarizes students with a variety of culturally appropriate assessment methods and instruments, including systematic observation of typically and on-typically developing children. The course addresses the development and the use of formative and summative assessment and evaluation instruments to ensure comprehensive quality of the total environment for children, families, and the community. Students will develop skills for evaluating the assessment process and involving other teachers, professionals and families in the process. (3, 3T+0L)

302 RESEARCH IN CHILD GROWTH AND DEVELOPMENT (3) This advanced course in child growth, development, and learning builds upon the foundational material covered in the basic course ECE 202 Child growth, Development, and learning course. An integration of major theories of child development is provided by focusing on contemporary research in all aspects of development, including bio-ecological, social-affective, cognitive-learning and language-cultural. This course considers methodological aspects of research in early childhood development and education with a focus on preparing early childhood professionals to use empirically-based research to inform their teaching of young children and prepares teachers to be researchers in their own classrooms. Prerequisites: Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

303 FAMILY, LANGUAGE AND CULTURE (3) This course analyzes the interrelationships between family, language, and culture as connected to children’s development and learning. In this course, language is understood as a human activity and a higher mental process which builds on the children’s families, community, and cultural background. Language conceived as human activity will be examined through an understanding of dialogue, because dialogue is a way of promoting positive relationships between home, school and community
partnerships. In the course of these collaborative partnerships, a vision for how to promote well-being for young children will emerge and concretize in a culturally and linguistically responsive pedagogy. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

**304 YOUNG CHILDREN WITH DIVERSE ABILITIES (3)** This course builds on the broad knowledge gained in previous coursework. It provides a specific focus on educational policies, programs, practices, and services appropriate for infants, toddlers, preschoolers, and early primary children who exhibit delays and disabilities. The course will provide a means toward a deeper understanding and sensitivity to the needs and feelings of children with diverse abilities and their families. The foundations include research-based decision-making, developmentally and individually appropriate practices, a holistic view of yourn children and their families; cultural sensitivity and competence, and activity-based interventions. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

**475 TEACHING AND LEARNING MATH AND SCIENCE (4)** The focus of this advanced curriculum is on the standards, principles and practices in teaching mathematics and science to young children in preschool through grade 3. An emphasis is placed on developing a content-rich integrated math and science curriculum that focuses on children’s development and interests including appropriate content, process, environment, and materials with special consideration given to problem-solving as the major method of constructing basic concepts. Field Experience Required. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (4, 4T+0L)

**476 TEACHING AND LEARNING READING AND WRITING (3)** The foundation of this course is an understanding of the reading process including the relationship between reading, writing, listening, and speaking, individual needs and abilities in reading instruction, and classroom organization and material selection to support literacy development. Concepts of phonemic awareness, phonics instruction, vocabulary development, fluency, and comprehension are integrated with the use of developmentally appropriate authentic assessment techniques, immersion & multicultural literacy. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

**477 TEACHING AND LEARNING SOCIAL STUDIES, FINE ARTS AND MOVEMENT (3)** This course focuses on the aims, scope, and integration of methods of teaching social studies, the fine arts, and movement across the curriculum. This course emphasizes an integrated approach to teaching the “what and why” of social studies, assessing student learning, planning units lessons and activities, developing effective instructional strategies, and acquiring knowledge of social studies content. **Prerequisites:** Completion of the Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

**478L TEACHING AND LEARNING PRACTICUM (3)** The field practicum is a co-requisite course of teaching and learning reading and writing; teaching and learning math and science, teaching and learning social studies, fine arts, and movement. The field base component will provide experiences that address curriculum content and practice teaching that is relevant for children pre-K through grade three in developmentally and culturally sensitive ways. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)
EARLY CHILDHOOD STUDIES/ ECE-BA (NON-LICENSEURE PATHWAY)

Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. Co-requisites: ECE 475 or ECE 477. (3, 0T+3L)

479L STUDENT TEACHING (12) This course provides teacher candidates the opportunity to prepare specific artifacts that evidence understanding of the teaching profession. The competency based artifacts will include but not be limited to: philosophy of education, classroom management plan, goal setting and reflections, lesson plan, and case study. All NM entry level teacher competencies for the BA in Elementary Education and the Common Core, Conceptual Framework, and the Competencies established by the NM’s ECE Taskforce for BA Candidates in ECE are covered in this class. This is a full-time assignment during the semester, in conjunction with ED 480 (Student Teaching Seminar). Students will be engaged in a minimum of 16 weeks of student teaching. Students will: follow the daily schedule of the assigned grade, assume regular faculty and out-of-classroom duties, and participate in faculty meetings, PTA / PTO meetings, and other appropriate school-community activities. Final placement in a school is decided by the College of Education, contingent upon your being acceptable to the school in which you will do your teaching. Prerequisites: Completion of the Early Childhood Education Core, Passing the Essential Academic Skills Assessment and the New Mexico Assessment of Teacher Competency (Early Childhood)-provide to the College of Education, pre-student teaching application packet and interview. Co-requisite: ECE 480 Seminar. (3, 0T+12L)

480 SEMINAR (3) This course provides guided discussion, reflections, lesson planning, and observations revolving around the student teaching experience. As part of the lab course, student will complete a student teaching experience and student study assignment by collaborating with a mentor, principle, and the school community. This course provides interaction with other students in the ECE field setting. Guided discussions address classroom management, student learning, lesson plans, discipline, school/home communication, and professional development. Additional areas include professional issues, ethics and portfolio preparation. Prerequisites: Completion of the Early Childhood Education Core, Passing the Essential Academic Skills Assessment and the New Mexico Assessment of Teacher Competency (Early Childhood)-provide to the College of Education, pre-student teaching application packet and interview. Co-requisite: ECE 479 Student Teaching. (3, 3T+0L)

EARLY CHILDHOOD STUDIES (ECST) (TRACK)

EARLY CHILDHOOD EDUCATION (ECE-BA/NON-LICENSEURE PATHWAY)

Note: Unless shown otherwise, each course has a prefix of ECST.

202 CHILD GROWTH, DEVELOPMENT AND LEARNING This basic course in the growth, development, and learning of young children, prenatal through age eight, provides students with the theoretical foundation for becoming competent early childhood professionals. The course includes knowledge of how young children grow, develop and learn. Major theories of child development are integrated with all domains of development, including biological-physical, social, cultural, emotional, cognitive and language. The adult’s role in supporting each child’s growth, development and learning is emphasized. (3, 3T+0L)

218 HEALTH, SAFETY, AND NUTRITION This course provides information related to standards and practices that promote children’s physical and mental well-being, sound nutritional practices, and maintenance of safe learning environments. It includes information for developing sound health and safety management procedures for indoor and outdoor learning environments for young children. The course examines the many scheduling factors that are important for children’s total development, healthy nutrition, physical activity, and rest. (2, 2T+0L)
220 PROFESSIONALISM This course provides a broad-based orientation to the field of early care and education. Early childhood history, philosophy, ethics and advocacy are introduced. Basic principles of early childhood systems are explored. Multiple perspectives on early care and education are introduced. Professional responsibilities such as cultural responsiveness and reflective practice are examined. (2, 2T+0L)

222 INTRODUCTION TO LANGUAGE, LITERACY AND READING This course is designed to prepare early childhood professionals for promoting children’s emergent literacy and reading development. Through a developmental approach, the course addresses ways in which early childhood professionals can foster young children’s oral language development, phonemic awareness, and literacy problem solving skills, fluency, vocabulary, and comprehension. This course provides the foundation for early childhood professionals to become knowledgeable about literacy development in young children. Instructional approaches and theory-based and research based strategies to support the emergent literacy and reading skills of native speakers and English language learners will be presented. Prerequisite: ECE 202. (3, 3T+0L)

225 CURRICULUM DEVELOPMENT–BIRTH THROUGH AGE 4 The beginning curriculum course places play at the center of curriculum in developmentally appropriate early childhood programs. It addresses content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSP is included. Curriculum development is all areas, including literacy, numeracy, the arts, health, science, social skills, and adaptive learning for children, birth through age four, is emphasized. Prerequisite: ECE 202 Co-requisite: ECE 238. (3, 3T+0L)

226 FAMILY AND COMMUNITY COLLABORATION This course examines the involvement of families and communities from diverse cultural and linguistic backgrounds in early childhood programs. Ways to establish collaborative relationships with families in early childhood settings is discussed. Families' goals and desires for their children will be supported through culturally responsive strategies. Prerequisite: ECE 202. (3, 3T+0L)

238L LAB–PRACTICUM–BIRTH THROUGH AGE 4 The field-based component of this course will provide experiences that address curriculum content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSPs is included. Curriculum development in all areas, including literacy, numeracy, the arts, health science, social skills, and adaptive learning for children birth through age four, is emphasized. As assigned by the instructor, you will be engaged in specific responsibilities for 75 hours in field and/or lab experiences. You must have a background check on file with the College of Education. Co-requisite: ECE 225. (2, 0T+2L)

254 CURRICULUM DEVELOPMENT AND IMPLEMENTATION AGE 3 THROUGH GRADE 3 The curriculum course focuses on developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills, is emphasized. Information on adapting content areas to meet the needs of children with special needs and development of IEPs is included. Prerequisite: ECE 202. Co-requisite: ECE 264. (3,3T+0L)

264L LAB–PRACTICUM–AGE 3 THROUGH GRADE 3 The filed-based component of this course will provide experiences that address developmentally appropriate curriculum con-
EARLY CHILDHOOD STUDIES/ ECE-BA (NON-LICENSEURE PATHWAY)

tent in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health and emotional wellness, science, motor and social skills is emphasized. Information on adapting content areas to meet the needs of children with special needs and the development of IEPs is included. As assigned by the instructor, you will be engaged in specific responsibilities for 75 hours in field and/or lab experiences. You must have a background check on file with the College of Education. **Co-requisite:** ECE 254. (2,0T+2L)

285 GUIDING YOUNG CHILDREN This course explores various theories of child guidance and the practical applications of each. It provides developmentally appropriate methods for guiding young children and effective strategies and suggestions for facilitating positive social interactions. Strategies for preventing challenging behaviors through the use of environment, routines and schedule will be presented. Emphasis is placed on helping children become self-responsible, competent, independent, and cooperative learners and including families as part of the guidance approach. **Prerequisite:** ECE 202. (3, 3T+0L)

295 ASSESSMENT OF CHILDREN AND EVALUATION OF PROGRAMS This basic course familiarizes students with a variety of culturally appropriate assessment methods and instruments, including systematic observation of typically and on-typically developing children. The course addresses the development and the use of formative and summative assessment and evaluation instruments to ensure comprehensive quality of the total environment for children, families, and the community. Students will develop skills for evaluating the assessment process and involving other teachers, professionals and families in the process. **Prerequisite:** ECE 202. (3, 3T+0L).

302 RESEARCH IN CHILD GROWTH AND DEVELOPMENT (3) This advanced course in child growth, development, and learning builds upon the foundational material covered in the basic course ECE 202 Child growth, Development, and learning course. An integration of major theories of child development is provided by focusing on contemporary research in all aspects of development, including bio-ecological, social-affective, cognitive-learning and language-cultural. This course considers methodological aspects of research in early childhood development and education with a focus on preparing early childhood professionals to use empirically-based research to inform their teaching of young children and prepares teachers to be researchers in their own classrooms. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

303 FAMILY, LANGUAGE AND CULTURE (3) This course analyzes the interrelationships between family, language, and culture as connected to children’s development and learning. In this course, language is understood as a human activity and a higher mental process which builds on the children’s families, community, and cultural background, Language conceived as human activity will be examined through an understanding of dialogue, because dialogue is a way of promoting positive relationships between home, school and community partnerships. In the course of these collaborative partnerships, a vision for how to promote well-being for young children will emerge and concretize in a culturally and linguistically responsive pedagogy. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the BA in Early Childhood Education Program. (3, 3T+0L)

304 YOUNG CHILDREN WITH DIVERSE ABILITIES (3) This course builds on the broad knowledge gained in previous coursework. It provides a specific focus on educational policies, programs, practices, and services appropriate for infants, toddlers, preschoolers, and early primary children who exhibit delays and disabilities. The course will provide a means toward a deeper understanding and sensitivity to the needs and feelings of children with
diverse abilities and their families. The foundations include research-based decision-making, developmentally and individually appropriate practices, a holistic view of young children and their families; cultural sensitivity and competence, and activity-based interventions. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

**475 Teaching And Learning Math And Science (4)** The focus of this advanced curriculum is on the standards, principles and practices in teaching mathematics and science to young children in preschool through grade 3. An emphasis is placed on developing a content-rich integrated math and science curriculum that focuses on children’s development and interests including appropriate content, process, environment, and materials with special consideration given to problem-solving as the major method of constructing basic concepts. Field Experience Required. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (4, 4T+0L)

**476 Teaching And Learning Reading And Writing (3)** The foundation of this course is an understanding of the reading process including the relationship between reading, writing, listening, and speaking, individual needs and abilities in reading instruction, and classroom organization and material selection to support literacy development. Concepts of phonemic awareness, phonics instruction, vocabulary development, fluency, and comprehension are integrated with the use of developmentally appropriate authentic assessment techniques, immersion & multicultural literacy. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

**477 Teaching And Learning Social Studies, Fine Arts And Movement (3)** This course focuses on the aims, scope, and integration of methods of teaching social studies, the fine arts, and movement across the curriculum. This course emphasizes an integrated approach to teaching the “what and why” of social studies, assessing student learning, planning units lessons and activities, developing effective instructional strategies, and acquiring knowledge of social studies content. **Prerequisites:** Completion of the Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. (3, 3T+0L)

**478L Teaching And Learning Practicum (3)** The field practicum is a co-requisite course of teaching and learning reading and writing; teaching and learning math and science, teaching and learning social studies, fine arts, and movement. The field base component will provide experiences that address curriculum content and practice teaching that is relevant for children pre-K through grade three in developmentally and culturally sensitive ways. **Prerequisites:** Early Childhood Education Core, Passing the Essential Academic Skills Assessment – provide to the College of Education, Admission to the B.A. in Early Childhood Education Program. **Co-requisites:** ECE 475 or ECE 477. (3, 0T+3L)

**479L Student Teaching (12)** This course provides teacher candidates the opportunity to prepare specific artifacts that evidence understanding of the teaching profession. The competency based artifacts will include but not be limited to: philosophy of education, classroom management plan, goal setting and reflections, lesson plan, and case study. All NM entry level teacher competencies for the BA in Elementary Education and the Common Core, Conceptual Framework, and the Competencies established by the NM’s ECE Taskforce for BA Candidates in ECE are covered in this class. This is a full-time assignment during the semester, in conjunction with ED 480 (Student Teaching Seminar). Students will be engaged in a minimum of 16 weeks of student teaching. Students will: follow the daily schedule of
the assigned grade, assume regular faculty and out-of-classroom duties, and participate in faculty meetings, PTA / PTO meetings, and other appropriate school-community activities. Final placement in a school is decided by the College of Education, contingent upon your being acceptable to the school in which you will do your teaching. Prerequisites: Completion of the Early Childhood Education Core, Passing the Essential Academic Skills Assessment and the New Mexico Assessment of Teacher Competency (Early Childhood)-provide to the College of Education, pre-student teaching application packet and interview. Co-requisite: ECE 480 Seminar. (3, 0T+12L)

480 SEMINAR (3) This course provides guided discussion, reflections, lesson planning, and observations revolving around the student teaching experience. As part of the lab course, student will complete a student teaching experience and student study assignment by collaborating with a mentor, principle, and the school community. This course provides interaction with other students in the ECE field setting. Guided discussions address classroom management, student learning, lesson plans, discipline, school/home communication, and professional development. Additional areas include professional issues, ethics and portfolio preparation. Prerequisites: Completion of the Early Childhood Education Core, Passing the Essential Academic Skills Assessment and the New Mexico Assessment of Teacher Competency (Early Childhood)-provide to the College of Education, pre-student teaching application packet and interview. Co-requisite: ECE 479 Student Teaching. (3, 3T+0L)

ECONOMICS (ECON)

200 MACROECONOMICS Introduction to the fundamental principles underlying the operation of a market economy on a global and national 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. Prerequisite: ENG 109N. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area IV Social and Behavioral Sciences (NMCCN ECON 2113)

201 MICROECONOMICS Focuses on the problems specific to a household, firm, or industry, rather than those of a national or global scale. Topics of concern are household and firm behavior, demand and supply, market structures, labor, and capital. This course concentrates on the economics of the consumer, the business firm, the distribution of income, and the efficient allocation of resources. Prerequisite: ENG 109N. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area IV Social and Behavioral Sciences (NMCCN ECON 2123)

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. Further, you will be expected to begin to articulate your philosophy of education. Prerequisite: ENG 111; Co-requisite: ED 213. (3, 3T+0L)

213L LAB I You will do initial observations of classroom environments and determinations of what classroom teacher do. You will participate in seminars and observe 37.5 hours of classroom instruction in the field. You must have a background check on file with the College of Education. Prerequisite: ENG 111, or permission of instructor; Co-requisite: ED 201. (1, 0T+1L)

215L LAB II This course is designed to supplement ED 226. As assigned by the instructor, you will be engaged in specific responsibilities for 37.5 hours in the field and/or lab experi-
EDUCATION

ences. You must have a favorable background check on file with the College of Education. Co-requisite: ED 226 (1,0t+1L)

216  SCIENCE AND MATH  This course prepares teacher credential candidates to use best practices in science and math teaching for K-8 students. Students will 1) Understand the nature and purpose of teaching constructivist, inquiry-based science and math in the elementary school curriculum, especially FOSS and STC lessons used in northern New Mexico School Districts. 2) Make connections between the teaching of science and math in the classroom and learn why science and math should matter to people in northern New Mexico. 3) Explore best methods in teaching science and math to children of diverse ethnic, cultural and linguistic backgrounds. 4) Become knowledgeable of the current National Science Education Standards and Benchmarks (Next Generation Science Standards). Prerequisites: ED 201 and Math 150. (3, 3T+0L)

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. Prerequisites: ENG 111. (3, 3T+0L)

222  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. You will participate in seminars and observe 10 hours of classroom instruction in the field. Prerequisite: ED 201 and MATH 150. (3, 3T+0L)

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 and teacher classroom management. You will research and be presented with learning theories and research that result in the creation of learning environments which are safe emotionally, physically and psychologically. You will understand the principals involved in motivating students and overcoming resistance to learning. Prerequisite: ED 201. Co-requisite: ED 215. (2, 2T+0L)

410  TEACHING AND DIAGNOSIS OF READING  This course provides you with a conceptual framework for understanding the growth of language development and literacy throughout the elementary years. You will be introduced to instructional strategies to build reading, writing, and speaking abilities in your students. The course will address literacy differences through a standards approach to instruction, focusing on cognitive, affective, social, and cultural factors that created differences in literacy abilities. Common Core State Standards are incorporated into this course. You will be required to do field work. Prerequisite: Passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

411L  LAB III  Designed to supplement the Teaching and Diagnosis of Reading Course (ED 410). As assigned by the instructor, you will be engaged in specific responsibilities for 37.5 hours in the field and/or lab experiences. Co-requisite: ED 410. (1, 0T+1L)

450  PEDAGOGY AND LEARNING (WIC)  This course will help the student to develop a solid theoretical foundation in education and a critical view of various educational practices and theories. Students will review aspects related to the social, emotional, physical, and cognitive development of students and will understand the role of regular education teachers in teaching students with disabilities in the regular classroom. Students will learn about the
different disabilities covered under IDEA and will explore brain-based, multiple intelligences, multi-sensory instruction and different learning styles. **Prerequisites:** ED 220 and passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

**460 TEACHING READING AND WRITING (ELEM)** This course provides you with an overview of literacy and language development, and focuses on the development and implementation of research-based reading instructional approaches at the elementary level. This course will emphasize the integration of Common Core State Standards. **Prerequisite:** Passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

**475 CURRICULUM METHODS AND MATERIALS FOR SPECIAL EDUCATION** You will focus on teacher knowledge and application skills in teaching curricula aligned with Common Core State Standards. 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. **Prerequisite:** Passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

**479L STUDENT TEACHING** This is a full-time assignment during the semester, in conjunction with ED 480 (Student Teaching Seminar). You will be engaged in a minimum of 16 weeks of student teaching. 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 College of Education, contingent upon your being acceptable to the school in which you will do your teaching. You must have already passed and provided documentation to the College of Education regarding the New Mexico Teacher Assessments required by the New Mexico Public Education Department (Essential Academic Skills — Subtests I< II< and III; Assessment of Professional Knowledge: Elementary Education – Subtests I and II; and Essential Components of Elementary Reading Instruction). **Prerequisite:** Student Teaching Interview. **Co-requisite:** ED 480. (12, 0T+12L)

**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. **Prerequisite:** Student Teaching Interview. **Co-requisite:** ED 479. (1, 1T+0L)

**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 students’ outcomes. You will participate in seminars and observe 10 hours of classroom instruction in the field. **Prerequisite:** Passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

**EDUCATION – BILINGUAL EDUCATION (EDBE)**

Prerequisite for these programs is at least 6 credit hours in Spanish as a Heritage Language, or permission from the department.

