



**NORTHERN  
NEW MEXICO  
COLLEGE**

**FALL 2023 –  
SUMMER 2024  
CATALOG**



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# NORTHERN New Mexico College 2023 – 2024 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](http://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** P.O. Box 160, El Rito, NM 87530  
(575) 581-4100 / FAX (575) 581-4130

**ESPAÑOLA CAMPUS** 921 Paseo de Oñate, Española, NM 87532  
(505) 747-2100 / FAX (505) 747-2180

## LOCATIONS FOR PLUMBING & ELECTRICAL TECHNOLOGY PROGRAMS

In addition to El Rito, offices, training areas, and classroom locations include:

- 1789 Central Avenue Suites 7 & 8 Los Alamos, New Mexico 87544
- 411 Arizona SE Albuquerque, New Mexico 87108
- Española Valley High School- 1111 El Llano Road, Espanola, NM 87532
- Jemez Valley High School- 8501 NM-4, Jemez Pueblo, NM 87024
- Pojoaque Valley High School- 1574 State Road 502 West Santa Fe NM 87506
- Coronado High School-State Highway 96 -#1903, Galina NM 87017

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

Northern is accredited by the Higher Learning Commission, (800)621.7440, [www.hlcommission.org](http://www.hlcommission.org).

**Title IX Coordinator:** Donald Appiarius, EdD, Interim Dean of Students,  
(505) 747-2255, [titleix@nnmc.edu](mailto:titleix@nnmc.edu), Montoya Administration Office, M-F 8am–5pm.

**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)747.2138.

**Catalog Term:** August 15, 2023 through July 31, 2024

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Northern New Mexico College is an Equal Opportunity Employer and does not discriminate on the basis of race, color, religion or creed, national origin or ancestry, sex, gender, gender identity, sexual orientation, pregnancy, spousal affiliation, age, physical or mental disability, medical condition, veteran status, genetic information, citizenship and any other basis protected by law, in employment, admission to, participation in, or receipt of the services and benefits under any of its programs and activities.

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**Notes:**

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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



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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.

Northern continues to be an open-admissions institution offering the most affordable bachelor's programs in the Southwest, as well as other competitively priced programs. Now one of the state's four regional comprehensive institutions with its main campus in Española, NM, Northern offers more than 50 bachelor's, associate, and certificate programs in arts & human sciences, film & digital media, biology & environmental science, business, education, engineering, liberal arts, and nursing.

In 2019, legislative approval was given to Northern to start a co-located Branch Community College. The College reintroduced technical trades programs in electrical technology and plumbing, in partnership with two local unions and five public school districts through its new co-located Branch Community College, the first of its kind in the state's history.

Northern is fully accredited by the Higher Learning Commission (HLC) and has earned prestigious program-specific accreditations for its engineering, nursing, education, and business programs.

## **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 Programs in Information Engineering Technology and Electromechanical Engineering Technology** are accredited by the Engineering Tech-



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nology Accreditation Commission (ETAC) of ABET, [www.abet.org](http://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/](http://www.acenursing.org/commission-actions-spring-2017/) (404) 975-5000.

**The Department of Education** is accredited based on the Northern's College of Education BA in Elementary Education and Alternative Licensure programs are accredited based on the National Council for Accreditation of Teacher Education (NCATE)/CAEP standards..

**The Department 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](http://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. Additional locations for our Plumbing and Electrical Technology programs are listed on page 1.

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.

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# 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](http://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. For our Transfer of Credit Policy please go to Students > Admissions > Transfer Students > NNMC Transfer Policy at [www.nnmc.edu](http://www.nnmc.edu).

\* 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

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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 in 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, you are expected to meet the degree requirements of the current catalog. However, your Academic Advisor, with the approval of the Department Chair, may authorize you to graduate under a previous catalog as long as it is not more than five years old. Any exceptions to this policy require the approval of the Provost.

## **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. You will be able to register for your first semester classes, but a hold will be placed on your account until the College receives your official final transcript.

## **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

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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 and/or discussing with an advisor about other placement options.

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](mailto:forona@nnmc.edu)) for the necessary forms, or download the special application form from our web site at [www.nnmc.edu](http://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](http://www.nnmc.edu).

The Designated Service Officer at Northern is the Director of Admissions ([admissions@nnmc.edu](mailto: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

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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, general and course-specific fees (such as lab and media 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 third party fees (such as background checks or fingerprinting). 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).

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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 and/or the evaluation of your transcript.

### **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

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Education Department website at [www.hed.state.nm.us](http://www.hed.state.nm.us) for complete lists of courses.]

For our Transfer of Credit Policy please go to Students › Admissions › Transfer Students › NNMC Transfer Policy at [www.nnmc.edu](http://www.nnmc.edu).

## **DEPARTMENT OF ENGINEERING & TECHNOLOGY (DET) TRANSFER CREDIT**

DET will accept transfer of course/s with a final grade of “D” from accredited engineering programs, given “D” is a passing grade in the other institution/s. The DET chair/DET faculty will review the specific course prior to accepting it in the respective NNMC DET degree program.

## **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 General Education courses (see pages 21-23). For students enrolled at any public institution in New Mexico, courses which have been approved to be part of the statewide general education curriculum by the New Mexico Higher Education Department are guaranteed to transfer to any other New Mexico public institution in the area they were approved. Students should consult advisors at their current institution regarding which specific courses have been approved for Areas I-VI. Students should be aware that some general education courses approved only for Associate of Applied Science degrees may not transfer to Associate of Arts, Associate of Science, and/or Bachelor programs.

## **PRIOR LEARNING CREDIT**

Credit can be awarded for prior learning based on multiple factors, but is subject to academic department approval and will require submission of proof of prior learning experience. Students must complete the Prior Learning Credit Portfolio Application Form and submit the nonrefundable fee(s) to the cashier. The fee for submitting a portfolio for Prior Learning Credit is \$100 per credit hour (example, \$300 for a 3-credit hour course). This fee is nonrefundable regardless of approval decision.

When a student submits the Prior Learning Credit Portfolio Application form (with a copy of the receipt) to the department chair for final authorization, the department chair will assign two faculty reviewers for each portfolio submission. Maximum credit hours cannot exceed 30 credit hours for bachelor’s degrees and 15 hours for associate degrees. These limits of Prior Learning Credit include all methods of earning prior learning credits (such as CLEP, Locally-developed Exam, and Portfolio). Students may earn prior learning credit for general education, support courses, program specific



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courses, and elective courses.

For our Credit for Prior Learning Policy, please go to Students › Admissions › Transfer Students › Credit for Prior Learning at [www.nnmc.edu](http://www.nnmc.edu).

## 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](http://www.nnmc.edu).

For our Transfer of Credit Policy please go to Students › Admissions › Transfer Students › NNMC Transfer Policy at [www.nnmc.edu](http://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](http://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](http://www.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](http://www.nnmc.edu) email account regularly** for information being sent out from various departments at the college. If you have forgotten your [nnmc](http://www.nnmc.edu) email password, please contact IT Services at 505-747-2259

## ADMISSION / RE-ADMISSION OR RESIDENCY CLASSIFICATION APPEAL

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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 Advisement Center at Northern New Mexico College provides a full range of advising for students, including academic planning, course scheduling, and accessing resources. The First-Year Academic Advisors are committed to providing personal academic support and helping students navigate the college experience. All first-year students are required to meet with an advisor prior to registering for classes. This way we work together to ensure that students are on track with their degree plans and academic goals. We encourage students to meet with us several times over the course of the semester. Once students reach 30 credits, they will transition to their faculty advisor who will work closely with them to set goals and complete their program. Northern offers a variety of advising resources such as Accessibility Resource Center (ARC), Veteran's Resource Center Advisor, and Faculty Advising. Please contact the Advisement Center through our main email at [advisement@nnmc.edu](mailto:advisement@nnmc.edu) or the main phone line, 505 747 2150.

### PLACEMENT PROCEDURES

NNMC strives to place first year and entering students in the appropriate level Math and English classes to ensure preparation and skill attainment for success in college level courses. The College utilizes a Multiple Measure approach and considers the following factors in determining placement: Achievement in previous coursework through the examination of transcripts and consideration of GPA; Test scores when available, including Accuplacer, ACT, SAT, HiSET, or other approved exams; When necessary, performance on placement instruments developed by the NNMC Math and English departments. The First-Year Advisors will determine placement based on criteria set by the Math and English Academic Departments. If a student elects to appeal the placement, they will be referred to the chair of the appropriate department for consultation and potentially additional assessment. The full criteria and Test Score Charts are published on the Advisement Center web page and the Advising Procedure Manual.

1. Transfer students: NNMC will use your previous college transcripts to determine placement when equivalent courses are indicated.
- 2.

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2. Test scores will be used for placement if the test was taken within the last 3 years.

3. Re-testing: If you are not satisfied with your Accuplacer scores, you may re-test, but you will need to wait a minimum of one day and will be charged 12.00 to re-take 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.

## UNIT OF CREDIT POLICY

The assignment of semester credit is initially based on requirements set by the Higher Learning Commission (HLC) and corresponds to Carnegie Unit Guide lines and the federal definition of a credit hour<sup>1</sup>.

NNMC faculty determine credit hour values based on the number and type of tasks that enable the achievement of learning objectives and the estimated time needed by students to achieve the learning objectives.

In recognition of the dynamic nature of the online classroom and that classroom instruction may happen at any time, no distinction is made between classroom or faculty instruction and “out-of-class” student work. Time estimates for assigning credit hours are defined as the total time spent by students in fulfillment of course requirements, which may occur inside or outside the classroom or learning management system.

### There are three types of credit:

**Theory (T):** Students should expect to spend approximately three (3) hours per week per credit hour engaged in coursework. In the case of synchronous (real-time) instruction, the three hours corresponds to 50 minutes of delivery of instructional content and the remaining time dedicated to study or work. For purposes of calculating the total time equivalent to credits, a standard semester is defined as 16 weeks with 48 expected hours of work for the entire semester. Specific activities composing the total time spent vary for each course.

**Studio (S):** Students should expect to spend at least three (3) hours per week per credit hour engaged in coursework. In the case of synchronous (real-time) instruction, the three hours corresponds to 100 minutes of delivery of instructional content

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and the remaining time dedicated to study or work. For purposes of calculating the total time equivalent to credits, a standard semester is defined as 16 weeks with 48 expected hours of work for the entire semester. Specific activities composing the total time spent vary for each course.

**Lab (L):** Students should expect to spend at least four (4) hours per week per credit hour engaged in coursework. In the case of synchronous (real-time) instruction, the three hours corresponds to 150 minutes of experiential learning and the remaining time dedicated to study or work. For purposes of calculating the total time equivalent to credits, a standard semester is defined as 16 weeks with 48 expected hours of work for the entire semester. Specific activities composing the total time spent vary for each course.

Credit hours may be earned in short sessions (summer sessions, 8-week sessions, etc.) proportionately to those earned for the same activity during a regular term. This policy is applicable to all credit-bearing courses offered by NNMC, regardless of course level (undergraduate/certificate) and mode of delivery (e.g., face-to-face, online, hybrid). Courses will be periodically evaluated to ensure appropriate credit hours are achieved.