**305 SPANISH LITERACY FOR BILINGUAL EDUCATION** You will study the practical implementation of Spanish literacy skills, including reading, writing, listening, and speaking. This course will be taught in Spanish. **Prerequisites:** SPAN 101 and 102. (3, 3T+0L)
EDUCATION – TEACHING ENGLISH AS A SECOND LANGUAGE – TESOL

306 SPANISH FOR THE BILINGUAL CLASSROOM This course will present the Spanish language as it is applied to school community settings in addition to the classroom setting. It will include both vernacular and formal language. Spanish will be the language of instruction inclusive of student presentations and participation. Prerequisites: SPAN 101 and 102. (3, 3T+0L)

403 FOUNDATIONS OF BILINGUAL/ESL MULTICULTURAL EDUCATION This course focuses on the historical, legal, philosophical, theoretical paradigms of bilingual/ESL multicultural education. An emphasis on developing a deeper understanding of the culturally diverse student, their families and communities as it relates to learning is explored. Prerequisites: SPAN 101 and 102. (Cross-listed with EDTE 403). (3, 3T+0L)

406 METHODS AND MATERIALS OF TEACHING BILINGUAL ESL This course focuses on the understanding of teaching methodologies in the bilingual/ESL classroom. A variety of instructional strategies, techniques, and alternative assessments will be explored with an emphasis on critical reflective practice. Prerequisites: SPAN 101 and 102. (Cross-listed with EDTE 406) (3, 3T+0L)

412 FORMAL/INFORMAL ASSESSMENT This course will focus on the formal and informal assessment measures with an emphasis on English language development as it relates to reading and writing. You will develop a foundation of assessment theories, practices, and strategies with particular attention on how to link assessment to instructional activities. You will gain practical experience in designing, administering and interpreting assessments, with special attention to assessment instruments used in New Mexico. Prerequisites: SPAN 101 and 102. (Cross-listed with EDTE 412). (3, 3T+0L)

416 SECOND LANGUAGE ACQUISITION This course explores theories of both first and second language acquisition. It will also examine the relationship between language use and language development in the home, school and community. An emphasis will be placed on developing an understanding of language acquisition and bilingualism in a classroom environment. Prerequisites: SPAN 101 and 102. (Cross-listed with EDTE 416) (3, 3T+0L)

481 LINGUISTICS & PHONETICS FOR THE BILINGUAL TEACHER This course will apply linguistics and phonetics to the knowledge and use of Spanish in order to provide future teachers the ability to help students develop their language. It will cover the Spanish sound system, and include phonology, morphlogy, syntax, and dialectology of the Spanish language. Prerequisites: SPAN 101 and 102. (3, 3T+0L)

482 SPANISH LANGUAGE & FOLKLORE OF NEW MEXICO FOR THE BILINGUAL TEACHER This course will cover aspects of New Mexican language and folklore: linguistic structure, regional and social variation, bilingualism, maintenance and shift, English influence, etc. It will also cover folkways of the Spanish-speaking people of New Mexico. Prerequisites: SPAN 101 and 102. (3, 3T+L)

EDUCATION – TEACHING ENGLISH AS A SECOND LANGUAGE/TESOL (EDTE)

Prerequisite for these programs is at least 6 credit hours in a language other than English, or permission from the department.

403 FOUNDATIONS OF BILINGUAL/ESL MULTICULTURAL EDUCATION This course focuses on the historical, legal, philosophical, theoretical paradigms of bilingual/ESL multicultural education. An emphasis on developing a deeper understanding of the culturally diverse student, their families and communities as it relates to learning is explored. (Cross-listed with EDBE 403). (3, 3T+0L)
EDUCATION – ALTERNATIVE LICENSURE

406 METHODS AND MATERIALS OF TEACHING BILINGUAL ESL This course focuses on the understanding of teaching methodologies in the bilingual/ESL classroom. A variety of instructional strategies, techniques, and alternative assessments will be explored with an emphasis on critical reflective practice. (Cross-listed with EDBE 406) (3, 3T+0L)

408 APPROACHES TO TEACHING ENGLISH LITERACY SKILLS This course focuses on effective writing instruction in the bilingual and TESOL classroom. The relationship between listening, speaking, reading and writing are explored to enhance the identification and development of effective instruction strategies and appropriate curriculum. Contextual factors that impact writing instruction across the content areas, such as the home environment, school environment, culture cognition, and assessment are examined. (3, 3T+0L)

412 FORMAL/INFORMAL ASSESSMENT This course will focus on the formal and informal assessment measures with an emphasis on English language development as it relates to reading and writing. You will develop a foundation of assessment theories, practices, and strategies with particular attention on how to link assessment to instructional activities. You will gain practical experience in designing, administering and interpreting assessments, with special attention to assessment instruments used in New Mexico. (Cross-listed with EDBE 412). (3, 3T+0L)

414 INTRODUCTION TO LINGUISTICS You will be exposed to a broad overview of the field of linguistics as it pertains to the knowledge of language and language development. There is an emphasis on the study of phonetics, phonology, morphology, syntax, semantics and pragmatics. This course is oriented primarily to the needs of present and prospective teachers. (3, 3T+0L)

416 SECOND LANGUAGE ACQUISITION This course explores theories of both first and second language acquisition. It will also examine the relationship between language use and language development in the home, school and community. An emphasis will be placed on developing an understanding of language acquisition and bilingualism in a classroom environment. (Cross-listed with EDBE 416) (3, 3T+0L)

EDUCATION – ALTERNATIVE LICENSURE PROGRAM (ED)

Those enrolled in this program must achieve a minimum grade of ‘B” for each of the followings:

401 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. Further, you will be expected to begin to articulate your philosophy of education. You will participate in seminars and observe 10 hours of classroom instruction in the field. Co-requisite: ED 452. (3, 3T+0L)

412 TEACHING AND DIAGNOSIS OF READING This course provides a conceptual framework for understanding the growth of language development and literacy throughout the elementary years. You will be introduced to instructional strategies to build reading, writing, and speaking abilities in your students. The course will address literacy differences through a standards based approach to instruction, focusing on cognitive, affective, social and cultural factors that created differences in literacy abilities. Common Core State Standards are incorporated into this course. You will participate in seminars and observe 10 hours of classroom instruction in the field. Prerequisite: NES, Essential Academic Skills (I, II, III) and ED 401. (3, 3T+0L)
**EDUCATION – ALTERNATIVE Licensure**

**452 PEDAGOGY AND LEARNING** This course will help the student to develop a solid theoretical foundation in education and a critical view of various educational practices and theories. Students will review aspects related to the social, emotional, physical and cognitive development of students and will understand the role of regular education teachers in teaching students with disabilities in the regular classroom. Students will learn about the different disabilities covered under IDEA and will explore brain-based, multiple intelligences, multi-sensory instruction and different learning styles. **Co-requisite:** ED 401. (Cross listed with ED 450) (3, 3T+0L)

**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. You will participate in seminars and observe 10 hours of classroom instruction in the field. **Prerequisite:** ED 401 and passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

**464 READING AND TEACHING WRITING (ELEMENTARY)** The course provides an overview of literacy and language development, and focuses on the development and implementation of research-based reading instructional approaches. This course emphasizes the integration of Common Core State Standards. **Prerequisite:** ED 401 and passing NES, Essential Academic Skills (I, II, III). (3, 3T+0L)

**474 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. You will participate in seminars and observe 10 hours of classroom instruction in the field. **Prerequisite:** ED 401 and passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

**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 of Common Core State Standards. Components include assessment methods, lesson plans, and curriculum planning and classroom management. You will participate in seminars and observe 10 hours of classroom instruction in the field. **Prerequisite:** ED 401Passing NES Essential Academic Skills (I, II, III). (2, 2T+0L)

**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, will develop valid evaluation tools to measure student outcomes, and will participate in seminars and observe 10 hours of classroom instruction in the field. Cross-listed with ED 495 in BA in Elementary Education program. **Prerequisite:** ED 401 and passing NES Essential Academic Skills (I, II, III). (3, 3T+0L)

**496 SUPERVISED FIELD EXPERIENCE (ELEM/SEC)** This course provides an interaction with other students in the elementary/secondary 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. **Prerequisite:** Passing NES, Essential Academic Skills (I, II, III); **Co-requisite:** Passing remaining NES Assessments required by the New...
ELECTRICAL TECHNOLOGY (ELEC)

110  INTRO TO SOLAR ELECTRICITY  You will study the basics of electrical wiring technology found in photovoltaic systems, including direct current (DC) and alternating current (AC) circuits. You will review basic electrical theory and the current National Electrical Code (NEC) requirements. You will be introduced to the components found in grid-tied systems and stand-alone systems and given the opportunity to compare these systems. (1, 1T+0S)

110L INTRO TO SOLAR ELECTRICITY LAB  In this course, you will have laboratory experiences which apply to the theoretical material covered in ELEC 110. You will work with AC and DC components, methods, tools, and materials needed to connect photovoltaic systems from collector module wiring to panels to batteries to inverters to grid-tie equipment. Safety in the electrical environment is stressed. (2, 0T+2S)

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)

190  SOLAR AND WIND SYSTEMS IN THE ELECTRICAL CODE  Starting with a review of DC electrical circuits, you will cover Sections 690 and 695 of the National Electrical Code, which deals with photovoltaic and wind-generated electrical systems. You will discuss conductor sizes, circuits, outlets, disconnects and over-current protection between the energy source and the service entrance. Recommended Co-requisites: RE 207 or 208. (2, 1T+1S)
ELECTRICAL, ELECTRONIC, AND COMPUTER ENGINEERING (EECE)

105L MICROCOMPUTER SYSTEMS In this introductory course on microcomputers, you will study the characteristics and nature of modern-day computer systems, including hardware and software components. Among the principal software components, the course describes the roll of operating systems, and then focuses on Linux. The course provides the background knowledge and skills in Linux you will require for any type of engineering, technology or computer science related career. The course also includes an introduction to scripting languages and their benefits to automate operating systems tasks. (Fall, Spring) (3, 2T+1L)

111 INTRODUCTION TO WEB PROGRAMMING In this course, you will be introduced to web design and to the standards and languages for the Web. You will gain hands-on experience on design issues specific to the Web, learn webpage layout, and effective navigation. You will learn the process of webpage publishing and develop an understanding of the technologies that support the Web. No Prerequisite. (3, 2T, +1S)

132 COMPUTER NETWORKS I Students will learn both practical and conceptual skills that build the foundation of networking. They will examine the OSI and TCP/IP layers in detail to understand their functions and services. Students will become familiar with the various network devices, network addressing schemes, and types of media used to carry data across the network. They will gain experience designing and deploying inter-networks of WAN and LANS using static routing. (3, 3T+0L)

152L COMPUTER PROGRAMMING This is an introductory programming class. No programming experience is assumed for students taking this course. Topics include problem solving, program design, implementation, testing and basic object-oriented concepts including classes, object, and encapsulation. (Fall and Spring) (3, 2T+1L)

203L CIRCUIT ANALYSIS I You will study basic electrical elements and sources; energy and power; Ohm’s and Kirchhoff’s Laws; resistive networks, node and loop analysis; network theorems; first and second order circuits; sinusoidal sources and complex representations; impedance, phasors’ complex power; and three-phase circuits. Prerequisite: PHYS 216/L. (Fall) (3, 2T+1L)

230 INTRODUCTION TO ROUTING AND SWITCHING This course describes the architecture, components, and operations of routers and switches. Students learn how to design Local Area Networks (LANs), Wide Area Networks (WANs), and inter-networks using modern intermediate devices, including Layer 2 and multi-layer switches and routers. By the end of this course, students will be able to design and deploy networks and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. Prerequisite: EECE 132. (3, 3T+0L)

231L INTERMEDIATE PROGRAMMING This class teaches how to write medium complex computer programs that make use of structured decomposition, basic data structures, strings, recursion, files and dynamic memory. Knowledge of basic programming concepts is assumed. Prerequisite: EECE 152L (3, 2T+1L)

238L COMPUTER LOGIC DESIGN You will study binary number systems, Boolean logic; combinatorial, sequential, and register transfer logic; VHDL; arithmetic/logic unit; memories, computer organization, input-output, and microprocessors. Prerequisites: ENGR 120 or MATH 150 and EECE 152L. (Cross-listed with CS 238L) (Spring) (4, 3T+1L)

329 HUMAN COMPUTER INTERACTION This course covers the development of IT products considering the human-computer interaction, including human factors, performance analysis, usability studies, environment, and training. The course also covers the development of effective interfaces and accessibility. Prerequisite: EECE 231L. (3, 3T+0L)
330 COMPUTER NETWORKS II This course focuses on learning network design and operation from a layer 3 perspective, including both intra-domain static routing and dynamic routing protocols. Students will describe how routers discover remote networks and determine the best path to them. They will design addressing schemes and deploy WANs, LANs and inter-networks using static routing as well as RIPv1, RIPv2, EIGRP, and OSPF protocols. Based on these protocols, students will identify the characteristics of distance vector and link state routing protocols. They will learn fundamental tools for routing scalability, and will design hierarchical routing schemes with OSPF. Students will describe the concept of traffic engineering and apply multi-path schemes. Prerequisite: EECE 230. (3, 2T+1S)

331 DATA STRUCTURES AND ALGORITHMS You will be introduced to data structures and algorithms used in software programs; mathematics needed to analyze their time and space and complexity. Topics include asymptotic notation, recurrence algorithms and their sorting, hash tables, basic priority queues, search trees, and basic graph representation and search. Prerequisites: EECE 231 and EECE 337. (3, 3T+0L)

342 WIRELESS AND MOBILE COMPUTING This course focuses on principles and applications of wireless networks and Local Area Networks (LANs) including switches, Virtual LANs (VLANs) and extended switched networks. The course also provides an overview of mobile devices and an introduction to network security including message integrity, authentication and operational security in switched and wireless networks. Prerequisite: EECE 132 (3, 2T+1S)

351 ADVANCED PROGRAMMING This is an advanced programming class that exposes the student to computer science and software engineering concepts such as Object-oriented Design, data structures, graphical user interfaces and thread. The students will use an object-oriented language to learn about these concepts. Prerequisite: EECE 231. (Spring) 3, 2T+1L)

355 WEB ENGINEERING This course covers the design, implementation and testing of web-based applications including related software, database, interfaces and digital media. It also covers social, ethical and security issues arising from the web and social software. Prerequisites: IT 250 and EECE 231L. (3, 2T+1S)

380 INTRODUCTION TO CYBERSECURITY This course provides an introduction to the fundamentals of cybersecurity, including confidentiality, integrity, authentication, non-repudiation, and availability. Modern malware threats, including viruses, Trojans, worms, and botnets and a general understanding of how to protect networks and systems using state-of-the-art security appliances, including next-generation firewalls, threat prevention, logging and reporting functions, VPNs, and others are covered. Course credit hours: 3T+0L. Prerequisites: EECE 230

435 SOFTWARE ENGINEERING As junior- and senior-level science and engineering students, you will study modeling the process and life cycle, planning and managing the software project, designing, delivering, and maintaining the software systems. Prerequisite: EECE 231 and IT 250. (Fall) (3, 3T+0L)

440 ADVANCED COMPUTER NETWORKS Students will research, design, and implement a variety of WANs considering different technologies and protocols such as Frame Relay and PPP. Students will also implement multimedia applications over WANs, and develop knowledge and expertise in network security and management. Prerequisites: EECE 330 and EECE 342, (Fall, Spring, Summer) (3,2T+1S)

447 ROUTING AND SWITCHING You will learn how to connect computers in a network and how to connect the separate networks together to form an inter-network, through examination and implementation of bridging, switching concepts, and routing protocols and algorithms. Prerequisite: EECE 330. (3, 2T+1S)
453 ELECTRIC ENERGY STORAGE DEVICES  Student will study electrochemical, electrostatic, and electromechanical processes for storage of electrical energy; design of storage systems; storage efficiency measures. Prerequisite: EET 220/L. (3, 3T+0L)

461 SOFTWARE AND DESIGN  This course introduces software design and software configuration management (SCM). Design concepts, design strategies, architectural design and human computer interface design etc., will be covered. SCM principles, advanced topics and implementation procedures in one accessible resource will also be covered. It maps the integration of SCM activities within the software development life cycle. It explores the latest advances in SCM tools, SCM organization, operation and maintenance of SCM systems. (Fall) Prerequisite: EECE 435 (3T+0L)

472 PHOTOVOLTAIC DEVICES  Student will study Photovoltaic effect in semiconductors; electrical and mechanical design of photovoltaic cells, panels, and systems; use of lenses and mirrors in PV systems; manufacturing methods of PV devices. Prerequisite: EET 200/L. (3, 3T+0L)

547 ROUTING AND SWITCHING  Computer networking principles and operational structures of bridges, routers, routers. Packet switching techniques, routing protocols and packet processing algorithms. EECE 547 has higher standards and different deliverables than EECE 447. (3, 2T+1S)

ELECTRICAL ENGINEERING TECHNOLOGY (EET)

200 ELECTRICAL SYSTEMS I  Study basic DC electrical elements and sources; resistor networks, network theorems, capacitance, inductance, RC and RL circuits. Prerequisite: ENGR 217L. Co-requisite: 200L (1.5, 1.5T+0L)

200L ELECTRICAL SYSTEMS I LAB  Students will perform hands-on experiments related to DC circuits and digital circuits. This will include voltage, current, resistance measurement. First order and second order circuits will be analyzed as well as Thevenin’s equivalence. Prerequisite: ENGR 217L. Co-requisite: EET 200. (0.5, 0T+0.5L)

201 DIGITAL SYSTEMS  Students will be introduced to digital circuits and will learn Boolean logic, logic gates, combinational and sequential circuits. Prerequisite: ENGR 121/L. Co-requisite: EET 201L. (1.5, 1.5T+0L)

201L DIGITAL SYSTEMS LAB  Students will learn to implement and analyze digital circuits using VDHL to develop combinatorial and sequential circuits. Prerequisite: ENGR 121/L. Co-requisite: EET 201. (0.5, 0T+0.5L)

300 ELECTRICAL SYSTEMS II  Study basic AC electrical elements; sinusoidal sources and complex representations; impedance, phasor, analysis, complex power, three-phase circuits, and transformers. Students also will be introduced to electronic devices: diode, transistor, thyristors, rectifiers, OPAMPs and its applications. Prerequisites: EET 200/L. Co-requisite: EET 300L. (3, 3T+0L)

300L ELECTRICAL SYSTEMS II LAB  Students will perform hands-on experiments related to AC circuits and electronic circuits. This will include sine wave and power factor measurement. Implementation of three-phase circuits and transformers. The labs will also expose the student to electronics including rectifies, amplifiers, and applications of thyristors, TRIACA and OPAMPS. Prerequisites: EET 200/L, Co-requisite: EET 300. (1 0T+1L)

400 CONTROL SYSTEMS AND INSTRUMENTATION  The course covers control systems terminology, analog and digital feedback control system, PID and relay controls, data-acquisition system, stability, actuators and sensors. Prerequisites: EET 300/L. Co-requisite: EET 400L. (3, 3T+0L)
400L CONTROL SYSTEMS AND INSTRUMENTATION LAB The course covers experiments, design and implementation of control systems. Control systems will be developed in discrete time using digital PID and also for discrete events using PLCs. Prerequisites: EET 300/L Co-requisite: EET 400. (1, 0T+1L)

ELECTROMECHANICAL ENGINEERING TECHNOLOGY (EMET)

400 ADVANCED ELECTRO-MECHANICAL DESIGN This course is integration of mechanical disciplines, controls, electronics and computers in the design of high-performance machines, devices or processes. Hands-on lab exercises and design projects will provide extensive coverage of mechanical components and assembly, sensors and actuators, electrical drive. Prerequisites: EET 200/L, DRFT 100 and MET 302. (3, 3T+0L)

402 ROBOTICS An introduction to the kinematics, dynamics and control of robot manipulators. This course will cover basics of a robot, forward and inverse kinematics, the manipulator Jacobian, force relations, dynamics and control-position and force control. Trajectory generation, actuators, sensors, and applications of robotics. Prerequisites: EET 400/L (3, 2T+1L)

454 SOLAR THERMAL AND ELECTRIC ENERGY STORAGE The focus of this course is on learning the fundamentals of energy storage using either solar thermal or electric energy. Students will study thermal processes of solar energy conversion in solar engineering through topics such as solar radiation, solar harnessing equipment and system, solar materials and properties, solar applications, and solar system design. Students will also study electrochemical, electrostatic, and electromechanical processes for storage of electrical energy: design of storage systems; storage efficiency measures. Prerequisite: ENGR 217/L (4, 4T+0L)

490 CAPSTONE (WIC) In this project course, students will exercise their knowledge of Electromechanical Engineering Technology, design and associated course work. EMET 490 is a Writing, Intensive Course (WIC). (3, 1T+2L). Passing grade is C.

ENGINEERING (ENGR)

101 AN INTRODUCTION TO COMPUTATIONAL SCIENCE AND MODELING This course will use the NetLogo Environment to explore the nature and methods of computational thinking prior to composing and studying computational models of interacting agents in problems drawn from the physical and social sciences. Prerequisites: none. Co-requisites: ENGR 101L. (3, 3T+0L)

101L AN INTRODUCTION TO COMPUTATIONAL SCIENCE AND MODELING LAB This course will use the NetLogo Environment to explore the nature and methods of computational thinking prior to composing and studying computational models of interacting agents in problems drawn from the physical and social sciences. Netlogo Environment will be used to study computational models (interacting with codes) for problems representing real world scenarios. Prerequisites: none. Co-requisites: ENGR 101. (1,0T+1L)

110L INTRODUCTION TO ENGINEERING This course is intended to provide an introduction to the engineering discipline. The course also provides a learning community experience for the mechanical engineering and information technology engineering students. Topics discussed include: departmental policies, code of ethics in engineering, history of engineering, introduction to writing technical reports, time management, introduction to concepts and techniques in computer programming. Students are exposed to intensive hands-on experiences that are assessed through a final project. Fall & Spring (2, 1T+1S)

Strikethrough indicates courses that are no longer offered.
121L  INTRODUCTION TO MATH FOR ENGINEERING APPLICATIONS I  Students will learn basic concepts of straight lines in engineering, Trigonometry, Quadratic Equation, Systems of Linear Equations and Exponents. The students learn the fundamental and minimum of these topics in order to understand basic engineering applications.  Prerequisite: MATH 150 (2, 1.5T+0.5L)

122L  INTRODUCTION TO MATH FOR ENGINEERING APPLICATIONS II  Students learn basic concepts of analytical geometry, sinusoids, complex numbers, derivatives, integrals, and differential equations. Students learn the fundamental and minimum of these topics in order to understand basic engineering applications.  Prerequisite: ENGR 121L. (2, 1.5T+0.5L)

215  PHYSICS FOR ENGINEERS I  Students will learn basic concepts of mechanics and will be introduced to the scalars and vectors, kinematics in one/two dimensions, Newton’s laws of motion, forces and moments. Students will perform free-body-diagram analysis for statical equilibrium problems. Finally, the concepts of work, energy, power and energy conservation principle will be introduced.  Prerequisite: ENGR 121L (2, 2T+0L)

216L  PHYSICS FOR ENGINEERS II  Students will learn basic concepts of thermodynamics, dynamics, vibrations and fluid mechanics. Ideal gas laws, work, heat and 1st law of thermodynamics will be introduced. Students will be introduced to dynamics problems in one/two dimensions, linear impulse and momentum. rotational motion of rigid bodies and simple harmonic notion. Finally, students will learn fundamental concepts of fluid mechanics.  Prerequisite: ENGR 122L (3, 2T+1L)

217L  PHYSICS FOR ENGINEERS III  Students will learn basic concepts of electricity and magnetism with a focus on devices: resistors, capacitors, inductors, motors, generators and transformers. Python will be used to simulate and visualize device properties and students will build and analyze small circuits composed of these devices.  Prerequisite: ENGR 122L (3, 2T+1L)

470  ENGINEERING MANAGEMENT I  You will study engineering management and business principles for first-time engineering, science, or technology managers. You will cover time and budget management, employee and organizational management, team building and rewards, and project strategy.  Prerequisite: ENG 111, with Senior standing recommended. (3, 3T+0L)

471  ENGINEERING MANAGEMENT II  You will study advanced engineering management principles for mid-level and executive engineering managers, focusing on technology and science strategies at the organization or corporate level. Topics will also include technology transfer, valuation, and transactions.  Prerequisite: ENGR 470. (3, 3T+0L)

472  ENGINEERING ENTREPRENEURSHIP  You will study the principles of engineering/technology entrepreneurship, marketing, people management, and team building for technology-based start-ups, focusing on best practices in the formation of a company which is focused on product and service innovations. As a member of a team, you will train in business plan assembly, presentation, and defense.  Prerequisite: ENG 111, with Senior standing recommended. (Spring) (3, 3T+0L)

474  ENGINEERING PROJECT MANAGEMENT  In this introduction to the methods underlying modern project management in the development of engineering software, hardware, or systems products, you will study team formation, status reporting, project management tools, and management of cross-disciplinary teams.  Prerequisite: ENG 111, with Senior standing recommended. (Spring) (3, 3T+0L)

475  DEVELOPING ENGINEERING PRODUCTS  You will study the art and science of managing engineering product development from the requirements phase to the testing
phase and customer delivery and support while reviewing rapid time to market principles, along with product platform design processes. **Prerequisite:** ENG 111, with Senior standing recommended. (Fall) (3, 3T+0L)

**478 ENGINEERING ETHICS** You will review the impact of engineering decisions in product design, testing and marketing in light of cases which depict appropriate and inappropriate ethical behavior in engineering organizations. You will also review cultural, ethnic, and historical factors in the formation of ethical systems. **Prerequisite:** ENG 111, with Senior standing recommended. (Spring) (3, 3T+0L)

**480 ENGINEERING MANAGEMENT AND PROJECT MANAGEMENT** Student will learn engineering management and business principles for first-time engineering, science or technology managers. Topics covered include time and budget management, employee and organization management, team building and rewards, and project strategy. Students will also be exposed to an introduction to the methods underlying modern project management in the development of engineering software, hardware or systems products. Specific topics include team formation, status reporting, project management tools and management of cross-disciplinary teams. **Prerequisites:** Junior standing or permission of Engineering academic adviser. (4, 4T+0L)

**578 ENGINEERING ETHICS** You will review the impact of engineering decisions in product design, testing and marketing in light of cases which depict appropriate and inappropriate ethical behavior in engineering organizations. You will also review cultural, ethnic, and historical factors in the formation of ethical systems. (Spring) (3, 3T+0L)

**ENGLISH (ENG)**

**106N BASIC READING AND WRITING** Studies grammar, simple sentence structure, and reading improvement skills; develops abilities in critical thinking. **Prerequisite:** adequate score on Course Placement Evaluation; **Co-requisites:** Personal Development courses per direction of advisor. (4, 4T+0S)

**108N BASIC COMPOSITION I** This course focuses on basic writing skills necessary to create focused, well-organized and supported essays. Students will engage in the writing process to draft, revise, proofread and edit their essays so that their writing is coherent and clear. Students will practice the skills of critical reading and develop skills of critical thinking. They will also study the conventions of grammar, punctuation, and usage. **Prerequisites:** adequate score on Course Placement Evaluation. **Co-requisite:** RDG 108 N Reading Improvement and FYE 101 First Year Experience. (4, 4T+0S)

**109N ACCELERATED BASIC COMPOSITION II** This course prepares students for college-level composition by engaging them in the writing process and focusing on the rhetorical skills necessary to write focused, clearly organized, well-supported, and grammatically correct essays. Students will critically read texts and incorporate ideas from sources to develop and support an arguable thesis. This will be accomplished by practicing the research skills of summarizing, paraphrasing, and quoting, using MLA format. This accelerated course has a **Co-requisite** of English 111 and is designed to support student’s successful completion of the objectives of English 111. **Prerequisite:** English 108N, or adequate score on Course Placement Evaluation. **Co-requisites:** ENG 111 and FYE 101 (3, 3T+0S)

**109NL BASIC COMPOSITION II** This course prepares students for college-level composition by engaging them in the writing process and focusing on the rhetorical skills necessary to write focused, clearly organized, well-supported, and grammatically correct essays. Students will critically read texts and incorporate ideas from sources to develop and support an arguable thesis. This will be accomplished by practicing the research skills of summarizing,
ENGLISH

paraphrasing, and quoting, using MLA format. Prerequisite: English 108N, or adequate score on Course Placement Evaluation. Co-requisites: FYE 101 (4, 4T+0S)

110N PUNCTUATION AND GRAMMAR REVIEW This course focuses on the basic rules of punctuation, mechanics, and grammar to support students in their efforts to write clearly and correctly. Students will work towards becoming proficient at finding and correcting their own errors. (1, 1T+0S)

111 COMPOSITION I In this course students will develop reading and writing skills that will help with the writing required in their fields of study and other personal and professional contexts. They will learn to analyze the rhetorical context of any writing task and compose with purpose, audience, and genre in mind. Students will reflect on their own writing processes, learn to workshop drafts with other writers, and practice techniques for writing, revising, and editing. Prerequisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area 1 Communications (NMCCN ENGL 1113)

112 COMPOSITION II In this course, students will explore argument in multiple genres. Research and writing practices emphasize summary, analysis, evaluation, and integration of secondary sources. Students will analyze rhetorical situations in terms of audience, context, purpose, mediums, and technologies and apply this knowledge to their reading, writing, and research. Prerequisite: ENG 111. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area 1 Communications (NMCCN ENGL 1123)

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. Prerequisite: 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. Prerequisite: ENG 111. (3, 3T+0S)

116 PROFESSIONAL AND TECHNICAL COMMUNICATION Professional and Technical Communication will introduce students to different types of documents they will create in their professional careers. This course emphasizes the importance of audience, document design, and the use of technology. Prerequisite: ENG 111. (3, 3T+0S) (NNCCN ENGL 1123)

120 INTRODUCTION TO LITERATURE In this course, students will examine a variety of literary genres, including fiction, poetry, and drama. Students will identify common literary elements in each genre, understanding how specific elements influence meaning. Prerequisite: ENG 111. (3, 3T+0S)

221 CREATIVE WRITING Involves the analysis and criticism of student-produced poetry or fiction (focus varies by semester). May be taken 2 times for credit. (3, 3T+0S)

230 WORLD LITERATURE I You will explore global literature from the first epics through works of the early 17th century. You will focus on how narrative and myth represent the perspectives, achievements, and values of specific world societies through major genres of the period, including non-fiction, poetry, and drama. Prerequisite: ENG 111. (3, 3T+0S)

231 WORLD LITERATURE II You will study masterpieces of fiction, non-fiction, poetry, and drama in order to develop a deeper appreciation of world literature from the 17th to the 21st centuries, and to strengthen your analytical skills. Prerequisite: 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). Prerequisite: ENG 112. (3, 3T+0S)
ENGLISH

265  NATIVE AMERICAN LITERATURE I  Involves a survey of Native American writing from the time of the European invasion to the present with an emphasis on contemporary authors. Prerequisite: ENG 111. Cross-listed as PIS 265. (3, 3T+0S)

266  NATIVE AMERICAN LITERATURE II  Involves critical reading and discussions of writings by Native American writers of fiction (short stories and novels) and poetry. Prerequisite: ENG 111. Cross-listed as PIS 266. (3, 3T+0S)

270  CHILDREN’s LITERATURE  In order to develop an understanding of children’s literature from a multicultural perspective, you will explore stories and novels written for children from various cultures, with an emphasis on Native American and Hispanic cultures. Through class discussion and essays, you will develop literary analysis of these works, focusing on issues of cultural identity and conflict. To help you better grasp the role of children’s literature in our community, you will participate in a service-learning project that supports literacy and cultural awareness among local youth. Prerequisite: ENG 111. (3, 3T+0S)

292  WOMEN’S LITERATURE  You will study literature written by and focusing on women, including novels, short stories, poetry, drama, and theory. Prerequisite: ENG 111. (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 twice for credit if the topic varies. Prerequisite: ENG 111. (3, 3T+0S)

296  FILM AS LITERATURE  You will develop your ability to critically view films through an examination of literary elements and film techniques. You will view films based on literature, reading works on which these films are based, which will allow a comparative analysis of the film’s interpretation of the literary source. Students will also view films from a variety of cultures to gain insight on how these cultures are represented through the films. Prerequisite: ENG 111. (3, 3T+0S)

318  ORAL TRADITIONS: FOLK STORIES  In order to develop an understanding of how oral traditions and folk stories shape the way people understand and interpret their experiences, you will explore folk stories from various cultures, with a special emphasis on Native American, Hispanic, and African American cultures. You will experience storytelling through guest speakers, class presentations, and films. Through class discussion and writing, you will develop critical responses and analysis of folktales, focusing on cultural patterns and perceptions. To help you better understand the role of folk stories in our community, you will participate in a service learning project that supports the preservation and celebration of folk stories and the oral tradition. Prerequisite: ENG 112. Cross-listed as HUM 318. (3, 3T+0S)

390  TOPICS IN COMPARATIVE LITERATURE: FORMS, GENRES, HISTORY  This course offers an introduction to literary and critical study from a comparatist perspective. It focuses on a relatively small number of texts and examines topics such as: how literary forms and genres shape our reading of texts; how their conventions manifest themselves; how these conventions vary within different cultural traditions; how the functions and effects of literary texts change over time, and from place to place; and how such texts (orals, written, visual; canonical or “popular”) provide occasions for revealing and refining their readers’ values and for sharpening their critical thinking. Students will examine the ways in which authors’ words and ideas — presented in common shared texts — construct for their readers differing, even contradictory, meanings and carry varied significance for individual readers. Prerequisite: ENG 112 (3, 3T, 0S)

456  SHAKESPEAREAN PLAYS  You will study a selection of Shakespearean dramatic forms as presented in histories, tragedies, and comedies. Through discussion and writing,
you will engage in careful analysis of the text and interpretation of the characters, conflicts, and themes. Through this work, students will develop an appreciation for and understanding of Shakespeare’s plays: their literary value, their historical context, and their insight into the human condition. Additionally, you will analyze a film production of at least one play to examine the relationship between the text and the theatrical interpretation. You will develop and refine your own insights into Shakespearean drama through synthesizing literary criticism and theories of human behavior from other traditions and disciplines. **Prerequisite:** ENG 112. (3, 3T+0S)

**468 ECO-CRITICISM** You will explore the interpretive possibilities of eco-criticism as it applies to the understanding and writing of literature. You will address the question of how literary texts represent and explore the relations between nature and culture and the human and non-human, and how they may help us understand environmental crisis and the multifaceted threat posed today by the domination of homo sapiens over the earth. **Prerequisite:** ENG 112. (3, 3T+0S)

**ENVIRONMENTAL SCIENCE (ES)**

**112 INTRODUCTION TO ENVIRONMENTAL SCIENCE I** You will study environmental science through the structure and function of ecosystems and the various levels of living organisms. You will define and analyze ecological principles which determine the sustainability of ecosystems, including energy use, nutrient recycling, balance, natural resources, resilience, and biodiversity. **Co-requisite:** ES 112L. (3, 3T+0L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN 1114 with lab)

**112L INTRODUCTION TO ENVIRONMENTAL SCIENCE I LAB** In this field-work companion to ES 112, you will work as part of a team, concentrating on a detailed investigation and analysis of a specific environmental problem or case. **Co-requisite:** ES 112. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN ES 1114 with lecture)

**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. Graded CR/NC. (3, 3T+0S)

**201 ENVIRONMENTAL PHYSICAL AND CHEMICAL PROCESSES** You will study basic general, analytical, organic, and polymer chemistry from an environmental perspective: the pollutants of air, water, and land; the rudiments of toxicology, and an introduction to green chemistry. You will learn about chemical processes in industry and nature, physical transport, risk, and aspects of human impacts and policy. **Prerequisites:** BIOL 201/L and CHEM 121/L; **Co-requisite:** ES 201L. (3, 3T+0L)

**201L ENVIRONMENTAL PHYSICAL AND CHEMICAL PROCESSES LAB** You will study the basic techniques for chemical analysis of environmental samples including air, water, and soil. You will also learn to use electronic data acquisition systems and further develop your scientific writing skills. **Co-requisite:** ES 201. (1, 0T+1L)

**203 INTRODUCTION TO GIS/GPS AND CARTOGRAPHY** You will evaluate the characteristics, uses, and limitations of computer applications in natural resource management including application programs in statistical analysis, computer modeling, geographic information systems (GIS), global positioning systems (GPS), and database management systems (DBMS). Cross-listed as DRFT 110. **Prerequisite:** permission of instructor. (3, 2T+15)

**205 CRITICAL THINKING IN SCIENCE** This course will improve and/or develop students’ proficiencies in thinking and problem solving ultimately resulting in improved
decision-making abilities. This course will examine the process through which thought and problem-solving take place and to expand upon the critical thinking skills that will lead to optimizing the student's ability to succeed in all fields of science. Many problems students will face as science professionals do not have obvious answers; therefore, the goal this course is to enable students to rely upon skills taught to address the problem aided by a proven method leading to greater creativity in problem solving, decision making and science leadership. (3, 3T+0L)

225 PRINCIPLES OF AGRICULTURE ECOLOGY You will be introduced to ecology in the analysis of agriculture and sustainable alternatives, with an emphasis on the fundamentals of agriculture: soils, seeds, and water, and the geographical and cultural context of farming systems. You will study topics in traditional agriculture, farm development and design, and sustainable farm practices. Prerequisites: ES 112/L and BIOL 203/L. (3, 3T+0L)

307 ATMOSPHERIC SCIENCE You will study how the climate system works, how climate has changed in the past, and how it is now being changed by human activity. You will develop the skills needed to analyze and critically evaluate public discussions of climate issues and written and oral communication skills in the context of climate and Earth system science. Prerequisites: ES 112/L, BIOL 203, CHEM 121/L. (3, 3T+0L)

308 INVASIVE SPECIES You will evaluate the role and scope of introduced species as well as their impact; conduct an overview of the problem and discuss how modes of exotics spread both historically and currently, as well as discussing terminology and political impacts. You will evaluate the common characteristics of successful invasive species, epidemics and epizootics, and describe the role of invasive species and the disruption of the normal ecosystem function by exotics. Prerequisites: ES 112/L and BIOL 203/L (3, 3T+0L)

310 MENSURATION AND BIOMETRICS You will develop skills in mensuration, the practice of measuring, particularly lengths and angles, and Biometrics, the set of techniques for measurement and analysis of biological phenomenon. You will develop a deeper understanding of forest inventory techniques and various sampling designs used in forest inventory. Prerequisites: ES 112/L, BIOL 203/L and MATH 145 (3, 3T+0L)

311 PLANT PATHOLOGY You will study the historical foundation of plant pathology and will evaluate the current and future nature of plant disease and its causal agents (fungi, bacteria, viruses, nematodes, environmental/chemical agents) and of symbionts and their effect on plant health and disease resistance, epidemiological considerations on disease spreading and major outbreaks, and disease control and management techniques. Prerequisites: ES 112/L and BIOL 203. (3, 3T+0L)

316 FIRE MANAGEMENT AND RESTORATION You will study the concepts fire management, which involves predicting fire behavior and effects, as well as making decisions appropriate to natural resource management objectives. You will also study fire management options, which vary greatly, and may include fuels management and education, fire suppression, wildland fire use, and igniting and managing a prescribed fire, and post-fire rehabilitation. Prerequisites: ES 112/L, ES 203, and BIOL 203/L. (3, 3T+0L)

317 RANGELAND MANAGEMENT You will study both the broad concepts of planning and the variety of planning approaches that are frequently used in rangeland planning on public and private land. You will also take an in-depth look at the management of grazing resources, including ecology, economics, burning, brush and weed control, grazing systems, and complementary grazing crops. You will address related topics, such as job satisfaction and leadership, communications, professionalism, ethics, and problem-solving. Prerequisites: ES 112/L, and BIOL 203/L. (3, 3T+0L)
ENVIRONMENTAL SCIENCE

318  SILVICULTURE (WIC)  You will study the physical, biological, social, historical, and economic forces shaping past and present forest structure and composition in the various regions of the United States, and you will learn how silvicultural practices have been adapted to address specific management problems. You will also evaluate silvicultural alternatives for addressing present and anticipated future forest management-related problems and issues. **Prerequisites:** ES 112/L and BIOL 203/L. (3, 3T+0L)

319  PRINCIPLES OF WILDLIFE SCIENCE AND MANAGEMENT  This course will cover ecological principles of the management of various groups of wildlife, the history and development of wildlife management as a science, characteristics of, and factors affecting wildlife populations, techniques and theories of management, and wildlife conservation. **Prerequisites:** ES 112/L and BIOL 203/L. (3, 3T+0L)

320  ENVIRONMENTAL ETHICS  You will study values systems underlying human relations to the natural environment with emphasis on issues that arise when these values conflict, beginning with a discussion of our current environmental crises, different approaches to solving these crises, and issues of environmental justice and how science and knowledge affect decisions. (3, 3T+0L)

325  PRINCIPLES OF PHYSICAL HYDROLOGY  In this course, you will be exposed to a qualitative introduction to the dynamics of watersheds and groundwater flow from an intuitive perspective, laying the foundations for understanding the physical mechanisms by which water is transported throughout a hydrologic system. **Prerequisites:** ES 112/L, MATH 162 (3, 3T+0L)

330  PRINCIPLES OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH  You will study the basics of environmental and occupational hazard assessment, how policies and programs are designed to protect communities and workers from health risks posed by chemical, biological, and physical agents. **Prerequisites:** ES 112/L, BIOL 203/L, and CHEM 121/L. (3, 3T+0L)

333  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. Cross-listed as RAD 233. (Spring only) (3, 3T+0L)

336  ENVIRONMENTAL SAMPLING AND INSTRUMENTATION  You will study the fundamental standards of environmental monitoring, such as the application and use of site assessment, monitoring wells, permeability testing, soil vapor extraction and air sparging pilot installations, and employ principles such as obtaining a representative sample; sample containment; design, installation site assessment, monitoring wells, permeability testing, soil vapor extraction and air sparging pilot installations. You will employ principles such as: obtaining a representative sample; sample containment; design, installation, testing and monitoring of wells; design, establish, and collect data from permeability testing, groundwater contour maps, sol vapor extraction, and air sampling systems, and pilot tests. **Prerequisites:** ES 112/L, or CHEM 122/L, MATH 145, and BIOL 203/L. (3, 3T+0L)

336L  ENVIRONMENTAL SAMPLING AND INSTRUMENTATION LAB  In a hands-on setting, students will participate in the fundamentals of environmental sampling and instrumentation to include data collection and evaluation. **Prerequisites:** ES 112/L, ES 201 or CHEM 122/L; Co-requisite: ES 336. (1, 0T+1L)