## 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). If a student needs to take more than 18 credits per semester, the student will require approval from the Department Chair that offers the program (or the Advisement Center) for non-degree seeking students.

### 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

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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 on the web at [www.enrollmentverify.org](http://www.enrollmentverify.org), and by mail: National Student Clearinghouse 2300 Dulles Station Boulevard, Suite 300, Herndon, Virginia 20171

Note that it is possible to verify only what you have done or are now doing, not what you intend to do. In other words, you may register in May or July for Fall courses; however, you cannot certify your enrollment for courses before the first day of class in any given term.

## 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.

Attendance is very relevant also for online courses. There is a definition later in the catalog under the Center for Distance Education section that discusses the expectations for attendance in online courses (see page 21).

*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

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**Federal Credit Hour Definition:** A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than: (1) one hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours. 34CFR 600.2 (11/1/2010).

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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 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: access to online courses will not be available until the first day of the semester.

#### Blackboard Orientation

It is recommended that all online students who need Blackboard assistance can find it by clicking on the Bb Student Guide located in the NNMC Student Help course menu in Bb. This brief tutorial provides an overview of Blackboard by topic another resource is Youtube where you will find an extensive collection of short "how to" videos.

#### 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

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interact with classmates. Self-direction, time management, and a dedicated study space are highly recommended.

### **Student Attendance**

Attendance in an online course is determined by students meeting deadlines and participating in a range of assigned and expected course activities stated by their instructor.

*Examples of “attendance” in an online class include:*

1. posting to discussion boards, blogs, and wikis
2. participating in group work
3. logging in and participating in a synchronous class meeting
4. submission of a quiz, exam, assignment or other assigned course work

Again, logging in to an online course does not meet the criteria for having good attendance.

Failure to “attend” an online class for two consecutive weeks without communicating with the instructor may, at the discretion of the instructor, be grounds for an Instructor Initiated Withdrawal from the course.

### **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 so you know the expectations for each of your NNMC college instructors.

### **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 laptop, tablet, or campus computers.
- 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 use with Zoom videoconferencing.
- 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](mailto:distanceed@nnmc.edu), or phone our Distance Education Support Line 505.747-2221 to set up an appointment, or visit the Center for Distance Education at [www.nnmc.edu](http://www.nnmc.edu) for additional information



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# 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):** Program course requirements

**2. Degree requirements:** The following General Education spread are minimum requirements throughout all *Associate of Applied Science (AAS)* and *Associate of Engineering (AEng)* degree majors shown in this catalog. The standards for *Associates of Art or Science* are much more detailed.

**Students will choose 12 credits from four different areas of the following six content areas, plus three (3) elective credits from Areas I-VI.**

- Area I. Communication;**
- Area II. Mathematics;**
- Area III. Science;**
- Area IV. Social and Behavioral science;**
- Area V. Humanities; and**
- Area VI. Creative and Fine arts.**

These are the general guidelines, but each AAS degree may have specific requirements within general education as well as additional requirements. The approved courses for Areas I-IV, are listed on the following page.

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.

## 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

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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.

### AREA I. COMMUNICATIONS (6 CR)

ENGL	1110	Composition I
ENGL	1120	Composition II
<i>or</i>		
ENGL	1210	Technical Communications

### AREA II. MATHEMATICS (3 CR)

*Choose one of the following:*

ENGR	1121L	Introduction to Math for Engineering Applications I
MATH	1350	Introduction to Statistics
MATH	1220	College Algebra
MATH	1130	Survey of Mathematics

### AREA III. SCIENCE (4 CR)

*Choose one of the following:*

ASTR	1115/L	Introduction to Astronomy with Lab
BIOL	1110/L	General Biology with Lab
BIOL	2210/L	Human Anatomy & Physiology I
CHEM	1120/L	Introduction to Chemistry (non majors) with Lab
ENGR	1101/L	Computer Science for All/Lab
ENVS	1110/L	Environmental Science I with Lab
GEOL	1110/L	Physical Geology with Lab
GEOL	2110/L	Historical Geology with Lab
PHYS	1230/L	Algebra-based Physics I with Lab
PHYS	1240/L	Algebra-based Physics II with Lab

*Or higher level 100 or 200 science courses with labs that are not also used for specific degree requirements.*

### AREA IV. SOCIAL AND BEHAVIORAL SCIENCES (3 CR)

*Choose one of the following*

ANTH	1140	Introduction to Cultural Anthropology
CJUS	1110	Introduction to Criminal Justice
POLS	1110	Introduction to Political Science
PSYC	1110	Introduction to Psychology
PSYC	2120	Developmental Psychology
SOCI	1110	Introduction to Sociology
SOCI	2210	Sociology of Deviance

### AREA V. HUMANITIES (3 CR)

*Choose one of the following:*

#### Humanities

GEOG	1120	World Regional Geography
HUMN	1110	Introduction to World Humanities I

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HUMN	2110	Introduction to World Humanities II
HUMN	1120	Search for Meaning
HUMN	2120	Comparative Religion
HUMN	2130	World Mythology

### History

HIST	1150	Western Civilization I
HIST	1160	Western Civilization II

### Philosophy

PHIL	1120	Logic, Reasoning and Critical Thinking
PHIL	2110	Introduction to Ethics

### Pueblo Indian Studies

PINS	1110	Introduction to Pueblo Indian Studies
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## AREA VI. FINE ARTS (3 CR)

*Choose one of the following:*

ARTS	1120	Introduction to Art
ARTS	1410	Introduction to Photography
FDMA	1110	Film History
FDMA	1210	Digital Video Production I

## ■ ADDITIONAL NINE CREDIT HOURS (“FLEXIBLE NINE”)

1) COMM 1130 Public Speaking

2) Civics Course: *Choose one of the following:*

POLS	1110	Introduction to Political Science
POLS	1120	American National Government
HIST	1110	United States History I
HIST	1120	United States History II
SOCI	2310	Contemporary Social Problems

3) Third course depends on whether the student is a STEM or Non-STEM major. However, if a student switches majors, the first course taken in this area will substitute for the requirement.

## NON-STEMH RECOMMENDATION

*Choose one of the following:*

### Literature Course

ENGL	1410	Introduction to Literature
ENGL	2310	Introduction to Creative Writing
ENGL	2650	World Literature I
ENGL	2660	World Literature II

*(Note that a course cannot count in two areas. For example, ENGL 2420 cannot count for Area V and for the additional 9 credit hours)*

## STEMH RECOMMENDATION

ENVS	2130	Critical Thinking in Science
PSYC	2120	Developmental Psychology (For nursing majors)

*(Note that this course cannot count both here and in Area IV)*

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**Total Gen Ed Credits required for baccalaureate degrees = 31 semester hours**

### **“FLEXIBLE NINE” COURSES**

In special circumstances, students may petition to substitute a General Education Flexible Nine course with another approved General Education course. These requests are for situations where it is difficult to take the approved Flexible Nine course and where the substitution will make it possible for the student to graduate without an additional semester of course work.

### **FOR PURPOSES OF MEETING GRADUATION REQUIREMENT**

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 PSYC 1110, 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:*

A+	4.33	Outstanding
A	4.00	Outstanding
A-	3.67	Outstanding
B+	3.33	Above Average
B	3.00	Above Average
B-	2.67	Above Average
C+	2.33	Average, Passing
C	2.00	Average, Passing
C-	1.67	Average, Passing*
D+	1.33	Below Passing*
D	1.00	Below Passing*
D-	0.67	Below Passing*
F	0.00	Not Passing
NF	0.00	Not Passing/No Show Failure
WF	0.00	Not Passing/Withdrawal after withdrawal deadline

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

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GPA. As of Spring Semester 2010, these grades are no longer used.

**NF–Not Passing/No Show Failure:** Faculty will award the grade of “NF” to any student who has not officially withdrawn but has stopped participating by the 60 percent point in the semester or part of term. The “NF” grade is equivalent to an “F.” A last date of attendance (LDA) is required when entering an “NF” grade.

**WF–Not Passing/Withdrawal After the Withdrawal Deadline:** A grade of “W” is automatically assigned for a withdrawal within the withdrawal period during a 16-week term or the withdrawal period for a part of term. A grade of “WF” is given for withdrawal after the official deadline to withdraw has passed, as noted in the academic calendar, and it is documented that the student has ceased to attend the class. A “WF” is factored into the GPA as zero points. This grading type would be applied by the Registrar during final grading for students that attempt to withdraw after the withdrawal period has ended.

**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 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

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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 assignation “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](http://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 instruc-

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tor 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/d eal 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](mailto: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 for Student Affairs shall communicate the final decision on the appeal to the Assistant Provost for Student Affairs, 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



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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 505.747.2115.

## **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 have 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

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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 transcript, 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 PHED course, an ARTS-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 different credit hour value, the value of the repeat course (the latest) will be used to calculate your cumulative GPA and to satisfy graduation requirements.

If you do not pass a course which is a prerequisite to enrolling in another, higher level course, you must repeat the prerequisite course before enrolling at the higher level. An example of this would be completing ENGL 109N with a grade of CR before being able to enroll in ENGL 1110.

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 appropriate entry posted to your transcript. In the absence of any other notation, you may assume that you are in Good Standing.

Your end-of-term standing (Good Standing, Dean’s List, Probation, or Suspension) is based on the total number of semester hours attempted and the GPA achieved for those credit hours and is 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 official 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 from the College Provost.

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*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 43.

## **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 Assistant Provost for Student Affairs. 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 through the Faculty Senate to the Provost for approval and forwarding to the Dean of Student Services for action.

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# 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, if you are pursuing a second degree, you may use the same General Education and required major core courses for both degrees as long as you take an additional 15 new hours for Associate degrees and 30 new hours for Bachelor degrees 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. An exception to the 40 credit hours of upper division exist for the RN to BSN bachelor program (please check the section of the program description)

6. You must complete an online *Graduation Application* as well as a *Graduation Application* form. This includes payment of the required graduation fee, (currently \$100.00 for 2022-2023); completing and obtaining signatures from your academic advisor and department chair; your academic department will submit the form to the Office of the Registrar once it is completed.

Applications are due by the by the first Friday of the month prior to 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 your Academic Chair will be notified that your graduation may be in jeopardy. You will begin to receive information from the Office of

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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 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	3.95–4.33 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

# TUITION & FEES (Fall 2023-Summer 2024)

Tuition, fees, and other charges are subject to change at any time by the College Board of Regents.

## TRADITIONAL FACE-TO-FACE PROGRAMS

NEW MEXICO RESIDENTS	TUITION	FEES*	TOTAL
1-11 hours, per credit hour (Part-time)	\$211.00	\$0	\$211.00
12 to 18 hours = block (Full-time)*	\$2532.00	\$0	\$2532.00
18+ hours (per credit hour)	\$211.00	\$0	\$211.00

SENIOR RESIDENTS Age 65+	TUITION	FEES*	TOTAL
Per credit hour (9 hours or less)	\$5.00	\$0	\$5.00
Per credit hour (more than 9 hours)	\$211.00	\$0	\$211.00

NON-RESIDENTS (including international students)	TUITION	FEES*	TOTAL
1-11 hours, per credit hour (Part-time)	\$597.00	\$0	\$597.00
12 to 18 hours = block (Full-time)	\$7164.00	\$0	\$7164.00

NON-RESIDENTS (WUE)**	TUITION	FEES*	TOTAL
1-11 hours, per credit hour (Part-time)	\$280.00	\$0	\$280.00
12 to 18 hours = block (Full-time)	\$3360.00	\$0	\$3360.00

COMMUNITY RATE (for art classes)	TUITION	FEES*	TOTAL
Per credit hour (6 hours or less)	\$100.00	\$0	\$100.00
Per credit hour (more than 6 hours)	\$211.00	\$0	\$211.00

TECHNICAL TRADES (Plumbing & Electrical Technology)	TUITION	FEES*	TOTAL
Resident/Non-Resident Per credit hour	\$110.00	\$0	\$110.00

Rates are for Associate/Certificate of Technical Trades programs. Students in this program do not pay online fees. Students who have more than one degree declared will pay the higher tuition rate.

### MILITARY (90% of any category above)

\* Students who take any online course (Web) while enrolled in a face-to-face program will pay an additional \$84/credit for that course. This additional cost will be coded in your bill as Web Course Tuition Adjustment.

\*\*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))

## ONLINE PROGRAMS (Business, Teacher Education, Upper Division RN to BSN)

NEW MEXICO RESIDENTS	TUITION	FEES*	TOTAL
1-11 hours, per credit hour (Part-time)	\$295.00	\$0	\$295.00
12 to 18 hours = block (Full-time)	\$3540.00	\$0	\$3540.00
18+ hours (per credit hour)	\$295.00	\$0	\$295.00

SENIOR RESIDENTS Age 65+	TUITION	FEES*	TOTAL
Per credit hour (9 hours or less)	\$5.00	\$0	\$5.00
Per credit hour (more than 9 hours)	\$295.00	\$0	\$295.00

NON-RESIDENTS (including international students and Upper Division Web RN to BSN courses)	TUITION	FEES*	TOTAL
1-11 hours, per credit hour (Part-time)	\$320.00	\$0	\$320.00
12 to 18 hours = block (Full-time)	\$3840.00	\$0	\$3840.00
18+ hours (per credit hour)	\$320.00	\$0	\$320.00

### MILITARY (90% of any category above)

\* Students who take any non-online course (i.e. TR) while enrolled in an online program will get a discount of \$84/credit for that course. The discount will be coded in your bill as Web Course Tuition Adjustment.

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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.

## Fees

### 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
Graduation Fee for Dual Credit students . . . . .	\$15.00
Cap & Gown. . . . .	\$40.00
Additional/replacement diplomas . . . . .	\$7.50
Official/Unofficial Transcript . . . . .	\$12.00
ID Card replacement . . . . .	\$5.00
Lab fee (per course). . . . .	\$78.38
Course Fee Field Experience. . . . .	\$78.38
CPR Cards & Textbook (HLED 1115/1120) . . . . .	\$21.00/\$50.00
EMT Basic Materials & Certification . . . . .	\$50.00
Institutional Testing (LDCE Exam) . . . . .	\$20.00
Capstone Test-Business . . . . .	\$25.00
In-house examinations (per course). . . . .	\$50.00
Prior Learning Assessment (PLA)	
Portfolio Evaluation . . . . .	\$100.00
Locally-developed Exam for PLA (per course). . . . .	\$50.00
CLEP/DSST examination (per course) . . . . .	\$15.00
GIS Industrial Certification . . . . .	\$245.00
Nursing Fees:	
Malpractice Liability Insurance. . . . .	\$15.00
Capitol Challenge . . . . .	\$45.00
Standard Nurse Testing . . . . .	\$713.50
Drug screen . . . . .	\$50.00
Nursing uniforms . . . . .	\$100.00
Nursing tote. . . . .	\$70.00

### ESTIMATED EXPENSES FOR NEW MEXICO RESIDENT PER SEMESTER

**Tuition:** see pertinent section about resident vs. non-resident on page 39.

**Books, Supplies, and Equipment:** \$600.00

**Living Expenses/Other:** \$650.00



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## 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.

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 by the published payment deadline.

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\*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.

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## 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.

Failure to submit authorizations, pay in full or enroll in a payment plan in a timely manner will result in disenrollment. Disenrollment is posted in the Academic Calendar.

## 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 six will be charged at the regular rate of \$211.00 per credit.

### 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].

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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. I

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

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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;

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(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. [5.7.18.9 NMAC—Rf, 5.7.18.11 & 12 NMAC, 8/30/2007; A, 5/30/2008

### 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 Education 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. 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.

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**E. 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 by forth by each eligible institution. The department will notify each eligible institution of the maximum waivers allocated on an annual basis.

**F. 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.

**G. 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.

**H. 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.

**I. 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:

COURSE LENGTH (in weeks)	PERCENTAGE OF REFUND		
	1st	2nd	3rd
16-longer	100%	100%	None
12-15	100%	100%	None

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9-11	100%	50%	None
8	100%	50%	None
6-7	100%	None	None
3-5	100%	None	None
1-2	None	None	None

*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](http://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 through 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” or “NF” 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:

COURSE LENGTH	DEADLINE TO WITHDRAW
2-7 days	before scheduled class
2 weeks	end 2nd day of course
3 weeks	end 1st week
4 weeks	end 2nd week
5 weeks	end 3rd week
6 weeks	end 4th week

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7 weeks	end 5th week
8 weeks	end 6th week
9 weeks	end 7th week
10 weeks	end 8th week
11 weeks	end 9th week
12 weeks	end 10th week
13 weeks	end 11th week
14-16 weeks	end 12th week

## 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

Northern's bookstore has migrated to BNC Virtual as our online textbook supplier, and will no longer be a physical brick-and-mortar store on campus. All course materials will continue to be purchased online.

For Returns, Tracking, Digital Support, & Online Orders: BNC Customer Service: 1 (800) 325-3252

For E-books/Digital Support: [digitalsupport@bncservices.com](mailto:digitalsupport@bncservices.com)

For more information please go to please go to Resources > Bookstore @Northern on our website at [www.nnmc.edu](http://www.nnmc.edu).

## 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



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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 *studentaid.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 Satisfactory Academic Progress–Undergraduate

In order to maintain eligibility for financial aid, a student must maintain satisfactory academic progress, which is measured quantitatively and qualitatively each academic term. For a student to be making satisfactory academic progress, the student must meet the following cumulative grade point average (GPA), pace of completion, and maximum time frame standards. Students who change majors will have their previously attempted and completed classes that count as credits toward their new major included in their Satisfactory Academic Progress (SAP) calculation.

## MINIMUM GPA

Students in all programs must maintain a cumulative GPA of 2.0 throughout their program. This applies to all programs.

*Important to know:*

1. NNMC does not round GPA for SAP purposes.
2. Only grades for classes that count or could count toward a students' declared program will be used in the GPA for SAP.
3. Remedial coursework will be calculated into your cumulative GPA. Remedial classes that do not issue a letter grade will have the equivalent of an A for the grade of CR and the equivalent of an F for the grade of NC.
4. Transfer credits are not included in the GPA.

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5. College credits taken during high school (aka Dual Credit) at Northern are included in the GPA.

6. For repeated classes, the highest grade is factored into the GPA.

7. Audited classes are not included in the GPA.

### **Pace of Completion**

Students must maintain a 67% completion rate throughout their program. This applies to all programs. This rate is determined by the following calculation:

Credits completed with a passing grade

÷ Credits attempted

= Completion rate of at least 67%

*Important to know:*

1. NNMC will use standard rounding rules for completion rate (i.e. we will round up .5 or higher and round down if below .5)

2. Only classes that count or could count toward a students' declared program will be used in the completion rate.

3. Remedial classes are not included in the completion rate.

4. Transfer credits, including college credits taken during high school (aka Dual Credit) with Northern, are included in both competed and attempted.

5. For SAP standards passing grades include A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D- and CR

6. Attempted credits include any class in which the student receives a letter grade including those noted above as passing and F, NF, WF, W, I, NC and NR

7. Repeated classes are included in both competed and attempted.

8. Audited classes are not included in the completion rate.

### **Maximum Time Frame**

This is based on the total credits required for the program, not the time a student is expected to complete the program. A student may attempt no more than 150% of the credit hours required by their declared program of study.

For example, a student enrolled in a bachelor's program that requires 120 credits must be able to complete their program within a maximum of 180 credits. A student is no longer eligible for financial aid as soon as it is determined they cannot complete their program within the maximum allowed attempted credits.

*Important to know:*

1. NNMC will use standard rounding rules for maximum time frame (i.e. we will round up .5 or higher and round down if below .5)

2. Only classes that count or could count toward a students' declared program will be used in the maximum time frame.

3. Remedial classes are not included in the maximum time frame.

4. Transfer credits, including college credits taken during high school (aka Dual Credit) with Northern, are included in both competed and attempted.

5. For SAP standards passing grades include A+, A, A-, B+, B, B-, C+, C, C-, D+, D, D- and CR

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6. Attempted credits include any class in which the student receives a letter grade including those noted above as passing and F, NF, WF, W, I, NC and NR
  7. Repeated classes are included in both completed and attempted.
  8. Audited classes are not included in the maximum time frame.

### **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:** A student placed on a warning may continue to receive financial aid for the assigned warning payment period/semester, but must meet the minimum SAP standards by the end of the warning semester.

- **Suspension:** If a student does not attain the required cumulative GPA and/or credit completion ratio by the end of the warning semester, 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 required SAP standards the student can formally appeal the suspension status by completing and submitting the Satisfactory Academic Progress Appeal Form for Financial Aid. Appeals and all required supplemental documentation must be submitted to the Financial Aid Office no later than 30 days after the first day of the semester for which a student is appealing. Incomplete appeals will not be reviewed. Some examples of extenuating circumstances might include:

- Severe illness, medical condition, or injury .
- Death of a family member.
- Traumatic life-altering event.

#### **A COMPLETE APPEAL INCLUDES:**

- Required documentation based on circumstance you are appealing under
- Complete and concise answers to all of the questions on the appeal form
- List of classes the student intends to take along with a plan to successfully complete each class. For example, attending tutoring, peer counselling, instructor check-ins, or meeting with a professional counselor. The student must have a proactive plan in which they will achieve a successful semester.

**APPEAL REVIEW:** All SAP appeals will be reviewed by a committee. Students will not be permitted to personally address the committee, so it is important that you submit all required documents with your appeal and answer all questions, in a clear and concise

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manner, on the appeal form. Committee decisions are final.

**APPROVED APPEAL:** If the appeal is approved, the student will be placed on an Academic Improvement Plan for which their financial aid eligibility will be reinstated. The student must meet the requirements of their plan each semester, until they achieve the minimum SAP standards, or they forfeit future aid eligibility.

**DENIED APPEAL:** If the appeal is denied, then the 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.

## **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. Some award amounts are prorated according to enrollment status (i.e., full-time,  $\frac{3}{4}$  time and half-time). Audited classes are not included toward financial aid enrollment requirements.