Strikethrough indicates courses that are no longer offered.
ENVIRONMENTAL SCIENCE

338  ENVIRONMENTAL LAW AND REGULATIONS  You will study the basic laws and regulations for the management of solid and hazardous wastes, as well as those regulations impacting national forests and agriculture. Supplemental courses will follow in the concentration areas.  
Prerequisites: ES 112/L.  (3, 3T+0L)

340  PRINCIPLES OF CROP PRODUCTION  You will focus on the ecological principles underlying crop production systems, evaluating cropping systems, tillage methods, planting and harvesting methods, and crop growth patterns. You will examine crop production in the context of management approaches, environmental resources and constraints, and socioeconomic considerations.  
Prerequisites: ES 225.  (3, 3T+0L)

365  PRINCIPLES OF SUSTAINABLE AGRICULTURE  You will study food production resources (soils, crops, and climates), with emphasis on the scientific principles of management that conserve or renew those resources for a continuing benefit to society. You will participate in field trips which stress hands-on experience with soils, crops, and descriptive climatology.  
Prerequisites: ES 225 and BIOL 203/L.  (3, 3T+0S)

380  UNDERGRADUATE RESEARCH EXPERIENCE  This is a practical faculty-directed research experience for upper-division Environmental Science majors. During the regular semester you will perform 8-10 hours per week of work alongside your mentor in a project with a time frame agreed to by both, the student intern, and the mentor. Arrangements involve all aspects of environmental research that can include fieldwork, bench laboratory work, library research, or any combination of these activities. The mentor will actively engage you in sharing the responsibility for the research process.  
Fall & Spring (3, 3T, 0L)

399  FIELD PROBLEM  Topic developed between student and advisor. Var. 1-6, (1-6T)

400  ENVIRONMENTAL MANAGEMENT  You will integrate the principles of regulatory, social, and ecological concern in order to critically discuss and evaluate existing and proposed environmental management systems. By the end of this course, you will be able to design environmental management strategies which reduce environmental impacts, optimize resource use, promote waste reduction and recycling, prevent pollution, and involve public stakeholders, leading to superior environmental and bottom-line performance.  
Prerequisites: ES 112/L and BIOL 203/L.  (3, 3T+0L)

404  FOREST HEALTH, RESTORATION, AND MANAGEMENT  You will study the basic roles of natural disturbance agents, such as diseases, insects, fire, exotic organisms and their interactions in natural forest ecosystems. You will study how restoring and maintaining the health of forests has become an internationally recognized goal for resource management agencies, public conservation organizations, and society in general.  
Prerequisites: ES 112/L and ES 318.  (3, 3T+0L)

410  SOIL TESTING AND INTERPRETATION  You will become acquainted with soil composition and classification; relationship of soil to plant growth and animal health; use of fertilizers, erosion and control. You will study the four general components of soil testing: a) soil sampling and handling, b) analytical methodology involved in nutrient extraction from the soil by various tests, c) interpretation of the analytical results, and d) recommendations for the correction of soil nutritional problems, including acidity, deficiencies, imbalances, and excess levels.  
Prerequisites: ES 112/L, ES 201/L, BIOL 203/L; Co-requisite: ES 410L.  (3, 3T+0L)

410L  SOIL TESTING AND INTERPRETATION LAB  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: ES 410.  (1, 0T+1L)
ENVIRONMENTAL SCIENCE

411 — SOIL MANAGEMENT AND FERTILITY You will apply fundamental, unifying soil science principles in sustainable management of forested, agricultural and urban or constructed ecosystems, evaluating the relationships between nutrient response and chemical, physical, and biological properties of soil, and proposing the least impacting methods for remediation of contaminated soils and the reintroduction of nutrients and biota. Prerequisite: ES 410/L. (3, 3T+0L)

412 ENVIRONMENTAL HEALTH AND TOXICOLOGY You will study the relationship between human health and environmental toxicants from an interdisciplinary perspective. You will become familiar with a broad range of concepts, including the nature of hazards, epidemiological study design, exposure assessment, toxicology microbiology, risk assessment, risk perception, and risk management. You will learn to draw the links among human health and sustainability, urbanization, energy production, and relevant ethical issues. Prerequisites: ES 112/L, ES 201/L or CHEM 122/L, BIOL 203/L, and BIOL 210/L. (3, 3T+0L)

414 WILDLAND FIRE MANAGEMENT In this course, you will focus on fire in restoration ecology and the effects of fire on plants, animals, soils, water, and air, with an emphasis directed toward fire as an ecological process in wildland ecosystems. You will study how to characterize and predict fire effects over time and space, as well as how to apply this to restoration ecology. Prerequisites: ES 318. (3, 3T+0L)

415 ENERGY AND RESOURCE DEVELOPMENT (WIC) You will study a wide variety of topics in energy and resource conservation and development, from a global scale to those of industry, buildings, and products, with emphasis on the evaluation of systems with particular attention given to dynamic and efficient systems and input/output models. Topics you will study include experimental and theoretical research in energy technology, development, application, and evaluation of methods and tools for the analysis of technical systems, with respect to the environment, sustainable development, and energy. (3, 3T+0L)

416 IRRIGATION AND DRAINAGE You will participate in the design, management, and evaluation of irrigation and drainage systems, addressing the concepts and processes of system design, soil-water-plant relationships, evapo-transpiration and water requirements, effective water use, irrigation scheduling, infiltration, and irrigation systems planning. Prerequisites: ES 112/L and MATH 162. (3, 3T+0L)

420 ECOLOGY AND HYDROLOGY OF SOUTHWESTERN RIVER SYSTEMS Students will experience the unique geology, ecology, and dynamic hydrology of the southwestern U.S. along the diverse ecosystems of New Mexico and Arizona. The curriculum includes three days of classroom lecture followed by multi-day field trips to ecologically diverse regions representative of the Chihuahuan and Sonoran deserts, southwestern forests and grasslands. The field trip will include a diverse set of hikes, lectures, and project investigation multiple aspects associated with the evolution of Southwest river and riparian systems including the geological, ecological, natural resources, the social and political ward issue and management practices. The ecology of “sky islands,” deserts, forests and range of Southwest Arizona includes trips to the Arizona Sonoran Desert Museum and Chiricahua National Park. (Spring only) The banks of the major river systems in New Mexico will be examined through a multi-day whitewater field trip on the Rio Chama and or the upper Rio Grande (Summer only). Prerequisite: Permission of instructor. (2, 2T+0L)

480 SENIOR CAPSTONE This will be the culminating experience for you, as an environmental science student. You will work with an academic advisor who will serve as your mentor in overseeing your final student internship with a government agency, environmental organization, or private company. In your fieldwork, you will search for solutions to real problems while working with professionals, acquiring important experience, and making connections
with potential employers. You must identify a capstone field mentor who will provide on-site student support and who will periodically and ultimately evaluate your performance. (3, 0T+3L)

499 PROBLEM Topic developed between student and advisor (Var. 1-6) (1-6T)

FILM AND DIGITAL MEDIA ARTS (FDMA)

101 INTRODUCTION TO DIGITAL VIDEO PRODUCTION Introduction to digital video production as it relates to digital media and documentary story telling. Emphasis will be on the fundamentals of videography with a broad exploration of basic camera skills and non-linear editing techniques. One short film will be the final assignment. (4, 3T+1S)

102 INTRODUCTION TO DIGITAL AUDIO DOCUMENTARY An introduction to basic digital studio and field production techniques and the procedures necessary for gathering aural history for the production of documentary radio/web broadcast. You will learn how to select and edit excerpts from your interviews to produce radio vignettes. You will study Pro Tools, basic audio field recording with digital technology, the practice of aural history, and the art of sound collage. (4, 3T+1S)

107 DIGITAL MEDIA LITERACY The study and practice of media literacy is based on a number of fundamental concepts about: media messages, our media system, and the role of media literacy in bringing about change. The primary aim of the course to expose students to discipline of Digital Media Studies through discussion and critical analysis of Film, Web, Radio, and Television. (3, 1T+2S)

110 NON-LINEAR EDITING Introduction to basic non-linear editing techniques using the popular professional editing software. You will learn the fundamentals of non-linear editing used in all film and video productions. You will practice picture editing, sound editing, and music editing. You will discuss and demonstrate solutions to real-world problems encountered in editing rooms around the world—such as poor photography and poor direction. (4, 3T+1S)

111 DIGITAL MEDIA PRODUCTION I This class will serve as a foundational hands-on course for intermediate and advanced courses in the FDMA program and introduce roles and positions through participation in student production projects. (4, 2T+2S)

115 INTRODUCTION TO DOCUMENTARY FILM MAKING You will learn how to make a short documentary film on an assigned subject drawn from topical events in northern New Mexico. The process will typify film-for-hire conditions and will be an exercise in filmmaker/client relations. The teacher and staff will play the role of client. Examples could be profiling a local artist, a new business enterprise, or exploring a local historical event. (4, 3T+1S)

120 DIGITAL AUDIO PRODUCTION You will explore the tools and techniques of digitized sound production by focusing on a series of individual and collaborative projects. Cross-listed as MUS 123. (4, 3T+1S)

128 sUAS TECH I This course is part one of a two-part six credit hour certificate program in Drone Technology. Curriculum includes; pilot operation, FAA Part 107 certification preparation, and commercial deployment of Small Unmanned Aerial Systems (sUASs), more commonly known as drones. Topics covered will be Still and Moving Imagery, Surveying, and Mapping. (3, 3T+0L)

129 sUAS TECH II This course is part two of a two-part six credit hour certificate program in Drone Technology. Curriculum includes; pilot operation, FAA Part 107 certification preparation, and commercial deployment of Small Unmanned Aerial Systems (sUASs), more
commonly known as drones. Topics covered will be Still and Moving Imagery, Surveying, and Mapping. (3,3T+0L)

**130 TV PRODUCTION I** An introduction to the basic principles, procedure and techniques used in television production. This course requires participation during campus events for video control, special effects, camera operation, editing, composition, lighting, staging, directing, on-camera announcing and interviewing. (4, 3T+1S)

**140 DIGITAL IMAGING I: ADOBE PHOTOSHOP** In this course you will become familiar with Adobe Photoshop®, digital camera, scanner and printer. (4, 3T+1S)

**155 DIGITAL ANIMATION I: MOTION GRAPHICS** This course introduces students to both animation and motion graphics. Students will gain working knowledge of the twelve principles of animation, using both physical and strictly digital techniques. Students will become proficient with Adobe After-Effects® software. An ability to draw is NOT a requirement to succeed in this course (4, 3T+1S)

**201 ADVANCED DIGITAL VIDEO PRODUCTION** You will study advanced camera functions from a technical standpoint including maintaining optimum picture quality while filming, achieving higher caliber sound fidelity, and multi-camera shooting procedures. **Prerequisite:** FDMA 101. (4, 3T+1S)

**211 DIGITAL MEDIA PRODUCTION II** This class will serve as an advanced hands-on production centered course for FDMA Majors nearing graduation. Students will be required to function in leadership roles on Student developed production projects. **Prerequisite:** FDMA 111. (4, 2T+2S)

**230 TV PRODUCTION II** A continuation of FDMA 130 to allow students to improve their skills in television production. This course requires participation during on campus event to learn more advanced techniques for video control, special effects, camera operation, editing, composition, lighting, staging, directing, on-camera announcing and interviewing. (4, 3T+1S)

**240 DIGITAL IMAGING II: ADOBE INDESIGN®** In Digital Imaging II, students will build upon their knowledge of Adobe Photoshop®, as well as gain a working knowledge of Adobe InDesign® to produce various professional products, common to the graphic design industry. **Prerequisite:** FDMA 140 (4, 3T+1S)

**280 HISTORY OF CINEMA** You will study the historical perspective of cinema from the genesis of the moving image to modern digital filmmaking. **Prerequisite:** ENG 109N. (3, 3T+0S)

**295 DIGITAL MEDIA PORTFOLIO** You will create your own digital portfolio with a strong emphasis on editing, content, and presentation. You will engage in discussions on how to market your work to enter advanced degree programs or the workforce. **Prerequisite:** FDMA 201, or permission of instructor. (2, 1T+1S)

**296 DIGITAL MEDIA PRODUCTION – INTERNSHIP** For this capstone course in the FDMA program, you will take on 100% of the duties necessary to produce professional quality film/television content. You will work with professional union and non-union mentors on professional NM Film projects throughout the state. **Prerequisite:** FDMA 111 & 211 (Summer) (6, 0T+6S)

### FIRST YEAR EXPERIENCE (FYE)

**101 FIRST YEAR EXPERIENCE** This course is designed with a combination of other opportunities on campus to make the first year at Northern New Mexico College a satisfying and successful one. FYE courses will effectively assist our diverse student population with transitioning into the college environment. FYE courses aim to encourage an apprecia-
tion of the goals, methods and values of higher education. The courses work to establish a familiarity with campus resources and student services, develops skills necessary for academic success, foster leadership and teamwork skills, and encourages students to become independent learners. **Prerequisite:** Freshman Standing Only. (Fall, Spring). (3, 3T+0S)

### GEOGRAPHY (GEOG)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 111</td>
<td>WORLD GEOGRAPHY</td>
<td>Geography of major land forms, environments, ethnic cultures, population and resources of the world, and inter-relationships among them.</td>
<td>(3, 3T+0S)</td>
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### GEOLOGY (GEOL)

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<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>GEOL 101</td>
<td>PHYSICAL GEOLOGY</td>
<td>Materials composing the earth and the work of agencies modifying its surface. <strong>Co-requisite:</strong> GEOL 101L. (3, 3T+0L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN GEOL 1114, with lab)</td>
<td></td>
</tr>
<tr>
<td>GEOL 101L</td>
<td>PHYSICAL GEOLOGY LAB</td>
<td>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. <strong>Co-requisite:</strong> GEOL 101. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN GEOL 1114 with lecture)</td>
<td></td>
</tr>
<tr>
<td>GEOL 102</td>
<td>HISTORICAL GEOLOGY</td>
<td>History and evolution of the earth; rise and succession of various forms of life. <strong>Prerequisite:</strong> GEOL 101; <strong>Co-requisite:</strong> GEOL 102L. (3, 3T+0L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN GEOL 1214 with lab)</td>
<td></td>
</tr>
<tr>
<td>GEOL 102L</td>
<td>HISTORICAL GEOLOGY LAB</td>
<td>Detailed study of sedimentary rocks and fossils. Interpretation of geologic maps and cross-sections. Field trips to areas of sedimentary geology. <strong>Co-requisite:</strong> GEOL 102. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN GEOL 1214 with lecture)</td>
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### HEALTH, PHYSICAL EDUCATION, AND RECREATION (HPER)

All HPER courses are graded Credit/No Credit (CR/NC).

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPER 101</td>
<td>CONDITIONING EXERCISES</td>
<td>Various exercises designed to promote endurance, strength, flexibility, and general physical fitness.</td>
<td>(1, 0T+1S)</td>
</tr>
<tr>
<td>HPER 102</td>
<td>AEROBICS I</td>
<td>Exercise and movements for general physical fitness.</td>
<td>(1, 0T+1S)</td>
</tr>
<tr>
<td>HPER 105</td>
<td>BASKETBALL</td>
<td>Instruction and participation in the game of basketball, including rules, skills, shots, and strategies.</td>
<td>(1, 0T+1S)</td>
</tr>
<tr>
<td>HPER 106</td>
<td>GOLF</td>
<td>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.</td>
<td>(1, 0T+1S)</td>
</tr>
<tr>
<td>HPER 107</td>
<td>WALKING/RUNNING FOR FITNESS</td>
<td>Designed for all levels, including walkers, joggers, race walkers, and competitive marathon runners.</td>
<td>(1, 0T+1S)</td>
</tr>
<tr>
<td>HPER 110</td>
<td>SWIMMING</td>
<td>A course for those who can swim, not for those who want to learn the basics. It involves supervised lap swimming, including some instruction in swimming for fitness.</td>
<td>(1, 0T+1S)</td>
</tr>
<tr>
<td>HPER 111</td>
<td>WATER AEROBICS</td>
<td>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.</td>
<td>(1, 0T+1S)</td>
</tr>
</tbody>
</table>
HEALTH SCIENCE

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. (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)

117 **INTRODUCTION TO KUNDALINI YOGA** Introduces you to Kundalini Yoga techniques and postures, emphasizing meditation and breathing. (1, 0T+1S)

125 **POWER CONDITIONING I** A conditioning course emphasizing aerobics, weight training and cardiovascular conditioning. (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 on to five swimming strokes, with an introduction to the butterfly. Emphasis is on building endurance in preparation for Lifeguard Training course. May be repeated twice for credit. **Prerequisite:** Must have swimming background and familiarity with basic swimming strokes. (1, 0T+1S)

131 **WEIGHT LOSS YOGA** You will learn intermediate Kundalini Yoga in support of weight loss, through its imparting a deeper experience of yogic technology in working on helping you achieve self-control and self-fulfillment. (1, 0T+1S)

133 **STRESS RELIEF YOGA** You will learn intermediate Kundalini Yoga in support of stress relief, through its imparting a deeper experience of yogic technology and the principles for managing stress and renewing vitality on a constant basis. (1, 0T+1S)

225 **POWER CONDITIONING II** This is an advanced cardiovascular conditioning course, utilizing weight training, aerobics, and exercise equipment. **Prerequisite:** HPER 125. (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)

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HEALTH SCIENCE (HSCI)

102 **AMERICAN HEART ASSOCIATION CPR** 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. Graded on a Credit/No Credit basis. (0.5, 0.5T+0L)

103 **INTRODUCTION TO HEALTH CARE PROFESSIONS** This course is for students who are interested in a career in health care or health related field. You will be introduced to a variety of health care professions, determine the educational path required for your chosen field, and explore the personal qualities and professional skills essential for all health care providers. (3, 3T, + 0L)

109 **AMERICAN RED CROSS CPR/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. Graded on a Credit/No Credit basis. (0.5, 0.5T+0S)

125 MEDICAL TERMINOLOGY Covers terminology used by health care professionals, including word construction, spelling, pronunciation of terms, & common medical abbreviations. Prerequisite: ENG 106. (2, 2T + 0L)

160L EMERGENCY MEDICAL TECHNICIAN—BASIC (EMT-B) This course is designed for individuals who have an interest in working in the pre-hospital setting. It 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. Co-requisite: HSCI 102 or current American Heart Association CPR certification. (8, 6T+2L)

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)

HISTORY (HIST)

Note: Each course in this department bears a Prerequisite of ENG 109N or an adequate score on the Course Placement Evaluation.

101 WESTERN CIVILIZATION I Social, political, and economic development from ancient times to 1648. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN HIST 1053)

102 WESTERN CIVILIZATION II Social, political, and economic development from 1648 to the present. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN HIST 1063)

161 HISTORY OF THE UNITED STATES TO 1877 Economic, political, social, and intellectual development to 1877. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN HIST 1113)

162 HISTORY OF THE UNITED STATES FROM 1877 Economic, political, social, and intellectual development from 1877. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN HIST 1123)

220 SOUTHWESTERN WOMEN’S HISTORY You will explore 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)
<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>250</td>
<td>AMERICAN INDIAN HISTORY</td>
<td>You will study the history of Indians of North America, both pre-Colombian and post-Columbian: 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)</td>
</tr>
<tr>
<td>260</td>
<td>HISTORY OF NEW MEXICO</td>
<td>Survey from the explorations of Cabeza de Vaca to the present: the borderlands, Spanish, Indian, and Anglo contributions. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NNCCN HIST 2113)</td>
</tr>
<tr>
<td>301</td>
<td>HISTORY OF JUDEO-CHRISTIAN MUSLIM RELATIONS</td>
<td>You will examine the nature of Judeo-Christian Muslim relations in different contexts and years of world history, with focus ranging from the Crusades to modern experiences in the world. You will concentrate on historical and societal dimensions rather than theology. (3, 3T+0S)</td>
</tr>
<tr>
<td>340</td>
<td>TOPICS IN AMERICAN HISTORY</td>
<td>The course is a focused study of topic or issues within the study of American history. Content varies from semester to semester. The course involves readings, lecture, discussion and composition. As topics vary, consult a current Schedule of Classes for specific content areas. Prerequisite: ENG 112. (Fall) (3, 3T+0L)</td>
</tr>
<tr>
<td>360</td>
<td>INDIGENOUS HISTORY</td>
<td>The course is a concentrated study of the indigenous history of North America. The content includes both creative and academic readings that illustrate the theories and issues of the indigenous Americas. The course involves readings, lecture, discussion and composition. As topics vary consult the instructor for specific content areas. Prerequisite: ENG 111 (SPRING) (3, 3L+0L)</td>
</tr>
<tr>
<td>200</td>
<td>HONORS TOPIC</td>
<td>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. Prerequisite: ENG 112 and a minimum 3.2 cumulative GPA. (3, 3T+0S)</td>
</tr>
<tr>
<td>130</td>
<td>INTRODUCTION TO MANAGEMENT IN THE HOSPITALITY INDUSTRY</td>
<td>You will explore and analyze management opportunities, functions, methods, and concepts in various segments of the hospitality industry. Prerequisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)</td>
</tr>
<tr>
<td>133</td>
<td>CASINO MANAGEMENT</td>
<td>You will study the historical and current perspectives of the gaming industry as those apply to management principles for casino operations, including coordination with traditional hospitality services. Prerequisite: HTRM 130. (3, 3T+0S)</td>
</tr>
<tr>
<td>135</td>
<td>HOTEL MANAGEMENT</td>
<td>You will study rooms management, including front office, housekeeping, security, and engineering with emphasis on operations, coordination, and communication within and between departments. Prerequisite: HTRM 130. (3, 3T+0S)</td>
</tr>
<tr>
<td>140</td>
<td>FOOD AND BEVERAGE SERVICE MANAGEMENT</td>
<td>You will study food and beverage service management systems in the hospitality field. You will learn to analyze cost control and quality control techniques. This course requires a work site practice location. Prerequisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)</td>
</tr>
<tr>
<td>142</td>
<td>RESORT AND CASINO MARKETING AND MERCHANDISING</td>
<td>You will study merchandising and marketing as a system concerned with motivating consumers to purchase</td>
</tr>
</tbody>
</table>

Strikethrough indicates courses that are no longer offered.
hospitality products and services. Prerequisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

210 INTERNSHIP You will be involved in supervised off-campus non-group instruction including field experiences, practice, or internships with a requirement that you provide written and oral critiques of the activities required. Prerequisite: prior approval of proposed assignment by instructor and completion of all other courses. (3, 0T+3S)

HUMANITIES (HUM)

101 HUMANITIES I Comparative study of religion, philosophy, art, metaphysics, ethics, and aesthetics (B.C.E. to 1500 C.E.). Prerequisite: 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.). Prerequisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

103 THE SEARCH FOR MEANING This course examines various topics related to the personal search for meaning through the lens of the Humanities and within the social context. The course involves readings, discussions, research and composition. Prerequisite: ENG 109. (Fall, Spring) (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. Prerequisite: ENG 109N. (3, 3T+0S)

110 HUMANITIES II Comparative study of religion, philosophy, art, metaphysics, ethics, and aesthetics (1500 C.E to present.). Prerequisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

200 COMPARATIVE RELIGION To gain a familiarity with the major religious traditions in the world, you will examine various religious traditions and practices, focusing on the similarities and differences between their conception of the Divine and different religious conceptions of what it means to live the “good life.” You will alternate between (a) reading secondary texts that compare religious traditions from an “outsider” perspective and (b) reading primary texts central to each religion. Prerequisite: ENG 109N. (3, 3T+0S)

204 HISPANIC FEMINIST STUDIES You will be introduced to the interdisciplinary field of Chicana Studies, including historical research on labor, political involvement, cultural studies, and feminism. (3, 3T+0S)

246 TOURISM AND THE ARTS IN NEW MEXICO PUEBLOS As tourism and art production have become principal means for the Pueblo peoples of New Mexico to support their families and communities, you will study this course through a multi-lens perspective of this economic, cultural, and aesthetic reality using historical readings, short films, and visits to local museums and Pueblo artists’ galleries. Prerequisite: ENG 111. Cross-listed as PIS 246. (3, 3T+0S)

281 SPIRIT OF PLACE, NATIVE SENSES OF PLACE You will examine the meaning of place in your life and its particular importance to understanding Native identity and culture. You will focus on how to relate place with examples of how Native writers, poets, artists, storytellers, and other performers convey a “sense” or “spirit” of place in their work. Prerequisite: ENG 111. Cross-listed as PIS 281. (3, 3T+0S)
294  WORLD MYTHOLOGY  This course provides a comparison and study of the mythologies of a variety of civilizations. 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, as well as a study of the basic cross-cultural patterns found in mythological traditions. Cross-listed with ENG 294.  Prerequisite: ENG 111.  (Fall, Spring).  (3, 3T+0S)

324  EPIC LITERATURE AS PSYCHOLOGICAL INSIGHT  Students will learn to use epic literature as a way of developing a greater understanding of their own lives and the culture they live in. The course will focus on a critical reading of texts as a way of uncovering and understanding larger social, cultural and psychological ideas.  (3, 3T+0S)

390  TOPICS IN THE STUDY OF RELIGION  Focused study of religious traditions and/or issues within the study of religion; content varies each semester. The course involves readings, lecture, discussion, and composition. As topics vary, consult a current Schedule of Classes for specific content areas.  Prerequisite: ENG 112.  (Fall, Spring, Summer)  (3, 3T)

460  PSYCHOLOGY OF MYTH  Students will explore mythology from a psychological point of view, paying particular attention to the relationship between mythology and psychoanalytic traditions. In addition students will learn mythological patterns and interpret their meaning within a psychological context, while also exploring both myth and psychology as different ways of knowing.  Prerequisite: ENG 112.  (3, 3T+0S)

HUMANITIES & SOCIAL SCIENCES (HSS)

288  FOUNDATIONS OF INTEGRATED STUDIES  This is an introductory course to the B.A. in Integrated Studies. Students will study the nature of disciplines and interdisciplinary work. They will also be introduced to the Integrated Studies degree and to inquiry-based learning that extends beyond the boxes of traditional disciplines.  Prerequisite: ENG 111.  (Fall, Spring).  (3, 3T+0S)

311  READINGS IN THE SOCIAL SCIENCES  In this seminar, taught in the conversational method, students will read and discuss great works and ideas from the major social sciences. The works from these disciplines, such as Psychology, Sociology, Anthropology, Political Science, and Economics, explore the social structures that influence how we understand our social environment and ourselves. Often these works—such as the works of the psychologist Sigmund Freud—have themselves influenced our shared and individual experience so profoundly that they shape, perhaps unknowingly, our view of the world.  Prerequisite: ENG 112.  (4, 4T+0S)

320  GENESIS OF MATHEMATICS AND SCIENCE  This seminar, taught according to the conversational method, will examine landmark works and ideas from the history of mathematics and the natural sciences. These disciplines represent a dialogue with a rich tradition. Isaac Newton once wrote that, “If I have seen a little further it is by standing on the shoulders of Giants.” In this class, we will be engaging in conversation with giants from the field of mathematics and the sciences by reading various texts and by asking basic questions that arise from those texts. We will be asking the most basic questions, the kind whose answers are mostly taken for granted in traditional mathematics and sciences classes.  Prerequisite: ENG 112.  (4, 4T+0S)

324  EPIC LITERATURE AS PSYCHOLOGICAL INSIGHT  You will learn to use literature as a way of developing a greater understanding of our own lives and the culture in which we live through a study of great literary works and their themes within the interdisciplinary context of the themes that the literature explores, and you will use critical reading of texts as a way of uncovering and understanding larger social, cultural, and psychological
themes in the works. In addition, you will demonstrate an ability to use literature as a lens for exploring both cultural mythologies and the individual psyche. **Prerequisite:** ENG 112. (3, 3T+0S)

388  **INTEGRATED STUDIES II**  In this junior-year, inquiry-based course, students will explore a single, fundamental question, such as the following: “What is the Enlightenment?” Questions will be fundamental and will require material and methods from more than one point of view, cultural tradition, and academic discipline. **Prerequisite:** HSS 288. (Fall). (3, 3T+0S)

389  **SENIOR PROJECT I**  Students will deepen their understanding of interdisciplinary work. In addition, to further developing the theoretical underpinnings of their individual degree plan, student will propose their senior project. **Prerequisite:** HSS 288 (3, 3T+0S)

414  **HUMANITY AND CREATIVITY**  New Mexico is one of the great artistic areas of the United States. It is home to archaic petroglyphs and prehistoric pottery, as well as traditional retablos and weavings; it is the inspiration for distinctive artists such as Georgia O’Keeffe and D.H. Lawrence. This course will explore art and its place by applying the conversational method to great works and ideas of and about art. We will examine questions such as these: What is art? What is an artist? What in us needs art? **Prerequisite:** ENG 112. (4, 4T+0S)

421  **THEMES IN THE HUMANITIES: HISTORY, LITERATURE, ART, AND PHILOSOPHY**  This seminar, taught according to the conversational method, will examine works from the humanities disciplines, such as philosophy, literature, and history. The great themes in the humanities are driven by the most fundamental needs and questions that human beings have, such as the need for meaning, and the questions “Why are we here?” and “What may be our highest hopes and aspirations?” **Prerequisite:** ENG 112. (4, 4T+0S)

488  **INTEGRATED STUDIES III (WIC)**  In this intensive-writing capstone, under the guidance of the workshop instructor and under a general course theme, students will select a series of interdisciplinary questions that will be explored throughout the semester. Questions will be fundamental and will require material and methods from more than one point of view, cultural tradition, and academic discipline. **Prerequisite:** HSS 388. (Spring). (3, 3T+0S)

489  **SENIOR PROJECT II**  This is an intensive-writing course for self-design students in Integrated Studies. Under the guidance of the workshop instructor, students will conduct a senior writing project that demonstrates a mastery of the interdisciplinary theme at the heart of their self-designed degree. **Prerequisite:** HSS 388 or 389. (3, 3T+0S)

**INFORMATION TECHNOLOGY (IT)**

210  **INFORMATION TECHNOLOGY SYSTEMS**  You will study the basic components of IT systems, including networking, web systems, databases, system administration and maintenance, scripting, and system integration. **Prerequisites:** EECE 152L. (3, 2T+1L)

250  **INTRODUCTION TO DATABASES**  Through an introduction to database software, you will study the Entity-Relationship model, basic database tables, queries, forms, and report creation and management. **Prerequisite:** EECE 152L. (3, 3T+0S)

350  **DATABASE MANAGEMENT**  You will study current trends in data management, studying topics which include database theory and architecture, normalization, query languages, security and Web applications, focusing primarily on a study of database structures and design, hierarchical and relational models, and database access using Oracle SQL. **Prerequisite:** IT 250. (3, 2T+1S)

410  **INFORMATION ASSURANCE AND SECURITY**  This courses introduces students to the principles of assurance and security, and then applies those principles to industrial and enterprise networks and information systems. The course provides a theoretical back-
ground of traditional and modern cryptographic techniques to provide for confidentiality, integrity, and availability. Concepts are then applied to secure and assure information, using a variety of techniques and frameworks such as AAA architecture, firewall technologies, intrusion prevention systems, and virtual private networks and secure management. 

**Prerequisites: EECE 230 and 330 (3, 2T+1S)**

490  **IT CAPSTONE I (WIC)** Capstone I is a project-oriented course where students work in teams to design and implement a large IT-related project. Projects are prepared in response to an industrial or in-house sponsor. Engineering ethics and project management skills, such as communication and team management, are reinforced through modules during the semester, and are applied to the different stages of the project. The course finalizes with oral presentations, written reports and/or student demonstrations which are judged by a panel composed of faculty members and external guests. IT 490 is a designated Writing Intensive Course (WIC). **Prerequisite:** senior standing, Information Engineering Technology major. (3, 2T+1S) Passing grade is C.

491  **IT CAPSTONE II** Capstone II is a project-oriented course where students work in teams to design and implement a large IT-related project. Projects are prepared in response to an industrial or in-house sponsor and may be a continuation of the project developed in Capstone I. Project management skills such as communication and team management are applied to the different stages of the project. The course finalizes with oral presentations, written reports and/or student demonstrations which are judged by a panel composed of faculty members and external guests. **Prerequisite:** IT 490. (3, 2T+1S) Passing grade is C.

510  **INFORMATION ASSURANCE AND SECURITY** You will study the background of information systems—security fundamentals and tools, emphasizing the role of general and application systems controls in protecting data and computing resources, the identification of threats, and the administrative and technological tools and techniques used to audit and monitor access and access control. 

**Prerequisites:** EECE 355 and IT 350. (3, 2T+1S)

530  **NETWORK ADMINISTRATION** The practice of network administration in organizations in which security, application control, software updates, hardware inventory control and operational costs are of paramount importance. Economic modeling of organizational tasks in capital outlay, operational budgets and expense savings. (3, 3T+0S)

599  **TOPICS IN IT** Special topics in the IT field. (3, 3T+0S)

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**INTEGRATIVE HEALTH STUDIES (IHS)**

357  **HERBAL MEDICINE** In this course, you will be introduced to basic concepts of herbal medicine and explore advanced methods and specific uses of herbal preparations. **Prerequisites:** ENG 111. (2, 2T+0L)

358  **HERBAL PHARMACY** In this course you will explore hands-on methods for making herbal preparations, salves, tinctures, liniments, and teas. **Co-requisite:** IHS 357. (2, 2T+0L)

480  **EVOLUTION OF CROSS-CULTURAL HEALING** In this overview of cultural and anthropological influences on health beliefs, with an emphasis on New Mexico, you will examine “lay” or “folk” understanding of the causes and management of disease. You will discuss traditional approaches to health and healing (e.g., shamanism, curanderismo). **Prerequisite:** ENG 112 and IHS 118. (3, 3T+0L)

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**LANGUAGE, LETTERS, AND LIBERAL ARTS**

101  **FOUNDATIONS OF LIBERAL ARTS** Liberal Arts Education is an approach to learning that empowers individuals and prepares them to deal with complexity, diversity, and
LAW ENFORCEMENT / MATHEMATICS

LAW ENFORCEMENT (LE)

The following courses are not taught at Northern. They exist only in terms of enabling posting of incoming credit from other colleges which offer these courses:

130 — PATROL, COMMUNICATIONS AND INVESTIGATIONS  You will learn the functions of a patrol officer as that job relates to law enforcement. You will study effective communication skills, professional writing skills, and effective investigative skills associated with being the first responder at a crime scene. (6, 6T+0S)

235 — TRAFFIC, ENFORCEMENT AND ACCIDENT INVESTIGATION In this course, which encompasses the part of your training standards mandated by the New Mexico Law Enforcement Academy, you will gain the knowledge and skills necessary to recognize and properly enforce traffic laws in the State of New Mexico. (3, 3T+0S)

236 — POLICE PROFICIENCY I In this course, which encompasses that part of your training standards mandated by the New Mexico Law Enforcement Academy, you will learn the basic investigative skills with regard to solving criminal activities, such as auto theft, burglary, robbery, sex crimes, narcotics recognition, child abuse, and stalking. (3, 3T+0S)

237 — POLICE PROFICIENCY II In this course, which encompasses that part of your training standards mandated by the New Mexico Law Enforcement Academy, you will continue your study of investigative techniques and evidence gathering begun in LE 237. (3, 3T+0S)

238 — POLICE PROFICIENCY III In this course, which encompasses that part of your training standards mandated by the New Mexico Law Enforcement Academy, you will study defensive tactics, the use of force and firearms training. Prerequisite: LE 238. (3, 3T+0S)

239 — FIRST RESPONDER FOR LAW ENFORCEMENT You will complete American Red Cross courses in standard first aid, CPR, emergency childbirth, and the care and handling of injured persons. (1, 1+0S)

MATHEMATICS (MATH)

100N — FUNDAMENTALS OF MATHEMATICS Introduction to the mathematical method and its use in practical applications. Students will use fundamental operations with fractions, decimals and signed values; convert between fractions, decimals and percentages; apply the order of operations correctly; create algebraic expressions and equations; simplify algebraic expressions and equations; manipulate formulas; translate verbal statements into algebraic expressions and equations; solve linear equations; create tables and graphs; interpret graphs; and describe the results of problem solving orally and in writing. Grades are awarded on a CR/NC basis. Prerequisite: Adequate score on the Course Placement Exam. (4, 4T+0L)

100NL — FUNDAMENTALS OF MATHEMATICS AND LAB This course will cover basic operations (addition, subtraction, multiplication and division) with numbers in addition to all the topics listed in MATH 100N. Students will also spend additional time in a computer lab. Grades are awarded on a CR/NC basis. (5, 4T+1L)

Strikethrough indicates courses that are no longer offered.
102N  BASIC ALGEBRA  First complete course in algebra for those not prepared for college-level algebra. Students will learn ratio and proportion, solutions of linear equations and systems of linear equations, exponents, radicals, graphs, factoring, quadratic equations, rational expressions, polynomials, inequalities and applications involving the previous concepts. Grades are awarded on a CR/NC basis. **Prerequisite:** MATH 100N or adequate score on Course Placement Evaluation. (4, 4T+0L)

129  PROBLEM SOLVING METHODS  This course presents strategies for solving mathematical problems for non-math majors. Topics include the review of the number system, algebraic graphs and functions, linear and exponential equations, systems of linear equations in two variables, the metric system, conversions and geometry. **Prerequisite:** MATH 102N. (4,4T+0L)

130  INTERMEDIATE ALGEBRA  The course will cover graphing, linear functions, solving linear equations and inequalities, solving two equations and two unknowns, absolute value equations and inequalities, multiplying and factoring polynomials, operations with rational expressions, simplifying, dividing and multiplying radical expressions, the quadratic formula, and applications and word problems using the above concepts. **Prerequisite:** MATH 129 or 64-69 on Accuplacer. (Fall, Spring) (4, 4T+0L)

130L  ACCELERATED INTERMEDIATE ALGEBRA AND LAB  This course covers all the topics in MATH 130. However students will spend additional time in a computer lab. **Prerequisite:** Math 100N or 100NL or 41-63 on Accuplacer. (5, 4T+1L)

145  INTRODUCTION TO PROBABILITY & STATISTICS  This course will cover descriptive statistics including frequency distributions, means, median, mode, standard deviation, the normal curve, the binomial distribution, correlation and linear regression. Probability and counting principles will also be studied. Topics in inferential statistics that will be covered include hypothesis testing, the sign-test, z-test, t-test (one- and two-samples) and confidence intervals. **Prerequisite:** MATH 130L or MATH 130. (3, 3T+0S)

150  COLLEGE ALGEBRA  This course will examine functions and their graphs, linear and quadratic functions and optimization problems, polynomial, rational, exponential, and logarithmic functions and their applications, as well as linear systems of equations, matrices, and Gaussian elimination. **Prerequisite:** MATH 130L or MATH 130. (3, 3T+0S)

151  CONCEPTUAL MATHEMATICS  This course is a survey of mathematical topics. It emphasizes general problem-solving skills and applications of mathematics in various disciplines. The topics that will be covered include the evolution of number systems, basic geometry, and probability. **Prerequisite:** MATH 129 or MATH 130L or MATH 130. (3, 3T+0S)

155  TRIGONOMETRY and PRE-CALCULUS  This course serves as preparation for calculus. The course covers the definition of trigonometric functions, radian and degree measure, inverse trigonometric functions, graphs of trigonometric and inverse trigonometric functions, trigonometric identities, circular functions, triangles, vectors, complex numbers, polar coordinates and graphs. This course also contains more advanced pre-calculus concepts: conic sections, parametric equations, exponential and logarithmic functions and applications in geometry. **Prerequisite:** MATH 150. (3, 3T+0S)

162  CALCULUS I  The course will cover functions, limits and continuity, differentiation (including derivatives of trigonometric functions, and product, quotient, and chain rule), implicit differentiation, related rates, extrema and applications of differentiation, the definite and indefinite integral, Riemann sums, Fundamental Theorem of Calculus and integration by substitution. **Prerequisite:** MATH 155. (4, 4T+0L)

162E  CALCULUS I FOR ENGINEERS  This course is intended for engineering majors and will examine Calculus I in more depth and rigor. The course will cover functions, limits and
continuity, differentiation, related rates, extrema and applications of differentiation, the indefinite and definite integral, Riemann sums, Fundamental Theorem of Calculus and integration by substitution. **Prerequisite:** Math 155 (Cross-list with Math 162). (4, 4T+0S)

163 CALCULUS II  Calculus II continues the study of Calculus I and its applications to inverse functions, logarithmic, exponential, inverse trigonometric and hyperbolic functions. Techniques of integration (integration by parts, trigonometric substitution and partial fractions) will be discussed. Areas, volumes, centroids and arc lengths will be computed using integrals. Sequences, series, series tests, power and Taylor series will be covered. **Prerequisite:** MATH 162. (4, 4T+0L)

163E CALCULUS II FOR ENGINEERS  Calculus II for Engineers continues the study of Calculus I and its application to inverse functions, logarithmic, exponential, inverse trigonometric and hyperbolic functions. Techniques of integration (integration by parts, trigonometric substitution and partial fractions) will be discussed. Areas, volumes, centroids and arc lengths will be computed using integrals. Sequences, series, series tests, power and Taylor series will be covered. **Prerequisite:** MATH 162E. (Cross-listed with Math 163). (4,4T+0L)

180 CALCULUS FOR BUSINESS AND LIFE SCIENCES  In this course, Calculus concepts will be introduced without trigonometry. Concepts studied include the definition and application of limits, derivatives and integrals. The course will also discuss the chain rule and optimization. Connections will be made to solving problems in business, life and social sciences. **Prerequisite:** MATH 150. (4, 4T+0L)

264 CALCULUS III  Parametric equations and vectors in the plane and in three-dimensional space, functions of several variables, extrema 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, infinite series and test for convergence and divergence, and differential equations. **Prerequisite:** MATH 163 or 163E. (4, 4T+0L)

275 INTRODUCTION TO NUMERICAL COMPUTING  This course will introduce solutions of non-linear equations of one variable, solutions of linear equations in many variables (matrices), interpolation, approximation of integration and differentiation of functions, computational solutions of initial-value problems for ordinary differential equations, and programming with mathematical software. **Prerequisite:** Math 163 and a computer language (3, 3T+0S)

290 UNDERGRADUATE RESEARCH EXPERIENCE IN MATHEMATICS  This is a computer-based experience in mathematical research. 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. **Prerequisite:** MATH 162 or 162E. (May be repeated for credit) (3, 3T+0L)