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 non-institutional charges. For example, books and supplies can be purchased with memoed financial aid if they are purchased with the Bookstore@Northern.

After the census date, which is always the third Friday of the term, funds will be disbursed to the student's accounts. Once all allowed and authorized charges are 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 of financial aid for students starting classes in the second half of the semester will happen approximately one week after the first date of attendance. Per federal regulation, single semester loans are issued in two disbursements; the first disbursement occurs when the loan process is completed and the second disbursement occurs after midterms.

## **WITHDRAWAL FROM COURSES AND THE RETURN OF TITLE IV FUNDS**

Title IV Federal Student Aid funds, commonly known as Federal Student Aid, 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 award 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.

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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 by means of the Return of Title IV calculation will be returned to the U.S. Department of Education in this order:

- Unsubsidized Direct Loan
- Subsidized Direct Loan
- Direct 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:** A federal grant provided by the federal government to undergraduate students who demonstrate exceptional financial need and have an Expected Family Contribution (EFC) below a certain threshold established by the federal government. The Pell Grant award amount is prorated based on Enrollment Status. The maximum amount for the 22-23 aid year is \$6,895.

**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):** Available to provide aid for New Mexico undergraduate students with substantial financial need. Award amount ranges from \$200 - \$1,200.

### 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

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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:*

**Federal Direct Student Loans (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](http://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](http://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 Opportunity Scholarship:** covers tuition and required fees for eligible New Mexico residents who are enrolled in a career training certificate, associate degree, or bachelor's degree. Students must be attending at least half time and have a cumulative GPA of 2.5.

**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 semes-

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ter 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 Student Scholarships:** The Northern Foundation, a non-profit 501(c) (3) corporation, has awarded scholarships to over 1500 qualified and deserving students. since 1996. Northern New Mexico College continues to provide institutional scholarships for students to help defray the cost of attending college.

**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:* HISET: 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:** 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.

## TUITION DISCOUNT PROGRAMS

**COMMUNITY RATE For Art Classes:** Northern also offers a Community Rate for art classes of \$100 per credit hour, or \$300 for a typical art class, all fees included. The Community Rate is designed for non-degree students of any age taking 6 credits or less.

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# 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. For assistance, please 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 30 students annually. For information, contact the CAMP Office at (505)747.5493.

## FIRST YEAR EXPERIENCE PROGRAM

Northern offers a unique array of programs and support services for first-year students. These include a First-Year Experience seminar, 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.

## MADRID CENTER PEER TUTORING SERVICES

NNMC offers free Peer Tutoring services for all students through one on one sessions and study groups. Our Peer Tutors can help with the following subjects: Accounting, Business, Biology, Chemistry, Human Anatomy and Physiology, Macroeconomics, Microeconomics, Physics, Statistics and Probability.



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Need help with a course not listed? Contact us and we can find someone to help you. Located at the Madrid Center in the Library and open Mon-Thurs from 12-6 pm and Fri from 12-4 pm. We also offer convenient online tutoring. For more information email [eagles.tutoring@nnmc.edu](mailto:eagles.tutoring@nnmc.edu) or call (505) 423-2321. Walk-ins welcome.

### **MATH CENTER**

Do you need to improve your math skills? The Math Center, located in the Ben Lujan Library, offers assistance through individual tutoring, study groups, and math tutorial software. To schedule an appointment or obtain more information please call 505.747.2164.

### **MENTAL HEALTH COUNSELING AND STUDENT SUPPORT SERVICES**

Mental health and substance abuse counseling services are free and confidential for all NNMC students. Counseling is provided by licensed professionals. No record of counseling is contained in any academic, educational, or job placement file. Referrals can be made by contacting us directly. Contact Counseling and Student Support Center (CASSC) staff at [cassc@nnmc.edu](mailto:cassc@nnmc.edu).

### **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 provide students with a variety of resources for career exploration and development, including career planning, internship opportunities, preparing for a job search, and finding employment. We also provide employers the opportunity to connect with our campus community. Contact: [studentjobs@nnmc.edu](mailto:studentjobs@nnmc.edu)

### **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 Life department. Activities range from social to athletic and cultural events. Opportunities exist for becoming a member of the Student Senate, Student Ambassadors or for joining one of the many student clubs and organization, 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

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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 automated food service at its Española campus.

## **BOOKSTORE SERVICES**

Bookstore @Northern has migrated to BNC Virtual as our online textbook supplier, and will no longer be a physical brick-and-mortar store on campus. All course materials will continue to be purchased online, and, eventually, so will general merchandise, including Eagle Spirit Gear and school supplies.

For Returns, Tracking, Digital Support, & Online Order contact BNC Customer Service at 1 (800) 325-3252

For E-books/Digital Support email [digitalsupport@bncservices.com](mailto:digitalsupport@bncservices.com)

For more information please go to [Resources](#) > [Bookstore@Northern](#) on our website at [www.nnmc.edu](http://www.nnmc.edu).

## **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.

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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](http://www.nnmc.edu), call 505.747.2243, or email [library@nnmc.edu](mailto: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**

NNMC values its employees and students and recognizes the importance that families play in our communities. The College desires to be a family friendly place of business for our employees and students; however, the workplace is not the appropriate place for childcare.

Our Children on Campus policy serves to address guidelines and foster respect for all parties impacted by the presence of non-student, minor children on the campus, in the workplace, or in the classroom. The college recognizes that family responsibilities may, in some circumstances, require the presence of a child on campus for a limited amount of time.

Anyone who brings a child to campus should be respectful of the needs of others to have a quiet educational and/or work setting. To protect the safety of young visitors and to avoid disruptive behavior, children accompanying employees, students, or visitors of NNMC must be under the supervision of a responsible adult while on NNMC property.

Employees of the college have assigned duties and cannot take supervisory responsibility for any unattended children of employees, students, or visitors. It is not appropriate for a nonstudent, minor child of any age to be in the workplace on a regular basis, including after school each school day or on regularly scheduled school holidays, or when they are too ill to go to school or childcare.

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This policy is not intended to prohibit appropriately supervised children from the campus when their purpose is to attend specific specified cultural events, sporting events, or to accompany students and families seeking advisement or information about the college. Please see our full policy and guidelines on our website at *nmmc.edu*.

## 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.

### 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.

### 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 States 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.

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## NM EDUCATIONAL OPPORTUNITY CENTER (EOC)

The Educational Opportunity Center (EOC) is a free TRIO program that helps adult learners pursue their college and career goals. EOC provides one-on-one counseling, guidance, and support to our participants in the areas of college admissions, college transfers, student success skills, financial aid, financial planning, career planning, and accessing resources and opportunities.

EOC specializes in working with individuals from backgrounds that are underrepresented in higher education such as first-generation, low income, differently abled, tribal affiliates, recovery and reentry, adults who previously left their last educational program before completion, and many more. Contact EOC at [eoc@nmmc.edu](mailto:eoc@nmmc.edu), (505) 747-2183, or (505) 695-4026.

## 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

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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:*

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- *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.

Complaints about failure of the College to comply with the Family Educational Rights and Privacy Act may be made, in writing, to the Family Policy Compliance Office, U.S. Department of Education, 600 Independence Avenue SW, Washington, D.C. 20202-4604.

**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](http://www.nnmc.edu).

## **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

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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](http://www.nmsexoffender.com)).

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

\* Commonly referred to as the Megan Act.

## 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 Transcript Request Form via Parchment Exchange–Leader in eTranscript Exchange to the Office of the Registrar. You may pick up a transcript request form at the Registrar's office, or download one from Northern's website for unofficial transcripts at the Office of the Registrar located in the *Students* menu. You can fax (505.747.5449) or email ([registrar@nmmc.edu](mailto:registrar@nmmc.edu)). Please allow five working days for processing. After the end of the semester or during registration periods, there will be a delay in processing. If you have questions, please call 505.747.2138. .

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 (Parchment) 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.

Transcripts can be delivered to academic institutions, prospective employers, and other recipients through this integrated Parchment 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.

## 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.



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## 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.

## 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.

## Standards of Conduct

Students at Northern are expected to act in a responsible manner and to abide by all College policies while they are matriculating students at Northern.

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 is incongruent with 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 New Mexico College Student Handbook contains detailed information concerning specific standards each students required to uphold, information about disciplinary sanctions which could be invoked for violations 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 maintained as a separate document. There are additional separate policies which are part of the Student Handbook and will be noted below.

## 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.

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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.

## **Title IX / Sexual Harassment & Gender Discrimination Policy**

[www.nnmc.edu/titleix](http://www.nnmc.edu/titleix)

Northern New Mexico College is committed to providing a learning and working environment free of all forms of harassment and discrimination for everyone in the College community.

Northern New Mexico College does not discriminate on the basis of race, color, religion or creed, national origin or ancestry, sex, gender, gender identity, sexual orientation, pregnancy, spousal affiliation, age, physical or mental disability, medical condition, veteran status genetic information, citizenship or any other basis protected by law, in employment, admission to, participation in, or receipt of the services and benefits under any of its programs and activities.

Sexual harassment is a violation of both Title VII of the Civil Rights Act of 1964 and Title IX of the Educational Amendments of 1972, and will not be tolerated at Northern.

### **TITLE IX OF THE EDUCATION AMENDMENTS OF 1972**

*Title IX is a federal law that protects people from:*

- **Discrimination based on sex**, regardless of gender, identity, or orientation in educational programs or activities receiving federal funding, and;
- **Sexual harassment or sexual misconduct**, including unwelcome sexual advances, requests for sexual favors, stalking, and intimate partner violence, and cyberbullying to note a few examples.

**If you believe that you or someone else has been harassed or discriminated against on the basis of sex**, you should report the alleged incident to the Title IX Coordinator, who will initiate and oversee a thorough investigation.

#### **NORTHERN'S TITLE IX COORDINATOR:**

**Donald Appiarus, EdD, Interim Dean of Students**  
**(505) 747-2255, [titleix@nnmc.edu](mailto:titleix@nnmc.edu), M-F, 8am-5pm.**

In addition, all Northern staff and faculty members are mandatory reporters, and are required to share information related to incidents of sexual misconduct with the Title IX Coordinator.

Both Federal and State law prohibits retaliation against anyone who has opposed an unlawful discriminatory practice or has filed a complaint, testified or participated in any proceedings under Federal or State law. Retaliation against an employee or student for filing a sexual harassment or gender discrimination complaint is strictly prohibited and grounds for a subsequent harassment complaint and possible disciplinary action up to and including termination or expulsion.

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Go to [nmmc.edu/titleix](https://nmmc.edu/titleix) to read Northern's full Title IX policy, and to learn more about the procedures for filing a sexual harassment or gender discrimination complaint, and the resources available to students at Northern and in the community.

## 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 use, manufacture, distribution, dispensation, sale, possession, or transfer of controlled substances, or being under the influence of, alcohol or alcoholic beverages.

### 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.

### PENALTY FOR VIOLATION

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

## Student Complaint Process

Occasionally, a student will encounter a problem on campus that he or she does not know how to resolve. When this happens, students should always try to resolve the problem by first discussing it with those most involved with the issue. Dealing with conflict in the most direct and straightforward manner should always be the first step toward resolution. It is possible that concerns that may be addressed when a student makes an appointment with a faculty or staff member and calmly and honestly communicates their frustrations or concerns.

If however, an issue or problem still exists, there is a formal complaint process at NNMC that a student may initiate. All formal complaints must be put in writing using the official NNMC Student Complaint Form. These forms are available in hard copy from the Assistant Provost, or online at [nmmc.edu](https://nmmc.edu) (Students › Student Gateway › Student Complaint Process).

### WHEN INITIATING A FORMAL COMPLAINT:

- Be sure you have first attempted to resolve the issue by speaking directly with the individual(s) or office(s) involved.

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- Complete a NNMC Student Complaint Form
  - Submit the form to Don Appiarius, Interim Dean of Students. (don.appiarius@nnmc.edu, 505.747.2255).
  - When the complaint is received it will be forwarded to the appropriate individual to review and address the issue.
  - After your concern has been addressed, you will receive a letter documenting the receipt and review of your complaint.

For information regarding issues or concerns that are not covered by this process (such as issues of sexual harassment and grade appeals) please refer to the NNMC Catalog or Student Handbook, or contact the Assistant Provost at 505.747.2255.

***Special Note:***

Sometimes NNMC students find they are particularly pleased with how something has been handled for them, how they were assisted by a particular staff member, the positive experience they had in a specific class, or some other outstanding thing that happened to them at NNMC. As a student you should know that the same “Student Complaint Form” that is used to lodge a concern, can also be used to provide a written compliment or note of appreciation. In this case, the process for submitting the form is the same as for filing a formal complaint.

**The complaint process is based upon the following definitions:**

**Complaint:** A written concern or formal charge of dissatisfaction with a person, service, or process that requires clarification, investigation, and resolution.

**Level I Complaint:** A verbal complaint that is resolved. Will not be tracked.

**Level II Complaint:** A written complaint, based upon the complaint definition that requires a student’s signature. If a form is submitted without a student’s name, the complaint will not be considered. Level II complaints will be tracked to ensure an action has been taken.

**Exclusions:** The Student Complaint Process does not apply to grade appeals, complaints of sexual harassment, or any student-to-student complaints. Please refer to the Student Code of Conduct for procedures regarding these types of complaints. In addition, outcomes of appeal processes are not subject to further consideration through this process.

**WHAT CAN I DO IF I AM STILL NOT SATISFIED?**

**Student complaint process for non-distance education students:**

The New Mexico Higher Education Department (NMHED) has authority to help facilitate resolution to student complaints, only after the student has utilized all internal complaint procedures at the educational institution. Please visit <http://www.hed.state.nm.us/students/hed-student-complaint-form.aspx> for more information about NMHED’s Student Complaint Process for non-distance education students. Complaints regarding grades and student conduct violations shall not be reviewed by NMHED.

**Student complaint process for distance education students:**

The National Council for State Authorization Reciprocity Agreements (NC-SARA) is an agreement among member states, districts and territories that sets national

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standards for interstate offering of post-secondary distance education courses and programs. Northern New Mexico College (NNMC) is a NC-SARA approved institution and the New Mexico Higher Education Department (NMHED) is the NC-SARA Portal Entity for New Mexico. Distance Education students attending NNMC who would like to resolve a grievance should follow NNMC's established Student Complaint Process.

However, if an issue cannot be resolved internally, you may file a NC-SARA complaint with the New Mexico Higher Education Department. Complaints regarding grades and student conduct violations shall not be reviewed by NMHED. Please visit <https://hed.state.nm.us/students-parents/nc-sara> for more information.



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## Department of Arts & Human Sciences

The mission of the Arts & Human Sciences Department is aligned with the strategic mission of Northern New Mexico College, which is to provide students with skills such as communication, critical thinking, research, and interpersonal ability, through high-quality academic coursework.

*Degrees offered include* Associate degrees in Film & Digital Media Arts, Substance Abuse Counselor, General Psychology, Criminal Justice, and a Bachelor's in Integrated Studies.

Our Bachelor of Integrated Studies (BAIS) is a unique program relevant to student's 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.

<b>Robert Beshara, PhD, MFA Chair</b> <i>robert.beshara@nnmc.edu</i>	Associate Professor of Psychology & Humanities	747. 2104
<b>Johanna Case-Hofmeister, MFA, Director</b> <i>johanna.case@nnmc.edu</i>	Assistant Professor of Arts & Humanities	747.5419
<b>Sneha Chakradhar, PhD</b> <i>sneha.chakradhar@nnmc.edu</i>	Assistant Professor of Criminal Justice	747.2295
<b>David Lindblom, MFA</b> <i>dlindblom@nnmc.edu</i>	Associate Professor of Film & Self-Design	747.2266
<b>Kiersten Figurski, MA</b> <i>kiersten.figurski@nnmc.edu</i>	Lecturer of Psychology	747.2295
<b>George Ackerman, PhD</b> <i>george.ackerman@nnmc.edu</i>	Lecturer of Criminal Justice	747.2295
<b>Alonso Lopez Martinez</b> <i>alonso.lopezmartinez@nnmc.edu</i>	Administrative Assistant	747.2295

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## 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 (31 CR) SEE PAGES 21-24

Area I. Communications (6 cr)

Area II. Mathematics (3 cr)

Area III. Laboratory Sciences (4 cr)

Area IV. Social/Behavioral Sciences (3 cr)

Area V. Humanities (3 cr)

Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours for Non-STEMH (9 cr)

COMM 1130 Public Speaking (3 cr)

Civics Course (3 cr)

Literature Course (3 cr)

*All degrees require fulfillment of General Education*

#### FDMA PROGRAM REQUIREMENTS (29 CR)

FDMA 1210 Digital Video Production I (4)

FDMA 1265 Digital Media Literacy (3)

FDMA 2540 Introduction to Non Linear Video (4)

FDMA 1515 Introduction to Digital Image Editing - PS (4)

FDMA 2994 Portfolio Design & Development (2)

*Choose 12 credits from the following:*

FDMA 1110 Film History (3)

FDMA 1255 Introduction to Digital Audio Documentary (4)

ARTS 1410 Introduction to Photography (3)

FDMA 2315 Documentary Film Production I (4)

FDMA 1410 Audio Production I (4)

FDMA 1560 Screenwriting I (3)

FDMA 1310 Introduction to Television Production (4)

FDMA 1540 Introduction to Motion Graphics (4)

FDMA 1660 sUAS (Drone) Technology I (3)

FDMA 1665 sUAS (Drone) Technology II (3)



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FDMA	2245	Advanced Digital Video Production (4)
FDMA	2265	Digital Media Production II (4)
COMM	2220	Intermediate Television Production (4)
FDMA	2998	Digital Media Production Internship (6)
FDMA	3396	Screenwriting II (3)
FDMA	4496	Screenwriting III (3)

**TOTAL CREDITS: 60**

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## **Bachelor of Arts**

### **INTEGRATED STUDIES**

Emphasis areas in Humanities, Psychology, Crime and Justice Studies, Media & Art, and Self-Design.

According to the Center for Integrated Studies, integrated studies is based on the idea that integrating 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 can be intentional and reflective, to blend their diverse educational experiences into pursuing personal and career goals.

Integrated studies is a degree program that will prepare students for careers requiring 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 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 21-24**

**Area I. Communications (6 cr)**

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

**Area III. Laboratory Sciences (4 cr)**

**Area IV. Social/Behavioral Sciences (3 cr)**

**Area V. Humanities (3 cr)**

**Area VI. Fine Arts (3 cr)**

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■ **Additional Nine Credit Hours for Non STEMH (9 cr)**

- COMM 1130 Public Speaking (3 cr)
- Civics Course (3 cr)
- Literature Course (3 cr)

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

Students choosing their emphases in Psychology and Criminal Justice must take MATH 1350; students choosing other emphases may choose MATH 1220 or MATH 1130.

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

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

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

- HUMN 2160 Foundations of Integrated Studies (3)
- HUMN 3388 Integrated Studies II (3)
- HUMN 4488 Integrated Studies III (3) (WIC)

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

*Students choose three of the following Dialogue courses:*

- HUMN 3311 Readings in the Social Sciences (4)
- HUMN 3320 Genesis of Mathematics and Science (4)
- HUMN 4414 Humanity and Creativity (4)
- HUMN 4421 Themes in the Humanities: History, Literature, Art, and Philosophy (4)
- HUMN 4450 Readings in Crime and Justice (4)

**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) outside their emphasis.

**INTEGRATED STUDIES Emphases Requirements**

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

**HUMANITIES EMPHASIS (56 CR)**

**Groups A and B (27 cr)**

Students complete 27 credit hours from courses that fall under the humanities umbrella. Eighteen of those hours must be upper division.

**Group A: The following 9 credit hours are required. (9 cr)**

- PHIL 2110 Introduction to Ethics (3)
- PHIL 1120 Logic, Reasoning, & Critical Thinking (3)
- HUMN 2120 Comparative Religion (3)

**Group B: Students must complete 18 credits from the following (18 cr)**

- PHIL 1160 History of Philosophy (3)
- PHIL 3366 Great Works of Asian Thought (3)

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HUMN 3324	Epic Literature as Psychological Insight (3)
HUMN 3390	Topics in the Study of Religion (3)
HUMN 4460	Psychology of Myth (3)
PHIL 3330	Comparative Metaphysics (3)
PHIL 3364	Great Works of Western Philosophy (3)
PHIL 4452	Philosophy of Technology (3)

### Elective Requirement for Humanities Emphasis (29 cr)

The remaining 29 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. No more than four hours of PHED may count toward the degree.

### TOTAL CREDITS: 120

### PSYCHOLOGY EMPHASIS (56 CR)

#### Group A and B (45 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 30 credit hours are required:

PHIL 1120	Logic, Reasoning, & Critical Thinking (3)
PSYC 1110	Introduction to Psychology (3)
PSYC 2240	Psychology of Personality (3)
PSYC 2160	Basic Counseling Techniques (3)
PSYC 2210	Abnormal Psychology (3)
PSYC 2440	Family Systems Theory (3)
PSYC 2120	Developmental Psychology (3)
PSYC 3321	Research Design (3)
PSYC 4421	Independent Research Project (3)
PSYC 2110	Social Psychology (3)

#### Group B. Students must choose 15 credits from the following courses, 9 of which must be upper division courses (300 level or higher):

HUMN 1110	Group Dynamics (3)
PSYC 3301	Biopsychology (3)
PSYC 3302	Issues in Death and Dying (3)
PSYC 3305	Positive Psychology (3)
PSYC 3375	Humanistic Psychology (3)
PSYC 4400	Special Topics in Psychology (3)
PSYC 4405	Psychology and Film (3)
PSYC 4410	Comparative Perspectives in Psychology (3)
PSYC 4411	Human Ecology (3)

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PSYC	4420	Media Psychology (3)
PSYC	4477	Psychology of Gender and Sexuality (3)

■ **Additional Electives for Psychology Emphasis (11 cr)**

The remaining 11 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. At most, four hours of PHED may count toward the degree.