294 INTRODUCTION TO LINEAR ALGEBRA AND APPLICATIONS  This course will introduce systems of linear equations, Gaussian elimination, LU decomposition, matrix algebra and determinants, vector spaces, inner products, orthogonality, eigenvalues and eigenvectors and computational methods. **Prerequisite:** MATH 163 or 163E. (3, 3T+0S)

296 INTRODUCTION TO APPLIED ORDINARY DIFFERENTIAL EQUATIONS  The course will introduce solutions of first order differential equations (separable equations, exact equations and integrating factors), second order differential equations (homogeneous equations and characteristic equations, methods of undetermined coefficients, and variation of parameters), Laplace transforms, and applications to physics, mechanical and electrical systems and population dynamics. **Prerequisite:** MATH 163 or 163E. (3, 3T+0L)
311 **VECTOR ANALYSIS** This course will cover vector algebra, lines, planes, parametric curves, arc length, tangent and normal vectors and curvature of parametric curves, vector identities, gradients and directional derivatives, line, surface and volume integrals, divergence and curl of vector-valued functions, Gauss’s and Stokes’s theorems and geometric interpretations. **Prerequisite:** MATH 264. (3, 3T+0L)

312 **PARTIAL DIFFERENTIAL EQUATIONS** The course will cover the classification of partial differential equations, the heat, wave and Laplace’s equation, methods of solution of partial differential equations, separation of variables, Fourier series, Fourier transforms, Laplace transforms, coordinate transformations, and engineering and science applications. **Prerequisites:** MATH 264 and 316. (3, 3T+0L)

313 **COMPLEX VARIABLES FOR ENGINEERING** The course will cover the algebra of complex numbers, analytic functions and the Cauchy-Riemann equations, Cauchy’s integral theorem, conformal mapping, contour integration and residues. Applications in engineering and physical problems will be included. **Prerequisite:** MATH 264. (3, 3T+0L)

314 **LINEAR ALGEBRA WITH APPLICATIONS** The course will cover systems of linear equations, Gaussian elimination, LU decomposition, matrix algebra and determinants, least squares regression, vector spaces, inner products, orthogonality, eigenvalues, and eigenvectors, and computational methods. **Prerequisite:** MATH 163 or 163E. (3, 3T+0L)

316 **APPLIED ORDINARY DIFFERENTIAL EQUATIONS** The course will cover solutions of first order differential equations (separable equations, exact equations and integrating factors), second order differential equations (homogeneous equations and characteristic equations, method of undetermined coefficients, variation of parameters), Laplace transforms, series solutions, numerical methods, and applications to physics, mechanical and electrical systems and population dynamics. **Prerequisite:** MATH 163 or 163E. (Fall) (3, 3T+0L)

327 **DISCRETE STRUCTURES** The course will emphasize principles of discrete math, including mathematical logic, inductive and deductive reasoning, recursive methods, as well as concepts involving discrete structures and their connections to problems in science, technology, and engineering. **Prerequisite:** MATH 163 or 163E. (3, 3T+0L)

345 **ELEMENTS OF MATHEMATICAL STATISTICS AND PROBABILITY THEORY** Students will study probability theory, including combinatorics, probability densities, expectation, variance, correlation, estimation, confidence intervals, and hypothesis testing. Statistical tests (e.g. t-test, Chi-squared, ANOVA) will be discussed and used in applications related to biostatistics, social science and environmental science. **Prerequisite:** MATH 162 or 162E. (3, 3T+0L)

375 **NUMERICAL COMPUTING (WIC)** This course will cover solutions of nonlinear equations of one variable, solutions of linear equations in many variables (matrices), interpolation, techniques for approximation of integration and differentiation of functions, computational solutions of initial-value problems for ordinary differential equations, and programming with mathematical software. Students will be responsible for writing technical papers with citations describing the results of numerical computation. **Prerequisite:** MATH 163 or 163E and a computer language. (Spring) (3, 3T+0L)

395 **PRACTICUM IN MATHEMATICS** This course prepares the student to develop the skills to use mathematics and apply mathematical skills to model and solve a real life problem. The student will be involved in researching a topic of his/her choice under the guidance of a faculty member. The topic could be selected from any applied area: Biology, Engineering, Environmental Science, Physics, or Business, for example. **Prerequisite:** MATH 296 or MATH 316 or permission from the instructor. (3, 3T+0L)
MECHANICAL ENGINEERING TECHNOLOGY

401 ADVANCED CALCULUS I Students will undergo a rigorous study of the calculus of one variable, the definition of real numbers, sequences, limits, functions, continuity, differentiation, and integration. You will be responsible for understanding and constructing proofs. Prerequisites: MATH 264. (4, 4T+0S)

441 PROBABILITY The course will cover mathematical models for random experiments, random variables, expectation, discrete and continuous distributions, joint distributions, conditional probabilities, independence, laws of large numbers, the central limit theorem, and moment generation functions. Prerequisite: MATH 264. (3, 3T+0S)

464 APPLIED MATRIX THEORY The course will cover the theory of linear equations, matrix analysis of systems of linear differential equations, eigenvalues and eigenvectors, iterative methods for solving linear systems, variational principles, and generalized inverses. Prerequisite: MATH 314. (3, 3T+0S)

466 MATHEMATICAL METHODS IN SCIENCE AND ENGINEERING The course will cover special functions, tensor algebra, calculus of variations, integral equations, difference equations, and mathematical methods for solving differential equations. Prerequisites: MATH 312, 316. (3, 3T+0S)

MECHANICAL ENGINEERING TECHNOLOGY (MET)

201 APPLIED MECHANICS I The focus of this course is on learning the fundamentals of mechanics of bodies that are in static equilibrium. Students will learn conceptual skills that will build the foundation for performing force analysis of particles and rigid bodies in both two and three dimensions. Students will learn to draw the free-body-diagram and perform force and moment analysis. Students will apply concept of force and moment and couple to solve practical problems. Students will learn to analyze distributed force systems and forces in members of trusses and frames. They will apply concept of centroids, center of mass and center of gravity to solve mechanics problems. Finally, the students will learn concepts and applications on friction. Prerequisite: ENGR 215 (3, 3T+0L)

301 APPLIED MECHANICS II The focus of this course is on learning the mechanics of particles and rigid bodies that are in motion under the action of forces. Students will learn conceptual skills that will build the foundation for performing kinematic and kinetic analysis of particles, system of particles and rigid bodies for engineering applications. Student will be introduced to three-dimensional dynamics of rigid bodies. Students will learn to apply the concepts of work, energy and power to engineering problems. Prerequisite: MET 201 (2, 2T+0L)

302 STRENGTH AND PROPERTIES OF MATERIALS The focus of this course is on learning the fundamentals and applications of strength and properties of materials. Students will study stresses and strains in members subjected to tension, compression, torsion, and shear and bending. Concepts of combined and principle stresses, Mohr’s circle for plane stresses will be introduced. Students will learn to construct shear force and bending moment diagrams for beams. Students will analyze external and internal forces and moments in beams, bars, shafts, pressure vessels etc. Finally, students will be exposed to engineering applications involving combined loadings and to statically indeterminate members. Prerequisite: MET 201. (3, 3T+0L)

303 THERMODYNAMICS Students will study fundamental principles of thermodynamic equilibrium, thermodynamic properties and equations of state; first and second laws of thermodynamics and their application to second law analysis. Students will analyze heat engines and power and refrigeration cycles. Prerequisite: PHYS 216/L. (3, 3T+0L)

Numerical Control (CNC); Manufacturing economics and optimization of manufacturing processing systems. Prerequisite: DRFT 100. (3, 3T+0L)

421 HEAT TRANSFER The focus of this course is on learning the fundamentals of heat transfer mechanisms and to apply them on practical engineering problems. Students will study different modes of heat transfer such as conduction, convection and radiation and apply them to solve engineering problems. They will be introduced to both steady and unsteady heat conduction problems. Students will also study different heat exchangers and analyze their performance. Prerequisite: MET 317 (3, 3T+0L)

MUSIC (MUS)

All studio courses may be repeated without penalty; however, no course may be counted more than once toward graduation requirements.

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) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN MUSI 1113)

108 CLASS CLASSICAL GUITAR I You will the basic techniques of classical guitar, rudiments of music, and the history of classical guitar. (2, 1T+1S)

109 CLASS FOLKLORIC GUITAR I Basic instruction in folk guitar. (2, 1T+1S)

111 CLASS GUITAR I Basic instruction in classical guitar from beginning to intermediate level. (2, 1T+1S)

112 CLASS VOICE I Basic instruction in voice from beginning to intermediate levels. (2, 1T+1S)

113 CLASS VIOLIN Basic principles of playing violin: finger patterns, bowing and vibrato techniques. (2, 1T+1S)

114 CLASS 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 CLASS SAXOPHONE Basic instruction in saxophone from beginning to intermediate level. (2, 1T+1S)

117 CLASS BASS Basic instruction in bass from beginning to intermediate level. (2, 1T+1S)

123 DIGITAL AUDIO PRODUCTION You will explore the tools and techniques of digitized sound production by focusing on a series of individual and collaborative projects. Cross-listed as FDMA 120. (4, 3T+1S)

134 DIGITAL MUSIC PRODUCTION TECHNIQUES You will expand on the skills learned in Digital Audio Production and progress from the technical to the procedural and aesthetic aspects of recording. Cross-listed as FDMA 125. Prerequisite: FDMA 120 or MUS 123. (4, 3T+1S)

208 CLASS CLASSICAL GUITAR II You will continue your study of classical guitar (MUS 108) with more complex music, techniques, and rhythms, and emphasis on ornamentation and presentation of classical music. Prerequisite: MUS 108. (2, 1T+1S)

211 CLASS GUITAR II Continuation of MUS 111. Instruction in guitar from intermediate to advanced level. Prerequisite: MUS 111. (2, 1T+1S)

212 CLASS VOICE II In this continuation of MUS 112, you will be presented with more advanced development of singing techniques. Prerequisite: MUS 112. (2, 1T+1S)
213 WOMEN'S ENSEMBLE This is a class for female group vocal participation through study of choral signing techniques and choral literature. You will be required to sing parts. Prerequisite: MUS 112 or permission of instructor. (1, 0T+1S)

214 MIXED CHORUS You will be provided an opportunity for group vocal participation through study of singing techniques and song literature. Prerequisite: MUS 112. (1, 0T+1S)

215 MEN'S ENSEMBLE This is a class for group vocal participation for males through study of choral singing techniques and choral literature. You will be required to sing parts. Prerequisite: MUS 112 or permission of instructor. (1, 0T+1S)

217 GOSPEL CHOIR I A class for group vocal participation through study of song literature and performance of gospel music. Part singing will be included. (1, 0T+1S)

219 CLASS FOLKLORICA 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. Prerequisite: MUS 109. (2, 1T+1S)

220 MUSICA FOLKLORICA INSTRUMENTAL & VOCAL ENSEMBLE Studies song literature and performance of traditional and modern Hispanic folk songs. You will be selected by audition by the instructor. Includes performance for special occasions on and off campus. (1, 0T+1S)

223 CLASS FLAMENCO GUITAR II You will study the higher Flamenco forms such as the “Soleares, Bulerias, and Alegias.” Prerequisite: MUS 114. (2, 1T+1S)

225 MUSICA FOLKLORICA LA NUEVA CANCIÓN 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 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)

240 HISTORY OF ROCK, RAP AND POPULAR MUSIC Examines popular music, concentrating on the U.S. after 1950. Considers precursor styles (e.g. blues, folk) and contributions to new styles of popular music. Discusses the evolution of rap and rock from 1960 to the present. Also examines sub-genres, such as House music, Heavy Metal, etc. Prerequisite: ENG 109N. (Fall, Spring) (3, 3T+0S)

250 MUSIC FOR THE CLASSROOM TEACHER This is a multifaceted music skills course to assist Elementary Education majors in preparing and teaching music in their classrooms. No previous musical training is necessary. Prerequisite: ENG 109N. (3, 2T+1S)

257 GOSPEL CHOIR II A continuation of Gospel Choir I (MUS 217) with group vocal participation through study of song literature and performance of gospel music. Part singing will be included. (1, 0T+1S)

NURSING (NURS)
A grade of "C" or greater is considered passing for all 100, 200, 300, and 400 level nursing courses. Clinical courses are graded on a Credit/No Credit basis

When participation is required at a clinical setting, students are responsible for their own transportation.
100  **NURSE AIDE**  This course focuses on the acquisition of knowledge and skills necessary to serve in the capacity of nurse aide. Successful completion of the nurse aide course prepares the student for the New Mexico Certification Exam for Nurse Aide.  **Prerequisites:** ENG 108N and PD 108N;  **Co-requisite:** NURS 100L.  (Fall, Spring, Summer) (4,4T+0L)

100L  **NURSE AIDE LAB**  This course focuses on the application of nurse aide skills in simulated lab and clinical settings. Grades are awarded on a CR/NC basis.  **Co-requisite:** NURS 100.  (Fall, Spring, Summer) (1.5, 0T+1.5L)

106  **PHARMACOLOGY**  This course provides an introduction to the principles of pharmacology, including: pharmacokinetics, pharmacodynamics, medication interactions and potential adverse medication reactions. Emphasis is placed on drug classifications and nursing care related to the safe administration of medication to patients across the life span.  **Prerequisite:** Admission to the Nursing Program.  (Fall) (3, 3T+0L)

113  **NURSING FUNDAMENTALS**  This course provides an introduction to nursing and roles of the nurse as well as profession related and patient care concepts. Emphasis is placed on the nursing process, knowledge and skills needed to provide safe, quality care. The theoretical foundation for basic assessment and nursing skills is presented.  **Prerequisite:** Admission to the Nursing Program.  **Co-requisite:** NURS 113L  (Fall) (4, 4T + 0L)

113L  **NURSING FUNDAMENTALS CLINICAL**  The student is given an opportunity to demonstrate the skills acquired in NURS 113 in a skills laboratory setting.  **Prerequisite:** Admission to the Nursing Program.  **Co-requisite:** NURS 113.  (Fall) (2, 0T +2L)

114L  **INTRODUCTION TO HEALTH ASSESSMENT**  This course provides the framework for preparing students to perform comprehensive health assessments on patients across the lifespan. Emphasis is placed on taking a thorough nursing history, performing physiological, psychological, sociological, cultural, and spiritual assessments, as well as identification of stressors and health risks. Laboratory experiences provide an opportunity to practice assessment skills on patients across the lifespan in a variety of settings.  **Prerequisite:** Admission to the Nursing Program.  (Fall). (2, 0T, +2S)

119  **ROLE TRANSITION/PRACTICAL NURSE**  This course examines the role of the vocational prepared nurse in today's health care systems, including information specific to the discipline of practical nursing and the NCLEX-PN exam as well as the role and scope of the practice of the practical nurse related to the nursing process, management of care, legal responsibility, and accountability.  **Prerequisites:** NURS 106, NURS 113/L, NURS 114L, NURS 125/L, NURS 214/L.  **Co-requisites:** NURS 217/L, NURS 218/L, NURS 225/L.  (Fall) (2, 2T + 0L)

125  **MEDICAL SURGICAL NURSING I**  This course introduces nursing care and management of the adult client with common medical-surgical conditions.  **Prerequisite:** NURS 106, NURS 114L, NURS 113, NURS 113L.  **Co-requisite:** NURS 125L  (Spring) (3, 3T, 0L)

125L  **MEDICAL/SURGICAL NURSING I CLINICAL**  Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care to adults in a variety of settings.  **Prerequisite:** NURS 106, NURS 113/L, NURS 114L.  **Co-requisite:** NURS 125.  (Spring) (3, 0T,3L)

214  **PSYCHIATRIC MENTAL HEALTH NURSING**  This course focuses on the care of patients across the lifespan experiencing cognitive, mental and behavioral disorders. Emphasis is placed on management of patients facing emotional and psychological stressors as well as promoting and maintaining the mental health of individuals and families. Concepts of crisis intervention, therapeutic communication, anger management, and coping skills are integrated throughout the course. The community as a site for care and support
services is addressed. **Prerequisite:** NURS 106, NURS 113/L, NURS 114L. **Co-requisite:** NURS 214L. (Spring) (2, 2T, +0L)

**214L PSYCHIATRIC MENTAL HEALTH NURSING CLINICAL** Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care to patients in selected mental health settings. **Prerequisite:** NURS 106, NURS 113/L, NURS 114L. **Co-requisite:** NURS 214 (Spring) (1, 0T, +1L)

**Note:** NRS 2 = Completion of all first year nursing courses

**217 MATERNAL/NEWBORN NURSING** This course provides an integrative, family-centered approach to the care of mothers and newborns. Emphasis is placed on normal and high-risk pregnancies, normal growth and development, family dynamics and the promotion of healthy behaviors in patients. **Prerequisite:** NURS 2. **Co-requisite:** NURS 217L. (Fall) (2, 2T, +0L)

**217L MATERNAL NEWBORN NURSING CLINICAL** Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care to mothers and newborns in selected settings. **Prerequisite:** NRS 2. **Co-requisite:** NURS 217. (Fall) (1, 0T, +1L)

**218 PEDIATRIC NURSING** This course provides an integrative, family-centered approach to the care of children. Emphasis is placed on normal growth and development, family dynamics, common pediatric disorders and the promotion of healthy behaviors in patients. **Prerequisite:** NRS 2. **Co-requisite:** NURS 218L. (Fall) (2, 2T, +0L)

**218L PEDIATRIC NURSING CLINICAL** Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care to children in selected settings. **Prerequisite:** NRS 2. **Co-requisite:** NURS 218. (Fall) (1, 0T +1L)

**225 MEDICAL SURGICAL NURSING II** This course focuses on the care of adult clients with complex medical/surgical health problems. Emphasis is placed on helping clients and their families cope with alterations in body functions. Concepts of pharmacology, health promotion and education, evidence-based practice, and interdisciplinary collaboration will be integrated throughout the course. **Prerequisite:** NRS 2. **Co-requisite:** NURS 225L. (Fall) (3, 3T, + 0L)

**225L MEDICAL SURGICAL NURSING II CLINICAL** Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe care to clients and selected groups in a variety of settings. **Prerequisite:** NRS 2. **Co-requisite:** NURS 225. (Fall) (3, 0T, +3L)

**235 MEDICAL SURGICAL NURSING III** This course focuses on advanced concepts of nursing care as they relate to patients across the lifespan with complex, multisystem alterations in health. Emphasis is placed on implementing time management and organizational skills while managing the care of patients with multiple needs and collaborating with the interdisciplinary team. Complex clinical skills, as well as priority setting, clinical judgment, and tenets of legal and ethical practice, are integrated throughout the course. **Prerequisite:** NURS 225/L, NURS 217/L, NURS 218/L. **Co-requisite:** NURS 235L. (Spring) (3, 3T, + 0L)

**235L MEDICAL SURGICAL NURSING III CLINICAL** Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe care to clients and selected groups in a variety of settings. Experiences that facilitate entry into practice are included in this practicum. **Prerequisite:** NURS 217/L, NURS 218/L, NURS 225/L. **Co-requisite:** NURS 235. (Spring) (3, 0T, +3L)

**240 ROLE TRANSITION/RN** This course is offered in the final semester of nursing studies and prepares the student for taking the national board exam for RN licensure (NCLEX-
RN). The focus of this course is to provide the student with multiple opportunities to take NCLEX style tests, to build their test taking skills and strategies, to analyze and remediate questions, and to concentrate their study in the areas of needed knowledge. **Prerequisite:** NURS 217/L, NURS 218/L, NURS 225/L. (Spring) (2, 2T+ 0L)

**245 PATHOPHYSIOLOGY** This course focuses on the altered processes of human physiology. An emphasis is placed on exploring changes of biological process of the body and the effects on homeostasis. Alterations of health problems are studied along with the associated clinical manifestations and treatments. **Prerequisite:** BIOL 238/L. (Spring) (4, 4T, 0L)

**400 NURSING IN TRANSITION** This course examines the role of the baccalaureate prepared nurse in today's health care systems. Historic, contemporary and future roles of the nurse are addressed. Skills in scholarly exposition and the use of technology are developed. **Prerequisite:** Admission to the program. (2, 2T+0L)

**401 INTEGRAL NURSING THEORY** The Theory of Integral Nursing and Holistic Nursing Theories are explored. The concept of praxis is introduced. Florence Nightingale's legacy and philosophical foundation are included. Students develop skills related to concepts such as self-awareness, self-care, relationship-centered care, nurse as environment and reflective practice. The use of conscious intention is emphasized. Pre- or Co-requisite: NURS 400. (3, 3T+0L)

**410 AN INTEGRATED APPROACH TO EVIDENCE-BASED PRACTICE** This course examines research methodologies utilized in nursing research. Emphasis is on utilization of research findings to establish evidence-based nursing interventions. Students analyze research findings aimed at selected health concerns. Students explore definitions of evidence-based practice and examine how worldviews and theories influence research. **Prerequisites:** MATH 145; Pre or Co-requisite: NURS 400 and NURS 401. (3, 3T+0L)

**420 INTEGRAL HEALTH ASSESSMENT** This course emphasizes development of skills in health assessment of (allopathic) human systems. Alternative systems (i.e., Ayurvedic, Native American, Oriental Medicine, and Intuitive) are introduced. Skills in interviewing, history taking, physical examination, and documentation and use of assessment data in planning care are developed. Laboratory and selected clinical settings are used to practice skill development. The Theory of Integral Nursing is explored as a model to frame data collection, organization, and synthesis into a cohesive whole. Pre- or Co-requisites: NURS 400 and NURS 401. (3, 2T+1L)

**430 COMPLEMENTARY AND ALTERNATIVE THERAPIES IN NURSING** This course provides an introduction to evidence-based complementary and alternative approaches to health care. Students acquire knowledge related to alternative and complementary healing modalities that can be incorporated into professional nursing practice and self-care practices. Students experience and develop beginning skills in the provision of CAM modalities as they interact with practitioners in selected clinical settings. Pre or Co-requisite: NURS 400 and NURS 401. (3, 2T+1L)

**440 HEALTH ISSUES, POLICY AND POLITICS IN HEALTH CARE (WIC)** This course emphasizes empowering students with knowledge, skills, and attitudes to effect change in health policy to improve health care delivery. Students analyze contemporary health care issues of concern to nursing and learn strategies for effective involvement in policy-making decisions and policy implementation. Students examine work environments and the impact of organizational systems on the quality of care. Students apply the Theory of Integral Nursing to a current health policy issue in a position paper expressed orally to a group. Pre or Co-requisite: NURS 400 and NURS 401. (3, 3T+0L)
OFFICE ADMINISTRATION

450 COMMUNITY AND GLOBAL HEALTH I  This first of a 2-part course provides an overview of contemporary community health nursing practice. The influence of culture on healthcare beliefs and practices is emphasized. Self-care is linked to population health. Health problems of selected populations within New Mexico are examined. Public Health Nursing Competencies are linked with the Theory of Integral Nursing to form the basis for student’s learning experiences. Pre- or Co-requisites: NURS 400 and NURS 401, and strongly suggest NURS 410. (3, 3T+0L)

451 COMMUNITY AND GLOBAL HEALTH II  This second of a 2-part course examines global health issues in relationship to local, regional, and international nursing practice. Self-care is linked to global health. In this course students select and focus upon a global health issue relevant to local community nursing practice. A service learning project based upon the selected issue provides the focus of clinical experience. Prerequisite: NURS 450. (4, 3T+1L)

460 INTEGRAL COMMUNICATION AND TEACHING  This course examines communication techniques, coaching, and teaching strategies, to enhance and facilitate cognitive and behavioral change. Students demonstrate principles of Integral Health Coaching, Motivational Interviewing, and Non-Violent Communication. Students implement an evidence-based service learning teaching project. Prerequisite: NURS 401. (2, 2T+0L)

470 TRANSFORMATIONAL LEADERSHIP IN NURSING  This course focuses on the principles of transformational leadership as applied to the nurse leader at the bedside, within an organization, in the community, and in the profession. The student is introduced to Complexity Science, Appreciative Inquiry, and Emotional Intelligence. Self-care is promoted as a leadership quality. Career advancement through lifelong learning is emphasized. Prerequisite: NURS 401. (4, 4T+0L)

480 INTEGRAL NURSING CAPSTONE COURSE  This capstone course emphasizes reflection, integration, and synthesis of concepts from previous courses. It is primarily a self-directed course, and is based upon the creation of a senior portfolio which demonstrates learning in cognitive, affective, and psychomotor domains. The portfolio is designed to demonstrate evidence of mastery of program objectives and serves as an assessment of student learning. The portfolio includes evidence of ability to conduct integral health assessments and evidence of ability to develop and implement service learning projects. Students include evidence of skill development in the use of complementary/alternative therapies in nursing practice. A reflective essay and a plan for continued professional and personal development is included in the portfolio. Pre- or Co-requisites: All Nursing courses. (2, 2T+0L)

OFFICE ADMINISTRATION (OA)

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+S)

115 RECORD/INFORMATION MANAGEMENT  The purpose of this course is to introduce individuals to the essentials of records and recordkeeping systems in organizations. The impact of electronic records will be particular focus. In this course, records management (RM) includes both traditional records management plus challenges by modern information communication technologies (ICT). Students will also review software tools and technologies for managing records in the modern organization. (Fall) (3, 3T+0S)

117 BUSINESS MATH  This course teaches basic math skills for financial situations. A student will learn how to calculate payroll, asset valuation, interest and retail evaluations. (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)

135 INTRODUCTION TO ACCOUNTING Studies basic accounting principles and conceptual framework. Places heavy emphasis on the accounting model. (3, 3T+0S)

151 INTRODUCTION TO MS PUBLISHER Introduction to electronic desktop publishing, focusing on how to design and edit publications for use in a variety of personal and business applications. (1, 1T+0S)

236 ADMINISTRATIVE PROCEDURES You will study office procedures, technology, records management, human relations, ethics, and telecommunications. Prerequisites: OA 115, ENG 111, and BA 200. (Spring) (3, 3T+0S)

240 INTRODUCTION TO MICROSOFT PROJECT This course teaches the basics of using Microsoft Project to help you manage projects, keep track of deadlines, resources, task distribution, constraints and contingencies. This is an inter-disciplinary course designed to assist in meeting project deadlines in all fields of study. (Fall) (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. (3, 3T+0S)

266 MICROSOFT OFFICE SPECIALIST TRAINING This course will focus on advanced training in the use of the Microsoft Suite of software applications (Word, Excel, PowerPoint, and Access) in preparation to take the Microsoft Office User Specialist Exam (MOUS). Prerequisites: BCIS 225, or BCIS 226 or, BCIS 249 or BCIS 265. (Spring) (1, 1T+0S)

PERSONAL DEVELOPMENT (PD)

108N BASIC COMPUTATIONAL SKILLS Develops proficiency in basic mathematical concepts, including addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals. You will also study the use of percentages, ratios, solving for one unknown (pre-algebra), and determining simple geometric areas. Math concepts are presented in a simple, logical, and applied way to prepare you for MATH 100N or above. CR/NC (Fall and Spring) (4, 3T+1L)

121N READING AND WRITING FOR COLLEGE SUCCESS This course focuses on the skills necessary to succeed in college courses, including skills in critical reading and writing, critical thinking, study strategies, computer literacy, time management, and goal setting. Students will also be exposed to the services offered by essential campus resources and learn strategies to best utilize those resources for academic success. (4, 4T+0S)

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. (1-3, 1-3T+0S)

PHILOSOPHY (PHIL)

Note: All 100 and 200 level courses have a prerequisite of ENG 109N or an adequate score on the Course Placement Evaluation.

111 HISTORY OF PHILOSOPHY Surveys the history of philosophical thought from the ancient Greeks to the present. (3, 3T+0S)
PHYSICS

220 ETHICS Survey of the development of morality, principles of individual and social behavior, and past and present ethical issues. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Fine Arts (NMCCN PHIL 2113)

250 CRITICAL THINKING You will develop skills for understanding and analyzing arguments in context by practicing the tools of traditional logic, including categorical logic and the identification of logical fallacies, through devoting attention to examining selections from academic texts from various disciplines. Your in-class work will be exercise intensive so as to learn critical thinking as a skill foundation for academic excellence. Prerequisite: ENG 111. (3, 3T+0S)

300 COMPARATIVE METAPHYSICS You will study texts from various cultures which show the metaphysical principles or assumptions regarding such matters as: whether time is linear or cyclical, and whether human beings are fundamentally individual or social. Prerequisite: PHIL 250. (Fall) (3, 3T+0S)

364 GREAT WORKS OF WESTERN PHILOSOPHY You will explore major works from the Western philosophical tradition, using varied texts based on student and instructor interest. You may take this course twice for credit (with permission of program director). Prerequisite: PHIL 250. (Fall) (3, 3T+0S)

366 GREAT WORKS OF ASIAN THOUGHT You will explore a selection of canonical readings from the classical Eastern traditions, including literary, philosophical, and religious writings of China, India, and Japan. You will use textual analysis which emphasizes recurrent, essential themes and concepts to highlight common themes between texts in an effort to identify the shared wisdom in these diverse traditions. Prerequisite: PHIL 250. (Spring) (3, 3T+0S)

452 PHILOSOPHY OF TECHNOLOGY You will examine technology in its distinctly Western form by tracing the essence of technology back to fundamental characteristics of Western thinking, beginning with the ancient Greek philosophers through contemporary philosophical analyses of technology. You will explore technology through popular works (such as film), which provide insight into the current human relationship to technology. Prerequisite: PHIL 250. (Spring) (3, 3T+0S)

PHYSICS (PHYS)

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 Motion in one/two dimensions, laws of motion, circular motion and applications of Newton’s laws, energy of a system and conservation of energy, linear momentum and collisions, angular momentum, oscillatory motion, wave motion and sound and superposition. Prerequisite: MATH 162 or ENGR 120; Co-requisite: PHYS 215L. [Fall, Spring, Summer] (3, 3T+0L)

215L ENGINEERING PHYSICS I LAB Co-requisite: PHYS 215. (1, 0T+1S)

216 ENGINEERING PHYSICS II Temperature and thermal expansion, ideal gas law, electric fields, electric potential, magnetism and optics. Prerequisite: PHYS 215/L; Co-requisite: PHYS 216L. (3, 3T+0L)
216L  ENGINEERING PHYSICS II LAB  Co-requisite: PHYS 216. (1, 0T+1L)

262  GENERAL PHYSICS  You will study optics and modern physics. Prerequisites: PHYS 122/L or PHYS 216/L; Co-requisite: PHYS 262L. (3, 3T+0L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN PHYS 2114 with lab)

262L  GENERAL PHYSICS LAB  You will engage in laboratory experiences supportive of PHYS 262, for which this course is a Co-requisite. (1, 0T+1L) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN PHYS 2113 with lecture)

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)

302  OPTICS  You will study geometrical optics, wave theory of light, Fresnel and Fraunhofer diffraction, polarization, absorption, dispersion, and scattering. Prerequisite: PHYS 262/L.

330  INTRODUCTION TO MODERN PHYSICS  You will study special relativity, quantum effects, quantum mechanics, atomic and subatomic physics, and the instruments of modern physics. Prerequisite: PHYS 262/L; Co-requisite: PHYS 330L. (3, 3T+0L)

330L  INTRODUCTION TO MODERN PHYSICS LAB  You will engage in laboratory experiences supportive of PHYS 330, for which this course is a Co-requisite. (1, 0T+1L)

331  THERMODYNAMICS AND STATISTICAL MECHANICS  You will study the concepts of heat and thermodynamics, large numbers and probability distributions, oscillator, spin and gas systems, simple interacting systems, and Fermi statistics. Prerequisites: MATH 311 and 314. (3, 3T+0L)

405  ELECTRICITY AND MAGNETISM  You will study electrostatics, the theory of dialectic materials, magnetostatics, the theory of magnetic materials, direct and alternating circuit theory, Maxwell equations, propagation, refraction and reflection of plane waves and wave guides. Prerequisites: MATH 311 and 312.

POLITICAL SCIENCE (PSCI)

Note: All courses have a prerequisite of ENG 109N or an adequate score on the Course Placement Evaluation.

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) Meets New Mexico Lower Division General Education Core Curriculum Area V Social and Behavioral Sciences (NMCCN POLS 1113)

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) Meets New Mexico Lower Division General Education Core Curriculum Area V Social and Behavioral Sciences (NMCCN POLS 1123)
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) Meets New Mexico Lower Division General Education Core Curriculum Area V Social and Behavioral Sciences. (NMCCN POLS 1213)

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)

Note: All 100 and 200 level courses have a prerequisite of ENG 109N or an adequate score on the Course Placement Evaluation, unless otherwise specified.

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) Meets New Mexico Lower Division General Education Core Curriculum Area IV Social and Behavioral Sciences (NMCCN PSY 1113)

140 INTRODUCTION TO SUBSTANCE ABUSE STUDIES  This survey course offers an overview of the biological, psychological, and sociological aspects of drug and alcohol abuse and addiction and an overview of substance abuse problems in the family, school, and industry. Consideration will be given to current research, attitudes towards drugs, theories of drug addiction and treatment, and Licensed Alcohol and Drug Abuse Counselor requirements in the state of New Mexico. Prerequisite: ENG 111 (3,3T+0S)

141 PSYCHOLOGY OF DRUG AND ALCOHOL ABUSE  The physiological and behavioral effects of alcohol and other drugs will be examined. Emphasis is placed on the psychopharmacology of commonly abused substances, the disease concepts of chemical dependency, and on current research. Prerequisite: ENG 111 (3, 3T+0S)

150 PERSONAL GROWTH  You will explore the personal development of one's mental, emotional, and physical state. You will study and discuss such interventions as nutrition, stress management, problem solving, and life-style changes. No Prerequisites. (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)

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 understanding 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 with basic counseling skills, including active listening techniques such as paraphrasing, summarization, attending behaviors, and focusing. Emphasis is on rehearsal of skills and on application of skills in personal, academic, therapeutic, individual, and group settings. (3, 3T+0S)

229 ADOLESCENT PSYCHOLOGY  You will study adolescent psychology from different theoretical perspectives, examining the process of development during adolescence including such topics as physiological, sexual, and emotional development, as well as the role of peer and family influences in the process of self-emergence and personal adjustment. (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)

250  DRUG AND ALCOHOL ASSESSMENT, REFERRAL, & TREATMENT METHODS  You will study twelve core functions and global criteria of the alcohol and other substance abuse, including screening, intake, orientation, assessment, crisis intervention, treatment planning, counseling, case management, client education, referral, report and record keeping, and consultation with other professionals in regard to client treatment and services. Attention will be given to the ethical considerations involved in the therapeutic process. In this course you will devote six clock hours to ethics of the substance abuse counselor. Pre- or Co-requisites: PSY 140, ENG 111. (3,3T+0S)

260  FAMILY SYSTEMS THEORY  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)

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)

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: PSY 275 and permission of the program director. (3, 3T+0S)

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. (Fall) (3, 3T+0S)

286  POSTTRAUMATIC STRESS DISORDER, DIAGNOSIS AND TREATMENT  The purpose of this course is to prepare students to serve as Trauma Stress Aides. Materials that inform understanding of the impact of psychological trauma, diagnosis, treatment strategies will be presented. Prerequisite: ENG 109 or passing score on the English Competency Exam. (3, 3T+0S)

290  DEVELOPMENTAL PSYCHOLOGY  You will study the more salient aspects of behavior and development through the lifespan from conception through old age, with emphasis on current research and theory. (3, 3T+0S)

301  BIOPSYCHOLOGY  You will explore the biological bases of behavior, learning how the biological perspectives are applied to understanding behavior including, but not limited to, anatomy and physiology of the brain, sensory systems, genetics, sexuality, hormones, neurotransmitters, and the biological basis of learning, memory, emotions, and stress. Prerequisites: ENG 111 and PSY 105. (3, 3T+0S)

302  ISSUES OF DEATH AND DYING  This course studies the issues of death and dying including individual and social perspectives, developmental understanding of death, impact of death on families, the stages of dying and grief and the legal and ethical issues regarding death and dying. Prerequisites: ENG 111, PSY 105 (3, 3T+0S)

305  POSITIVE PSYCHOLOGY  This course studies how human beings prosper in the face of adversity. Its goal is to identify and enhance the human strengths and virtues that make life worth living. Prerequisites: ENG 112 and PSY 105 (Fall, Spring, Summer) (3, 3T+0S)
321 RESEARCH DESIGN This course presents the methods of scientific research, using active learning and hands-on experiences, to include an emphasis in theory and in learning the basic skills of research methodology such as experimental and quasi-experimental design. There will be a module on ethics of research. The goal of this class is for the student to have acquired the skills necessary to conduct research in an independent research project. Offered only in the Fall. Students planning to graduate in May should take this course in the Fall before their projected Spring graduation. Prerequisites: ENG 111, PSY 150. Cross listed with CJ 321. (3, 3T+0S)

370 SOCIAL PSYCHOLOGY Students will explore factors that affect individual behavior in group situations; individual behavior with the family, at work, and in extreme situations such as combat; aggression, and conformity. Prerequisites: ENG 111, PSY 105. (3, 3T+0S)

400 SPECIAL TOPICS IN PSYCHOLOGY You may enroll in this course twice for credit as its content and focus will be on varied specialized fields in psychology. Prerequisites: ENG 111 and PSY 105. (3, 3T+0S)

410 COMPARATIVE PERSPECTIVES IN PSYCHOLOGY In this course, you will examine various theories related to the fundamental nature of the mind, mental states, and mental processes. Your study will emphasize traditional perspectives of the East and the West, giving careful consideration to questions concerning the relation between the mind and the physical world. Prerequisites: ENG 111 and PSY 105. (3, 3T+0S)

411 HUMAN ECOLOGY Because each of us contributes to the human ecological web, in this course you will explore how the human psychological perspective and environment are independent and interrelated. Prerequisites: ENG 111 and PSY 105. (3, 3T+0S)

421 INDEPENDENT RESEARCH PROJECT You will implement, interpret, and report on individually designed research projects. Prerequisite: PSY 321. (3, 3T+0S) Cross listed with CJ 421.

456 GRIEF THEORY AND PROCESS The student will study theories of grief and the grief process and models of bereavement examining the ethical issues involved in the grief process. Prerequisites: ENG111, PSY105 (3, 3T+0S)

477 PSYCHOLOGY OF GENDER AND SEXUALITY The student will explore issues in the behavior of men and women, including theoretical perspectives, stereotyping, gender differences, development, sexuality, and social and cultural problems. Prerequisites: ENG 111, PSY 105. (3, 3T+0S)

PUEBLO INDIAN STUDIES (PIS)

Note: All 200 level courses have a prerequisite of ENG 109N or adequate score on Course Placement Evaluation.

200 INTRODUCTION TO PUEBLO INDIAN STUDIES You will survey academic approaches, such as history, linguistics, and anthropology, to the study of Pueblo Indians and their neighbors. Prerequisite: ENG 109N. (Fall, Spring) (3, 3T+0S)

220 PUEBLO ARTS, CRAFTS, AND CULTURE You will be introduced to this course through stories which accompany hands-on learning in various arts and crafts as told in the Pueblos for daily life and the transmission of cultural practices and knowledge. The course is taught by social scientists, along with artists in beadwork, fabric work, wood carving, storytelling, and more. (3, 3T+0S)

240 RESEARCH TOPICS IN PUEBLO INDIAN STUDIES You will engage in directed one-on-one research topics related to Pueblo Indian Studies. May be repeated to a maximum of 6 credit hours. Prerequisite: permission of instructor. (1-6, 1-6T+0S)
242 **PUEBLO INDIAN WOMEN’S LIVES** You will survey anthropological, sociological, historical, life history, arts and crafts, and other writing by and about Pueblo Indian women. Topics may vary from term to term. (Fall) (3, 3T+0S)

245 **SPECIAL TOPICS IN TRIBAL LANGUAGES** This course will fulfill the college’s general education language requirement. Students will engage in direct language acquisition related to the course of the study of indigenous languages. Students will directly work with the tribal language program in which they have membership. *Prerequisite*: permission of instructor (Fall, Spring) (3, 3T+0S)

250 **INTERNSHIP IN TRIBAL LEADERSHIP, COMMUNICATION, AND TECHNOLOGY I**
You will do a Field Service Learning and Internship with the Pueblo in which you have membership. Permission of instructor. Graded CR/NC. (3, 0T+3L)

251 **INTERNSHIP IN TRIBAL LEADERSHIP, COMMUNICATION, AND TECHNOLOGY II**
This is a continuation of PIS 250. You will do a field service learning and internship. Permission of instructor. Graded CR/NC. (3, 0T+3L)

252 **PUEBLO INDIAN HISTORY** You will study academic approaches to historical studies of Pueblo Indians in New Mexico and Arizona from pre-Columbia to the present using archival sources, ethno-historical resources, and federal records. (3, 3T+0S)

256 **PUEBLO TRIBAL GOVERNMENTS** You will study the forms of government practices used by Pueblo Peoples at the time of contact with Europeans to the present. (3, 3T+0S)

258 **INDIAN GAMING, ENTREPRENEURSHIP, SOVEREIGNTY** You will survey games played by Pueblo Indians from earliest times to the present and how the establishment of casinos fits within these traditions. You will study the recent history of gaming from Bingo operations and the tribal court battles to the passage of the federal Indian Gaming Regulatory Act (1988). You will also explore and debate the importance of political and economic issues to Pueblo gaming. *Prerequisite*: ENG 111. Cross-listed as BA 258. (3, 3T+0S)

265 **NATIVE AMERICAN LITERATURE I** Involves a survey of Native American writing from the time of the European invasion to the present with an emphasis on contemporary authors. Cross-listed as ENG 265. *Prerequisite*: ENG 111. (3, 3T+0S)

266 **NATIVE AMERICAN LITERATURE II** Involves critical reading and discussions of writings by Native American writers of fiction (short stories and novels) and poetry. Cross-listed as ENG 266. *Prerequisite*: ENG 111. (3, 3T+0S)

346 **TOURISM AND THE ARTS IN NEW MEXICO PUEBLOS** As tourism and art production have become principal means for the Pueblo peoples of New Mexico to support their families and communities, you will study this course through a multi-lens perspective of this economic, cultural, and aesthetic reality using historical readings, short films, and visits to local museums and Pueblo artists’ galleries. *Prerequisites*: PIS 200 and ENG 111. (Fall, Spring). (3, 3T+0S)

370 **PUEBLO INDIANS AND EDUCATION** You will examine traditional ways of learning in Pueblo Indian cultures and compare those teaching methods with BIA and contemporary compact schools and public schools. *Prerequisites*: PIS 200 and ENG 111. (Fall, Spring) (3, 3T+0S)

372 **PUEBLO HEALTH CONCEPTS AND PRACTICES** You will examine Pueblo health care beliefs, values, and practices in modern life. *Prerequisites*: PIS 200 and ENG 111. (Fall, Spring) (3, 3T+0S)

381 **SPIRIT OF PLACE, NATIVE SENSES OF PLACE** You will examine the meaning of place in your life and its particular importance to understanding Native identity and culture. You will focus on how to relate place with examples of how Native writers, poets, artists,
storytellers, and other performers convey a “sense” or “spirit” of place in their work. Cross-listed as HUM 381. **Prerequisites:** PIS 200 and ENG 111. (Fall, Spring) (3, 3T+0S)

**386 SPECIAL TOPICS IN PIS** **Prerequisites:** PIS 200 and ENG 111. (Fall, Spring) (1-6, 1-6T+0L)

**458 ADVANCED RESEARCH** You will further develop research techniques applied throughout PIS courses through a focused, individual research project. **Prerequisite:** Permission of instructor. (Spring) (3, 3T+0S)

**483 TEWA ETHNOBIOLOGY: PLANTS AND ANIMALS OF THE TEWA WORLD** You will study, through lecture and field trips, how Tewa cultures reproduce knowledge of nature, including how indigenous plants and animals are named in Tewa dialect, as well as Spanish and English, and how those introduced by Spanish and American settlers became incorporated into Tewa culture. **Prerequisites:** PIS 200 and ENG 111. (Fall, Spring) (3, 3T+0S)

**484 AGRICULTURE PRACTICES OF THE PUEBLO WORLD** You will study diverse agricultural practices used by Eastern and Western Pueblos from pre-Columbian times to the present. **Prerequisites:** PIS 200 and ENG 111 (Fall, Spring) (3, 3T+0S)

**488 PUEBLO INDIAN STUDIES SENIOR SEMINAR** This is your capstone course which is designed to bring Integrated Studies students together in your final semester for an intensive review of materials covered in your full course of study. **Prerequisite:** PIS 458. (Spring) (3, 3T+0S)

**RADIATION PROTECTION (RDPR)**

**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. Cross-listed as ES 333. (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. (Fall only) (4, 3T+1S)

**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, 3T+1S)

**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. (Summer only) (4, 4T+0L)

The following course is not taught at Northern. It exists only in terms of enabling posting of incoming credit from agencies providing this training.