**TOTAL CREDITS: 120**

**CRIME AND JUSTICE STUDIES EMPHASIS (56 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:*

PSYC	1110	Introduction to Psychology (3)
PINS	1110	Introduction to Pueblo Indian Studies (3)
PHIL	2110	Introduction to Ethics (3)
CJUS	1110	Introduction to Criminal Justice System (3)
SOCI	2255	Race, Class, & Gender (3)
CJUS	3321	Research Design (3)
CJUS	4400	Topics in Crime and Justice (3)
CJUS	4410	Comparative Perspectives in Crime and Justice (3)
CJUS	4421	Independent Research Project (3)
CJUS	4450	Penology II (3)
CJUS	4488	Internship/Practicum/Service Learning (3)
CJUS	4498	Writing in the Social Sciences (3)

**Group B: Additional Courses (12 cr)**

*Students must choose 12 credits from the following courses:*

CJUS	1170	Introduction to Criminology (3)
CJUS	1120	Criminal Law (3)
CJUS	2235	Constitutional Criminal Procedure (3)
CJUS	2360	Criminal Procedures (3)
CJUS	1140	Juvenile Justice (3)
CJUS	4499	Restorative and Community Based Justice (3)

*May be taken more than once for credit*

CJUS	4499	Topics (3)
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■ **Additional Electives for Crime and Justice Emphasis (17 cr)**

The remaining 17 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. At most, four hours of PHED may count toward the degree.

**TOTAL CREDITS: 120**

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**MEDIA & ART EMPHASIS (56 CR)**

This emphasis is designed for students interested in taking art history, drawing, photography, video production, digital image editing, media psychology, and film history courses. Students can then specialize in the form of media or art that they wish to investigate further.

**Group A and B (45 credits)**

Students complete 45 credit hours from courses that fall under media and art. 10 of those hours must be upper division.

**Group A: Required Courses (33 cr)**

FDMA	1110	Film History (3)
ARTS	1120	Introduction to Art (3)
FDMA	1210	Digital Video Production I (4)
ARTS	1410	Introduction to Photography (3)
FDMA	1515	Introduction to Digital Image Editing (4)
ARTS	1610	Drawing I (3)
FDMA	2540	Introduction to Non-Linear Video (4)
HUMN	3389	Senior Project I (3)
PSYC	4420	Media Psychology (3)
HUMN	4489	Senior Project II (3)

**Group B: Major Electives (12 cr)**

FDMA	1210	Digital Video Production II (4)
FDMA	1265	Digital Media Literacy (3)
FDMA	1310	Introduction to Television Production (4)
FDMA	1410	Audio Production I (4)
FDMA	1560	Screenwriting I (3)
FDMA	1660	sUAS (Drone) Technology I (3)
FDMA	1665	sUAS (Drone) Technology II (3)
FDMA	2315	Documentary Film Production I (4)
FDMA	2415	TV Production II (4)
FDMA	2823	Film Making in Science (4)
FDMA	2996	Topics in Film & Digital Media (1-4)
FDMA	2998	Digital Media Production Internship (6)
FDMA	2994	Portfolio Design & Development (2)
FDMA	3396	Screenwriting II (3)
PSYC	4405	Psychology and Film (3)
FDMA	4496	Screenwriting III (3)

**Additional Electives (11 cr)**

The remaining 11 credits for the baccalaureate degree (totaling 120 credits) with this emphasis are electives. At most, four hours of PHED may count toward the degree.

**TOTAL CREDITS: 120**

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## SELF-DESIGN EMPHASIS (85 CR)

This program is designed for students who have earned credits in various classes bridging different programs and interests. It is particularly welcoming of transfer in students with eclectic credits. Under the guidance of an advisor, a student moves their disparate credits into an integrated, self-designed program and earns a meaningful four-year degree. Students can apply to receive credit for significant, relevant work experience to help amass the necessary 120 credits needed for this four-year BAIS degree.

### 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:

HUMN 2160	Foundations of Integrated Studies (3)
HUMN 3389	Senior Project I (3)
HUMN 4489	Senior Project II (3)

### Group B: Concentrations (33 cr)

Students should complete a primary and secondary concentration and complete at least 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 (47 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:

HUMN 3311	Readings in the Social Sciences (4)
HUMN 3320	Genesis of Mathematics and Science (4)
HUMN 4414	Humanity and Creativity (4)
HUMN 4421	Themes in the Humanities (4)
HUMN 4450	Readings in Crime and Justice (4)
ENGL 3390	Topics in Comparative Literature (3)
HUMN 3324	Epic Literature as Psychological Insight (3)
HUMN 4460	Psychology of Myth (3)
PHIL 3300	Comparative Metaphysics (3)
PSYC 4410	Comparative Perspectives in Psychology (3)

**TOTAL CREDITS: 120**

## Associate of Arts

### CRIMINAL JUSTICE

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

#### GENERAL EDUCATION (31 CR) SEE PAGES 21-24

Area I. Communications (6 cr)

Area II. Mathematics (3 cr)

Area III. Laboratory Sciences (4 cr)

Area IV. Social/Behavioral Sciences (3 cr)

Area V. Humanities (3 cr)

Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours for Non STEMH (9 cr)

COMM 1130 Public Speaking (3 cr)

Civics Course (3 cr)

Literature Course (3 cr)

*Students choosing their AA in Criminal Justice must take MATH 1350.*

#### PROGRAM REQUIREMENTS (29 CR)

##### Group A: Criminal Justice Core (18 cr)

*All of the following must be taken:*

CJUS 1110 Introduction to Criminal Justice System (3)

CJUS 1170 Introduction to Criminology (3)

CJUS 1120 Criminal Law (3)  
*or*

CJUS 2120 Courts and Criminal Procedures (3)

CJUS 2150 Corrections Systems (3)

CJUS 1140 Juvenile Justice (3)

*Choose one of the following two courses:*

CJUS 2140 Criminal Investigation (3)

CJUS 1130 Forensic Science (3)

##### Group B: Cross-Disciplinary Electives (9 cr)

*Select three courses from the following list:*

PHIL 2110 Introduction to Ethics (3)

PSYC 1140 Psychology of Alcohol and Drug Abuse (3)

PSYC 2160 Basic Counseling Techniques (3)

PSYC 2210 Abnormal Psychology (3)

PSYC 2315 Drug and Alcohol Assessment, Referral, and Treatment (3)

SOCI 1310 Sociology of Alcohol and Drug Abuse (3)

##### Group C: Electives from any Discipline (2 cr)

**TOTAL CREDITS: 60**

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## Associate of Arts

### GENERAL PSYCHOLOGY

GENERAL EDUCATION (31 CR) SEE PAGES 21-24

Area I. Communications (6 cr)

Area II. Mathematics (3 cr)

Area III. Laboratory Sciences (4 cr)

Area IV. Social/Behavioral Sciences (3 cr)

Area V. Humanities (3 cr)

Area VI. Fine Arts (3 cr)

■ **Additional Nine Credit Hours for Non STEMH (9 cr)**

COMM 1130 Public Speaking (3 cr)

Civics Course (3 cr)

Literature Course (3 cr)

Students choosing their Associate of Arts in Psychology must take MATH 1350.

### PROGRAM REQUIREMENTS (29 CR)

PSYC 1110 Introduction to Psychology (3)

PSYC 2160 Basic Counseling Techniques (3)

PSYC 2210 Abnormal Psychology (3)

PSYC 2440 Family Systems Theory (3)

HMSV 1110 Group Dynamics (3)

PSYC 2120 Developmental Psychology (3)

PSYC 2110 Social Psychology (3)

PHIL 1120 Logic, Reasoning, & Critical Thinking (3)

### ELECTIVE REQUIREMENTS

The remaining 5 credits for the Associate of Arts in General Psychology are electives. At most, four hours of PHED may count toward the degree.

**TOTAL CREDITS: 60**



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## 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. The program is also designed for students wishing to complete a baccalaureate degree in the social sciences, including psychology, sociology, or social work, emphasizing substance abuse counseling. This program does not meet the requirements for licensure and does not prepare students for licensure in any of the 50 states.

#### GENERAL EDUCATION (31 CR)

**Area I. Communications (6 cr)**

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

**Area III. Laboratory Sciences (4 cr)**

**Area IV. Social/Behavioral Sciences (3 cr)**

**Area V. Humanities (3 cr)**

**Area VI. Fine Arts (3 cr)**

#### ■ Additional Nine Credit Hours for Non STEMH (9 cr)

COMM 1130 Public Speaking (3 cr)

Civics Course (3 cr)

Literature Course (3 cr)

#### PROGRAM REQUIREMENTS (30 CR)

PSYC 1110 Introduction to Psychology (3)

PSYC 1130 Introduction to Substance Abuse Studies (3)

PSYC 1140 Psychology of Alcohol & Drug Abuse (3)

PSYC 2160 Basic Counseling Techniques (3)

PSYC 2210 Abnormal Psychology (3)

PSYC 2315 Alcohol & Drug Abuse Assessment, Treatment, & Referral (3)

PSYC 2440 Family Systems Theory (3)

HMSV 1110 Group Dynamics (3)

SOCI 1310 Sociology of Substance Abuse (3)

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

PSYC 2990 Practicum (3) or

HUMN 2160 Foundations of Integrated Studies (3)

**TOTAL CREDITS: 60**



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## 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.

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Chair, Biology, Chemistry, Environmental Science

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Chemistry

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Biology

**Toni Atencio**                      747.2210                      *tonia@nnmc.edu*  
Administrative Assistant

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## 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.

#### GENERAL EDUCATION (31 CR)

Courses listed under each area are specific requirements for the BS in Biology that also fulfill the requirements for General Education. See pages 21-24 for additional courses to meet the required credits in each area.