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 in 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 radiation-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)

READING IMPROVEMENT / RENEWABLE ENERGY

RENEWABLE ENERGY (RE)

103 RENEWABLE ENERGY INTRODUCTION AND OVERVIEW  In this course you will view the past, present, and future fields of renewable energy used to: heat, light, and cool buildings; produce domestic hot water; power, heat, and cool industrial processes; provide transportation; and provide communications. You will cover many systems: passive, active, and photovoltaic solar; wind; micro-hydro; wave; geothermal; biomass; fuel cells; human and animal power; and hydrogen. You will also cover vehicle fuels, such as ethanol, biodiesel, CNG, along with electric and hybrid systems, regenerative braking, and flywheels. Classes will be conducted both on- and off-campus. Prerequisite: ENG 108N and MATH 100N. (3, 3T+0S)

108 ACTIVE SOLAR HEATING  Solar energy can supply heat for buildings, domestic hot water, and industrial processes. Active systems acquire heat with collectors; distribute the heat with fluids driven by pumps or blowers; store the heat in liquids, solids, or change-of-state materials; and control the process with electrical or electronic sensors and controls. In this course you will analyze requirements and match needs with appropriate systems. Recommended Co-requisite: RE 108L. (3, 3T+0S)
108L  SOLAR ENERGY LAB  Working with components of both active and passive solar heating systems: flat plate and concentrating collectors; heat transfer gasses, liquids, and solids; monitoring, control, and distribution systems; glazing, selective surfaces; and low emissivity materials. You will cover heat storage in liquids, solid, and change-of-state materials, with an emphasis on mounting components, pipe and duct connections, and safety. Classes will take place on- and off-campus. Recommended Co-requisite: RE 108 or ADOB 107. (2, 0T+2S)

111  BEGINNING PHOTOVOLTAIC INSTALLATION  Introduction to photovoltaic energy and photovoltaic (PV) system installation. Includes markets and applications, safety basics, electricity basics, energy efficient appliances, solar energy fundamentals, photovoltaic materials, module fundamentals, concentrators, system components, system sizing, electrical design, mechanical design, and performance analysis and troubleshooting. This course specifically provides preparation for the North American Board of Certified Energy Practitioners (NABCEP) Photovoltaic Installer Certification exam. (Fall, Summer, Spring) (3, 1T+2S)

112  ROOF MOUNTING FOR SOLAR INSTALLATION  Techniques and skills for Photovoltaic (PV) installers to size, design, and install solar panels. An introduction to different types of mounting systems, site location of panels, orientation to house, shading at the site, weather, roof materials, soil and load bearing capacity. (Fall, Spring, Summer) (4, 2T+2S)

127  GEOTHERMAL SYSTEMS FOR HEAT AND POWER  You will discuss the full range of geothermal systems, from their origins and uses to how geothermal energy can provide industrial process heat and electrical energy. Classes will take place on- and off-campus. Prerequisite: RE 103. (4, 2T+2S)

128  BIOMASS SYSTEMS FOR HEAT, POWER, AND COGENERATION  You will study biomass, a wide range of heat and energy productions systems that use plant materials. You will also study the range of equipment: from the fire pit to the highly efficient nearly zero-emitting industrial furnaces. You will be introduced to coal-fired power plants, carbon material, and carbon-neutral and carbon-sequestering concepts. You will work with small scale systems and equipment both on- and off-campus. Prerequisite: RE 103. (4, 2T+2S)

129  TRENDS AND EMERGING ENERGY SOURCES  You will use this class as a forum to research, discuss, and forecast emerging trends in the field of renewable and emerging energy sources, which have been around for a long time and have now grained international attention and a high status not previously enjoyed to the extent that homeowners, garage scientists, multinational companies and national governments are focused on incremental developments and giant leaps into new technologies. Prerequisite: RE 103. (2, 2T+0s)

207  WIND ENERGY SYSTEMS DESIGN AND INSTALLATION  In this course you will study and discuss electrical energy production from the wind, including mechanical windmill water pumps; generator types from propeller driven units on towers to vertical axis turbines and emerging designs; the installation and maintenance of systems and safety concerns. Classes will take place on- and off-campus. Prerequisites: ENG 108N, MATH 100N, RE 103, and ECET 160. Recommended Co-requisite: ELEC 190. (4, 2T+2S)

208  PHOTOVOLTAIC SYSTEMS DESIGN AND INSTALLATION  In this course, you will cover the rapidly developing technology dealing with electrical energy production from the sun. You will study the contrasts between AC versus DC, and grid-tied versus stand-alone systems. You will discuss collectors, batteries, control systems, disconnects, over-current protection and distribution to structures, with an emphasis on the installation and mainte-
nance of systems and safety concerns. Classes will take place on- and off-campus. Prereq-
usites: ENG 108N, MATH 100N, RE 103. Recommended Co-requisite: ELEC 190. (4, 2T+2S)

212 ADVANCED PHOTOVOLTAIC INSTALLATION Continuation of RE111. Includes advanced photovoltaic (PV) energy and system installation training, safety basics, stand-
alone PV system sizing, grid-tied system sizing, National Electric Code (NEC), compliant wire sizing, grounding of PV systems, site analysis and array mounting, and PV system commissioning, troubleshooting, maintenance and performance evaluation. This course specifically provides preparation for the North American Board of Certified Energy Practitio-
ners (NABCEP) Photovoltaic Installer Advanced Certification exam. (Fall, Spring, Summer) (3, 1T+2S)

SOCIOLOGY (SOC)

Note: All courses have a prerequisite of ENG 109N, or adequate score on the Course Place-
ment Evaluation.

101 INTRODUCTION TO SOCIOLOGY Theorists and theories of human group behavior. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area IV Social and Behavioral Sciences (NMCCN SOC 1113)

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)

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 of 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 probable repercussions of those solutions; racism and prejudice, crime, sex roles, social stratification, ecology, drug abuse, and alcoholism. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area IV Social and Behavioral Sciences (NMCCN SOC 2113)

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) Meets New Mexico Lower Division General Education Core Curriculum Area IV Social and Behavioral Sciences (NMCCN SOC 2213)

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)
### SPANISH (SPAN)

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### SPECIAL EDUCATION (SPED) – ALTERNATIVE LICENSURE PROGRAM

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485/515  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. You will also participate in seminars and observe 10 hours of classroom instruction in the field. **Prerequisite:** passing NES, Essential Academic Skills (I, II, III). (3, 3T+0L)

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. **Prerequisite:** Passing NES, Essential Academic Skills (I, II, III); **Co-requisites:** Passing remaining NES Assessments required by the New Mexico Public Education Department (Competency, Content Knowledge and Reading if applicable.) (Cross-listed with ED 496). (1, 1T+0L)

497L  SUPERVISED FIELD EXPERIENCE LAB  Provides you with 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. Requires 100 (75 clock hours +25 Assessment and Accountability Framework hours). Interaction with students on a one-to-one basis and in small group settings is provided. **Prerequisite:** passing NES, Essential Academic Skills (I, II, III). **Co-requisites:** Passing remaining NES Assessments required by the New Mexico Public Education Department (Competency, Content Knowledge and Reading if Elem) (Cross-listed with ED 496L). (3, 0T+3L)

**SPEECH (SPCH)**

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) Meets New Mexico Lower Division General Education Core Curriculum Area I Communications (NMCCN COMM 1113)

**THEATRE (THE)**

All studio courses may be repeated without penalty; however, no course may be counted more than once toward graduation requirements.

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. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area V Humanities and Behavioral Sciences (NMCCN THTR 1013)

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 preparing a resume with an 8”x10” headshot. (3, 2T+1S)

SPECIAL COURSES / TOPICS (TP)

147, 247 Lower division 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 an associate degree or certificate. (1-6)

399, 499 Upper division 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 hours of “TOPICS” courses may be applied toward completion of a baccalaureate degree. (1-6)

SPECIAL COURSES / INDEPENDENT STUDY (IS)

248, 398, 498 Reserved for students 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 an associate degree or certificate, or toward a baccalaureate degree (1-6)

Syllabi for all Special Courses must be on file at the Registrar’s Office prior to the first day of the semester in which the Topics or Independent Study course will be offered.
Administration, Faculty, and Staff

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                                       Director, Admissions & Recruitment
Jacob Pacheco, BA . . . . . . . . . Director, Financial Aid
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Richard Sedillo . . . . . . . . . . . . . . Student Life Coordinator
Tamara Trujillo, MA . . . . . . . . . Coordinator, Assessment and Accreditation
Tessie Lopez Trujillo, AAS . . . . . Payroll Manager
Patricia Trujillo, PhD . . . . . . . . . Director, Diversity and Equity
Verna Trujillo, MA . . . . . . . . . . Coordinator, Accessibility Resources Center
Stephanie Vigil-Roybal, MA . . . . Director, College Assistance Migrants Program
Gerald Wheeler, MS . . . . . . . . . . Registrar
Lisa Wilson, MA . . . . . . . . . . . . . . Director, Advisement & Student Success
FULL-TIME FACULTY

Sadia Ahmed, Assistant Professor
University of South Florida: PhD, 2014

Stephanie Amedeo-Marquez, Assistant Professor
University of New Mexico: PhD, 1985

Claudia Aprea, Associate Professor
University of Washington-Seattle: PhD, 1996

Lori Baca, Associate Professor
University of Phoenix: D.B.A., 2014

David Barton, Associate Professor
Pacifica Graduate Institute: PhD, 2006

Teresa Beaty, Assistant Professor
University of Texas at Arlington: PhD, 2014

Robert Beshara, Assistant Professor
University of West Georgia: PhD, 2018

Sarah Bogar, Assistant Professor
University of New Mexico: MSN, 2011

Rose Cavalcante, Associate Professor
Indiana University: PhD, 1998

Steven Cox, Assistant Professor
Rensselaer Polytechnic Institute: PhD, 1988

Betty Espinoza, Technical Assistant Professor
Northern New Mexico Community College: AAS, 1995

Christina Esquibel, Associate Professor
University of New Mexico: EdS, 2000

Lori Franklin, Associate Professor
California State University: MA, 1989

Mateo Frazier, Associate Professor
The New School: Media Studies, MA, 2010

Joaquin Gallegos, Assistant Professor
New Mexico State University: MS, 2007

Gloriadell Gonzales, Technical Assistant Professor
Northern New Mexico College: Certificate, 2008

Ana X. Gutiérrez Sisneros, Assistant Professor
New Mexico State University: PhD, 2017

Ruth Hidalgo, Assistant Professor
Florida State University: PhD, 1997
Ajit Hira, Associate Professor  
University of Texas–Arlington: PhD, 1990

Joan Hodge, Assistant Professor  
University of Texas–Austin: MSN, 1976

Mario Izaguirre-Sierra, Associate Professor  
John Innes Center, East Anglia University: PhD, 2009

Thomas Javarinis, Assistant Professor  
Capella University: PhD, 2005

Pamela Lapcevic, Associate Professor  
New Mexico Highlands University: MA, 2009

David Lindblom, Assistant Professor  
Institute of American Indian Arts: MFA, 2016

Brenda Linnell, Associate Professor  
University of Texas–El Paso: PhD, 2011

Bryan Malone, Assistant Professor  
Colorado Technical University: DCS, 2014

Matthew J. Martinez, Associate Professor  
University of Minnesota: PhD, 2008

Patrick Mellon, Assistant Professor  
University of Louisiana: MBA, 1998

Ashis Nandy, Associate Professor  
Pennsylvania State University: PhD, 2012

Sushmita Nandy, Assistant Professor  
All India Institute of Medical Sciences, New Delhi, India: PhD, 2012

Veronica O’Halloran, Assistant Professor  
University of New Mexico: MSN, 2014

Pam Piccolo, Assistant Professor  
St. John’s College: MA, 2003

Tyagi Ramakrishnan, Assistant Professor  
University of South Florida: PhD, 2017

Anne Reines, Assistant Professor  
University of New Mexico: MSN, 2018

Ulises M. Ricoy, Associate Professor  
University of Texas San Antonio: PhD, 2007

David Torres, Associate Professor  
University of New Mexico: PhD, 1996
Ellen Trabka, Associate Professor  
University of Massachusetts-Lowell: MSN, 1995

Patricia Trujillo, Associate Professor  
University of Texas-San Antonio: PhD, 2008

Ana Vasilic, Assistant Professor  
University of Delaware: PhD, 2009

Simon Vaz, Assistant Professor  
Nova Southeastern University: Ed.S., 2006

Susan Wayne, Instructor  
Stonybrook University: MSN, 1986

Rhiannon West, Assistant Professor  
University of New Mexico: PhD, 2013

Gretchen Williams, Assistant Professor  
Western Governors University: MSN, 2018

Heather Winterer, Associate Professor  
University of Nevada–Las Vegas: PhD, 2007

FACULTY AND STAFF EMERITUS

Cora Abeyta, Certificate  
Instructor Emeritus of Cosmetology, 1977-1983

Jose Griego, PhD  
President Emeritus, 2005-2009

Sigfredo Maestas, PhD  
President Emeritus, 1996-2005

Anthony Sena, PhD  
Professor Emeritus, 2015

Priscilla C. Trujillo, MA  
Executive Vice-President Emeritus, 1996-2003

Levi Valdez, MA  
Dean Emeritus, Continuing Education and Community Services, 1996-2001
FALL 2018

Deadline to Petition to Graduate in Fall 2018 ........................................ Fri., June 29
PAYMENT DEADLINE: pay in full, or 5% down plus a payment plan,
or be disenrolled ................................................... Fri., Aug. 3
Deadline for Degree & Certificate Students to Submit an Application
for Fall 2018 ........................................................... Fri., Aug. 10
Deadline for Non-Degree Students to Submit an Application
for Fall 2018 ....................................................... Thur., Aug. 16
REGISTRATION. .................................................. Mon., Apr 16-Sun. Aug. 19
Convocation ....................................................... Mon., Aug. 13
First day to use financial aid for bookstore charges ............................. Mon., Aug. 13
CLASSES BEGIN ............................................. Mon., Aug. 20
Late Registration (one day only) .................................. Mon., Aug. 20
Last Day to Change Schedule (Drops/Adds only) ......................... Fri., Aug. 24
Last Day to Receive a Refund for Texts through the Bookstore .......... Thur., Aug. 30
Last Day to Change from CR-AU/AU-CR ................................ Fri., Aug. 31
Last Day to Drop a Full-Term Course with 100% refund & without record ... Fri., Aug. 31
Holiday (Labor Day) ........................................... Mon., Sept. 3
Mid-Term Week ................................................. Oct. 8-12
Fall Break (no classes) ..................................... Mon.-Tues., Oct. 15-16
Mid-Term Grades Due ........................................ Wed., Oct 17
Faculty and Staff Development Day (no classes) ........................ Wed., Oct. 17
REGISTRATION FOR SPRING 2019 Begins ..................... Mon., Oct. 22
Last Day for Instructors to Initiate a Withdrawal ............................ Fri., Oct. 26
Last Day to Withdraw from a Full-Term Course ............................... Fri., Nov 9
Holiday (Veterans Day), No Classes ................................ Mon., Nov. 12
Deadline to Petition to Graduate in Spring 2019 ......................... Fri., Nov. 16
Thanksgiving Break .......................................... Wed-Sun., Nov. 21-25
Final Exams* .................................................... Sat.-Thurs., Dec. 8-13
*Exam make-up days in case of bad weather .......................... Fri.-Sat., Dec. 14-15
Last Day of Term ................................................ Fri., Dec. 14
Final Grades Due .................................................. Mon., Dec. 17
Winter Break (College Closed) .................................. Sat-Sun., Dec. 22-Jan 6, 2019

SPRING 2019

Deadline for Degree & Certificate Students to Submit an Application
for Spring 2019 ................................................... Mon., Dec 31
PAYMENT DEADLINE: pay in full, or 5% down plus a payment plan,
or be disenrolled ................................................. Mon, Jan. 7
Deadline for Non-Degree Students to Submit an Application
for Spring 2019 ................................................... Thur., Jan. 10
Convocation ....................................................... Mon., Jan 14
First day to use financial aid for bookstore charge ......................... Mon., Jan 14
REGISTRATION FOR SPRING 2019 ....................... Mon., Oct 22-Mon., Jan 21
Holiday (Martin Luther King Jr’s Birthday) .......................... Mon., Jan. 21
CLASSES BEGIN .............................................. Tues., Jan. 22
Late Registration (one day only) ................................... Tues., Jan.22
Last Day to Change Schedule (Drops/Adds only) ............Fri., Jan. 25
Last Day to Change from CR-AU/AU-CR .....................Fri., Feb. 1
Last Day to Drop a Full-Term Course with 100% Refund & without record Fri., Feb. 1
Last Day to Receive a Refund for Text through the Bookstore Mon., Feb. 4
Mid-Term Week ............................................. Mon.-Fri., March 11-15
Mid-Term Grades Due ........................................... Tues., March 19
Spring Break ............................................. Mon.-Sun., March 18-24
Last Day for Instructors to Initiate a Withdrawal ..........Fri., March 29
Last Day to Withdraw from a Full-Term Course ..........Fri., April 12
REGISTRATION FOR SUMMER AND FALL 2019 BEGINS ............ Mon., April 15
Holiday (Good Friday) ........................................... Fri., April 19
Deadline to Petition to Graduate in Summer 2019 ..........Fri., May 3
Deadline for Degree & Certificate Students to Submit an Application
  for Summer 2019 ........................................... Fri., May 10
Final Exams* .................................................. Sat.-Thur., May 11-16
Commencement Rehearsal ....................................... Thur., May 16
Last Day of Term ............................................. Fri., May 17
*Exam make-up day in case of bad weather.....................Fri., May 17
COMMENCEMENT CEREMONY .................................. Sat., May 18
Final Grades Due ............................................. Mon., May 20

SUMMER 2019

PAYMENT DEADLINE: pay in full, or 5% down plus payment plan,
  or be disenrolled .............................................. Fri., May 17
First day to use financial aid for bookstore charges .......... Tues., May 28
Deadline for Non-Degree Students to Submit an Application
  for Summer 2019 ........................................... Thur., May 30
REGISTRATION ............................................. Mon., Apr 8-Sun., June 2
CLASSES BEGIN ............................................. Mon., June 3
Last Day to Change Schedule (Drops/Adds only) ............ Wed., June 5
Last Day to Change From CR-AU/AU-CR ..................... Fri., June 7
Last Day to Drop a Full-Term Course with 100% Refund & without record Fri., June 7
Last Day to Receive a Refund for Texts through the Bookstore Mon., June 10
Deadline to Petition to Graduate in Fall 2019 .............. Fri., June 28
Deadline to Petition to Graduate in Fall 2019 .............. Fri., June 28
Holiday (Independence Day) ................................. Thur., July 4
Last Day to Withdraw from a Full-Term Course ..........Fri., July 12
Last Day of Term .......................................... Fri., July 26
Final Grades Due .......................................... Mon., July 29
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