##### Area I. Communications (6 cr)

- ENGL 1110 Composition I (3)
- ENGL 1120 Composition II (3)
- or*
- ENGL 1210 Technical Communication (3)

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

- MATH 1220 College Algebra (3)

##### Area III. Laboratory Sciences (4 cr)

##### Area IV. Social/Behavioral Sciences (3 cr)

##### Area V. Humanities (3cr)

##### Area VI. Fine Arts (3 cr)

##### ■ Additional Nine Credit Hours (9 cr)

- COMM 1130 Public Speaking (3)
- ENVS 2130 Critical Thinking in Science (3)

*Choose one of the following civics courses (3):*

- POLS 1110 Introduction to Political Science
- POLS 1120 American National Government (3)
- HIST 1110 United States History I (3)
- HIST 1120 United States History II (3)

#### PROGRAM REQUIREMENTS (89 CR)

##### Biology Core Curriculum (23 cr)

- BIOL 1110/L General Biology with lab (4)
- BIOL 2110/L Principles of Biology: Cell & Molecular Biology with lab (4)
- BIOL 2410/L Principles of Biology: Genetics with lab (4)

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BIOL	3101	Evolution (4)
BIOL	3105	Organismal Biology (4)
BIOL	4451	Ecology (3)

### Immersive Biology Experience (7 cr)

BIOL	3372	Advances in Biology Discussion (3)
	or	
BIOL	3382	Undergraduate Teaching Experience (3)
	or	
BIOL	3392	Undergraduate Research Experience (3)
BIOL	4472	Undergraduate Seminar in Biology (1)
BIOL	4492	Biology Capstone Project (3)

### Supportive Courses in Math, Chemistry, and Physics (39 cr)

#### Mathematics (11 cr)

MATH	1350	Introduction to Statistics (3)
MATH	1250	Trigonometry and Pre-Calculus (4)
MATH	1510	Calculus I (4)

#### Chemistry (20 cr)

CHEM	1215/L	General Chemistry for STEM Major I with lab (4)
CHEM	1225/L	General Chemistry for STEM Major II with lab (4)
CHEM	3301/L	Organic Chemistry I with lab (4)
CHEM	3302/L	Organic Chemistry II with lab (4)
CHEM	4421/L	Biochemistry with lab (4)

#### Physics (8 cr)

PHYS	1230/L	Algebra Based Physics I with lab (4)
PHYS	1240/L	Algebra Based Physics II with lab (4)

### ■ Additional Program Requirements (22)

*10 of the 22 credit hours MUST be upper division (3000-4499). Please seek departmental advisement to tailor your course selection to your individual career objectives. Note: Course selection must be approved by BIOL program advisor and Chair of the department.*

#### **Suggested Areas of Concentration:**

##### PRE-HEALTH

BIOL	3115	Cancer Cell Biology (4)
BIOL	3310	Science and Society (4)
BIOL	3329	Molecular Cellular Biology (4)
BIOL	3349/L	Essentials of Anatomy and Physiology with lab (4)
BIOL	3351/L	General Microbiology with lab (4)
BIOL	3386	Vertebrate Biology (4)
BIOL	3399	Biology (3)
BIOL	4405	Animal Behavior (4)

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BIOL	4410	Bioinformatics (3)
BIOL	4412/L	Developmental Biology with lab (4)
BIOL	4422/L	Comparative Vertebrate Anatomy with lab (4)
BIOL	4425	Molecular Genetics (4)
BIOL	4426/L	Neurobiology with lab (4)
BIOL	4431	Drugs and Their Actions (4)
BIOL	4456	Immunology (4)
BIOL	4499	Evolution of Life Histories (4)
MATH	3345	Elements of Mathematical Statistics and Probability Theory (3)
CHEM	4421/L	Biochemistry with lab (4)

### **CELLULAR AND MOLECULAR BIOLOGY**

BIOL	3115	Cancer Cell Biology (4)
BIOL	3310	Science and Society (4)
BIOL	3329	Cellular and Molecular Biology (4)
BIOL	3399	Biopsychology (3)
BIOL	4410	Bioinformatics (3)
BIOL	4412/L	Developmental Biology with lab (4)
BIOL	4425	Molecular Genetics (4)
BIOL	4426/L	Neurobiology with lab (4)
BIOL	4431	Drugs and Their Actions (3)
BIOL	4456	Immunology (4)
MATH	3345	Elements of Mathematical Statistics and Probability Theory (3)
CHEM	4421/L	Biochemistry with lab (4)

### **ECOLOGY AND EVOLUTION**

BIOL	3310	Science and Society (4)
BIOL	3371/L	Invertebrate Biology with lab (4)
BIOL	3360/L	Plant Biology with lab (4)
BIOL	3386	Vertebrate Biology (4)
BIOL	4405	Animal Behavior (4)
BIOL	4406	Stream Ecology and Field Methods (4)
BIOL	4418	Conservation Biology (4)
BIOL	4451/L	General Ecology with lab (4)
ENVS	3308	Invasive Species (3)
ENVS	4412	Environmental Health and Toxicology (3)
ENVS	4420	Ecology and Hydrology of the Southwest (3)
MATH	3345	Elements of Mathematical Statistics and Probability Theory (3)

**TOTAL CREDITS: 120**

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## 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 (31 CR)

Courses listed under each area are specific requirements for the AS in Biology that also fulfill the requirements for General Education. See pages 21-24 for additional courses to meet the required credits in each area.

##### Area I. Communications (6 cr)

ENGL	1110	Composition I (3)
ENGL	1120	Composition II (3)
<b>or</b>		
ENGL	1210	Technical Communication (3)

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

MATH	1220	College Algebra (3)
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##### Area III. Laboratory Sciences (4 cr)

##### Area IV. Social/Behavioral Sciences (3 cr)

##### Area V. Humanities (3 cr)

##### Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours (9 cr)

COMM	1130	Public Speaking (3)
ENVS	2130	Critical Thinking in Science (3)

*Choose one of the Following Civics Courses (3):*

POLS	1110	Introduction to Political Science
POLS	1120	American National Government (3)
HIST	1110	United States History I (3)
HIST	1120	United States History II (3)

#### PROGRAM REQUIREMENTS (29 CR)

BIOL	1110/L	General Biology with lab (4)
BIOL	2110/L	Principles of Biology: Cell and Molecular Biology with lab (4)
BIOL	2410/L	Principles of Biology: Genetics with lab (4)
CHEM	1110/L	Introduction to Chemistry with lab (4)
CHEM	1215/L	General Chemistry for STEM Majors I with lab (4)
CHEM	1220/L	General Chemistry for STEM Majors II with lab (4)
MATH	1350	Introduction to Statistics (3)
		Electives (2)

#### TOTAL CREDITS: 60

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## Associate of 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 (31 CR)

Courses listed under each area are specific requirements for the AS in Chemistry that also fulfill the requirements for General Education. See pages 21-24 for additional courses to meet the required credits in each area.

##### Area I. Communications (6 cr)

ENGL	1110	Composition I (3)
ENGL	1120	Composition II (3)
<i>or</i>		
ENGL	1210	Technical Communication (3)

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

MATH	1220	College Algebra (3)
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##### Area III. Laboratory Sciences (4 cr)

##### Area IV. Social/Behavioral Sciences (3 cr)

##### Area V. Humanities (3 cr)

##### Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours (9 cr)

COMM	1130	Public Speaking (3)
ENVS	2130	Critical Thinking in Science (3)

*Choose one of the Following Civics Courses (3):*

POLS	1110	Introduction to Political Science
POLS	1120	American National Government (3)
HIST	1110	United States History I (3)
HIST	1120	United States History II (3)

#### PROGRAM REQUIREMENTS (29 CR)

CHEM	1120/L	Introduction to Chemistry with lab (4)
CHEM	1215/L	General Chemistry for STEM Majors I with lab (4)
CHEM	1225/L	General Chemistry for STEM Majors II with lab (4)
CHEM	2120/L	Integrated Organic and Biochemistry with lab (4)

13 Credit hours of Electives approved by your major advisor

**TOTAL CREDITS: 60**



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## Bachelor of Science

### ENVIRONMENTAL SCIENCE

#### GENERAL EDUCATION (31 CR) SEE PAGES 21-24

##### Area I. Communications (6 cr)

ENGL	1110	Composition I (3)
ENGL	1120	Composition II (3)
<i>or</i>		
ENGL	1210	Technical Communication (3)

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

MATH	1220	College Algebra (3)
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##### Area III. Laboratory Sciences (4 cr)

##### Area IV. Social/Behavioral Sciences (3 cr)

##### Area V. Humanities (3 cr)

##### Area VI. Fine Arts (3 cr)

##### ■ Additional Nine Credit Hours (9 cr)

COMM	1130	Public Speaking (3)
ENVS	2130	Critical Thinking in Science (3)

*Choose one of the following Civics Courses (3):*

POLS	1110	Introduction to Political Science
POLS	1120	American National Government (3)
HIST	1110	United States History I (3)
HIST	1120	United States History II (3)

#### PROGRAM REQUIREMENTS (91 CR)

##### Required Science Courses (43 cr)

MATH	1350	Introduction to Statistics (3)
MATH	1250	Trigonometry (3)
MATH	1510	Calculus I (4)
ENVS	1110/L	Environmental Science I (4)
CHEM	1120/L	Introduction to Chemistry (4)
CHEM	1215/L	General Chemistry for STEM Majors I with lab (4)
CHEM	1225/L	General Chemistry for STEM Majors II with lab (4)
BIOL	2610/L	Principles of Biology: Biodiversity, Ecology, and Evolution (4)
BIOL	2640/L	Plant and Animal Form and Function (4)

*Choose one of the following:*

BIOL	2110/L	Principles of Biology: Cell and Molecular Biology with lab (4)
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BIOL 2310/L Microbiology with lab (4)  
CHEM 2120/L Integrated Organic and Biochemistry (4)

*Choose one of the following:*

ENVS 2201/L Environmental Physical Chemical Processes (4)  
BIOL 2410/L Principles of Genetics with lab (4)

■ **Additional Program Requirements (48 cr)**

**Required ES Courses (26 cr)**

ENVS 2140 Introduction to GIS/GPS and Cartography (3)  
ENVS 2160 Principles of Agricultural Ecology (3)

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ENVS 3317 Rangeland Management (3)  
*or*  
ENVS 3318 Silviculture (WIC) (3)

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ENVS 3319 Principles of Wildlife Science and Management (3)  
ENVS 3336/L Environmental Sampling and Instrumentation (4)  
ENVS 3338 Environmental Law and Regulations (3)  
ENVS 3380 Undergraduate Research Experience (3)  
ENVS 4480 Senior Capstone – Field Experience (3)  
BIOL 4472 Seminar (1)

**The remaining 22 credit hours MUST be upper division ES courses (3000-4999).**

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: 122**

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## 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 (31 CR) SEE PAGES 21-24

##### Area I. Communications (6 cr)

ENGL	1110	Composition I (3)
ENGL	1120	Composition II (3)
<i>or</i>		
ENGL	1210	Technical Communication (3)

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

MATH	1220	College Algebra (3)
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##### Area III. Laboratory Sciences (4 cr)

##### Area IV. Social/Behavioral Sciences (3 cr)

##### Area V. Humanities (3 cr)

##### Area VI. Fine Arts (3 cr)

##### ■ Additional Nine Credit Hours (9 cr)

COMM	1130	Public Speaking (3)
ENVS	2130	Critical Thinking in Science (3)

*Choose one of the following Civics Courses (3):*

POLS	1110	Introduction to Political Science
POLS	1120	American National Government (3)
HIST	1110	United States History I (3)
HIST	1120	United States History II (3)

#### PROGRAM REQUIREMENTS (30 CR)

ENVS	1110/L	Environmental Science I (4)
BIOL	2110/L	Principles of Biology: Cell and Molecular Biology (4)
BIOL	2610/L	Principles of Biology: Biodiversity, Ecology, and Evolution (4)
CHEM	1120/L	Introduction to Chemistry with lab (4)
CHEM	1215/L	General Chemistry I with lab (4)
ENVS	2201/L	Environmental Physical and Chemical Processes (4)
ENVS	2140	Introduction to GIS/GPS (3)
ENVS	2160	Principles of Agricultural Ecology (3)

**TOTAL CREDITS: 61**

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## 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 (15 CR) SEE PAGES 21-24

##### Area I. Communications (6 cr)

ENGL 1110 Composition I (3)

##### Areas II. Mathematics (10 cr)

MATH 1220 College Algebra (3)

##### Areas III, IV, V, and VI (9 cr)

*Select 9 credits from at least 2 different areas.*

Laboratory Science, Social/Behavioral Sciences, Humanities, and Fine Arts

#### PROGRAM REQUIREMENTS (47 CR)

BCIS 1120 Computer Literacy (3)

*or*

BCIS 2215 Excel (3)

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BIOL 1110/L General Biology with lab (4)

CHEM 1215/L General Chemistry for STEM Majors I with lab (4)

ENGL 1210 Technical Communications (3)

ENVS 1110/L Environmental Science I (4)

MATH 1350 Introduction to Statistics (3)

PHYS 1230/L Applied Physics I with lab (4)

RDPR 2210 Introduction to Radiation Protection (3)

RDPR 2215 Radiation Science (3)

RDPR 2220 Radiation Instruments I (2)

RDPR 2225 Radiation Instruments II (2)

RDPR 2233 Radiation Biology (2)

RDPR 2235 Practical Radiation Programs I (2)

RDPR 2240 Practical Radiation Programs II (2)

RDPR 2242 Problems in Radiation Protection (3)

RDPR 2250 Supervised Field Experience (3)

3 Credit hours of Electives approved by your major advisor.

**TOTAL CREDITS: 62**

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## 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)

ENGL 1110 English Composition (3)

##### Area II. Mathematics (4 cr)

MATH 1215 Intermediate Algebra (4)

#### PROGRAM REQUIREMENTS (25 CR)

ENVS 2150 OSHA Health and Safety (3)

RDPR 2233 Radiation Biology (3)

RDPR 2234L Introduction to Radiation Science & Technology (4)

RDPR 2238L Introduction to Radiation Protection (4)

RDPR 2242 Problems in Radiation Protection (4)

RDPR 2243 Practical Radiological Programs and Sampling Methods (4)

RDPR 2250 Supervised Field Experience (3)

**TOTAL CREDITS: 32**

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## Associate of Applied Science

### NUCLEAR OPERATIONS TECHNOLOGY

This program is designed to prepare you for a career as a Nuclear Operator in environmental programs and scientific laboratories. The program prepares you to interpret radiation survey data, assess personal protection requirements, properly sample sites with potential contaminations and actively participate in appropriate environmental clean-up.

#### GENERAL EDUCATION (15 CR) SEE PAGES 21-24

##### Area I. Communications (6 cr)

ENGL 1110 Composition I (3)

##### Areas II. Mathematics (10 cr)

MATH 1220 College Algebra (3)

##### Areas III, IV, V, and VI (9 cr)

*Select 9 credits from at least 2 different areas.*

Laboratory Science, Social/Behavioral Sciences, Humanities, and Fine Arts

#### PROGRAM REQUIREMENTS (45 CR)

CHEM 1120/L Introduction to Chemistry (4)

ENGL 1210 Technical Communications (3)

ENGR 2140 Process Control I (2)

ENGR 2150 Process Control II (2)

ENGR 2230 Hydraulics (2)

MATH 1215 Intermediate Math (4)

PHYS 1230/L Applied Physics I with lab (4)

RDPR 2233 Radiation Biology (3)

RDPR 2234L Introduction to Radiation Science & Technology (4)

RDPR 2238L Introduction to Radiation Protection (4)

RDPR 2242 Problems in Radiation Protection (4)

RDPR 2243 Practical Radiological Programs and Sampling Methods (4)

RDPR 2250 Supervised Field Experience (3)

2 Credit hours of Elective

**TOTAL CREDITS: 60**

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# Department of BUSINESS ADMINISTRATION

**Chair: Lori Baca, D.B.A.**  
505.747.2186 [LBaca@nmmc.edu](mailto:LBaca@nmmc.edu)

Northern's Department of Business Administration (DoBA) offers baccalaureate, associate and certificate programs designed to provide practice-oriented training and skill development for students who aspire to successful careers 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.

<b>Sean Bowman, CPA, MPA</b> <i>Sean.bowman@nmmc.edu</i>	Accounting	747.2185
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<b>Robert Tierney, PhD</b> <i>robert.tierney@nmmc.edu</i>	Project Management	747.2276
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<b>Simon Vaz, MBA, Ed.S</b> <i>simon.vaz@nmmc.edu</i>	Management	747.5422
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<b>Betty Espinoza, AAS</b> <i>bettyespinoza@nmmc.edu</i>	Barbering/Cosmetology	747.5472
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<b>Gloriadell Gonzales, Certificate</b> <i>gloriadell_m_gonzales@nmmc.edu</i>	Barbering/Cosmetology	747.5471
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## 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. The BA Department 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

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(c) completed satisfactorily 15 credit hours in the following courses or their equivalents at other colleges:

MATH	1350	Introduction to Statistics
ACCT	2110	Accounting Principles I
ACCT	2120	Accounting Principles II
ECON	2110	Macroeconomic Principles
ECON	2120	Microeconomic Principles

(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 30 credit hours from Northern New Mexico College, Department of Business.  
\*Students may transfer courses but a minimum of 30 credit hours must be from NNMC, Department of Business.
4. Must have a total of 40 hours of upper division courses including BUSA 4485 (Internship) or BUSA 4490 (Capstone).
5. Completion of 120 credits

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## **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 (31 CR) SEE PAGES 21-24**

**Area I. Communications (6 cr)**

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

**Area III. Laboratory Sciences (4 cr)**

**Area IV. Social/Behavioral Sciences (3 cr)**

**Area V. Humanities (3 cr)**

**Area VI. Fine Arts (3 cr)**



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### ■ Additional Nine Credit Hours (9 cr)

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

*Choose one of the following Literature Courses:*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

### BUSINESS CORE (29 CR)

MATH 1350 Introduction to Statistics (3)

*or*

BUSA 2130 Business Statistics (3)

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MGMT 2110 Principles of Management (3)

ACCT 2110 Accounting Principles I (3)

ACCT 2120 Accounting Principles II (3)

MKTG 2110 Principles of Marketing (3)

BCIS 2140 Business Technology (3)

ECON 2110 Macroeconomic Principles (3)

ECON 2120 Microeconomic Principles (3)

Electives Electives (5)

**TOTAL CREDITS: 60**

---

## 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 (31 CR) SEE PAGES 21-24

#### Area I. Communications (6 cr)

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

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**Area III. Laboratory Sciences (4 cr)**

**Area IV. Social/Behavioral Sciences (3 cr)**

**Area V. Humanities (3 cr)**

**Area VI. Fine Arts (3 cr)**

**■ Additional Nine Credit Hours (9 cr)**

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

*Choose one of the following Literature Courses:*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

**BUSINESS CORE (29 CR)**

MATH 1350 Introduction to Statistics (3)

*or*

BUSA 2130 Business Statistics (3)

MGMT 2110 Principles of Management (3)

ACCT 2110 Accounting Principles I (3)

ACCT 2120 Accounting Principles II (3)

MKTG 2110 Principles of Marketing (3)

BCIS 2140 Business Technology (3)

ECON 2110 Macroeconomic Principles (3)

ECON 2120 Microeconomic Principles (3)

Electives Electives (5)

**Common Degree Requirements (21 cr)**

BLAW 2110 Business Law I (3)

BFIN 2110 Introduction to Finance (3)

BUSA 3313 Organizational Behavior (3)

BUSA 3330 Principles of Project Management (3)

MGMT 4462 International Business & Management (3)

BUSA 4490 Capstone (6)

**Accounting Courses (24 cr)**

ACCT 3304 Intermediate Accounting I (3)

ACCT 3305 Intermediate Accounting II (3)

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ACCT	3306	Intermediate Accounting III (3)
ACCT	3324	Federal Tax Accounting (3)
ACCT	3352	Accounting Information Systems (3)
ACCT	4405	Accounting for Not-For-Profit Organizations (3)
ACCT	4445	Cost Accounting (3)
ACCT	4446	Audit Theory and Practice (3)

### Electives (16 cr)

Electives may be chosen from any NNMC College or department subject to advisor consultation. A minimum of one must be at 3000 level or above.

**TOTAL CREDITS: 120**

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## 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 (31 CR) SEE PAGES 21-24

#### Area I. Communications (6 cr)

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

#### Area III. Laboratory Sciences (4 cr)

#### Area IV. Social/Behavioral Sciences (3 cr)

#### Area V. Humanities (3 cr)

#### Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours (9 cr)

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

*Choose one of the following Literature Courses:*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

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**BUSINESS CORE (29 CR)**

MATH	1350	Introduction to Statistics (3)
<i>or</i>		
BUSA	2130	Business Statistics (3)
<hr/>		
MGMT	2110	Principles of Management (3)
ACCT	2110	Accounting Principles I (3)
ACCT	2120	Accounting Principles II (3)
MKTG	2110	Principles of Marketing (3)
BCIS	2140	Business Technology (3)
ECON	2110	Macroeconomic Principles (3)
ECON	2120	Microeconomic Principles (3)
Electives		Electives (5)

**Common Degree Requirements (21 cr)**

BLAW	2110	Business Law I (3)
BFIN	2110	Introduction to Finance (3)
BUSA	3313	Organizational Behavior (3)
BUSA	3330	Principles of Project Management (3)
MGMT	4462	International Business & Management (3)
BUSA	4490	Capstone (6)

**Management Courses (18 cr)**

MGMT	3353	Operations Management (3)
BUSA	3354	E-Commerce (3)
MGMT	3360	Human Resource Management (3)
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BFIN	4408	Corporate Finance (3)
<i>or</i>		
BUSA	4410	Money and Banking (3)
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MGMT	4432	Strategic Management (3)
MGMT	4456	Marketing Management (3)

**Electives (21 cr)**

Electives may be chosen from any NNMC College or department, subject to advisor consultation. A minimum seven credit hours must be at 3000 level or above.

**TOTAL CREDITS: 120**

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## 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 (31 CR) SEE PAGES 21-24

Area I. Communications (6 cr)

Area II. Mathematics (3 cr)

Area III. Laboratory Sciences (4 cr)

Area IV. Social/Behavioral Sciences (3 cr)

Area V. Humanities (3 cr)

Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours (9 cr)

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

*Choose one of the following Literature Courses:*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

### BUSINESS CORE (29 CR)

MATH 1350 Introduction to Statistics (3)

or

BUSA 2130 Business Statistics (3)

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MGMT 2110 Principles of Management (3)

ACCT 2110 Accounting Principles I (3)

ACCT 2120 Accounting Principles II (3)

MKTG 2110 Principles of Marketing (3)

BCIS 2140 Business Technology (3)

ECON 2110 Macroeconomic Principles (3)

ECON 2120 Microeconomic Principles (3)

Electives Electives (5)

### COMMON DEGREE REQUIREMENTS (21 CR)

BLAW 2110 Business Law I (3)

BFIN 2110 Introduction to Finance (3)

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BUSA	3313	Organizational Behavior (3)
BUSA	3330	Principles of Project Management (3)
MGMT	4462	International Business & Management (3)
BUSA	4490	Capstone (6)

### **PROJECT MANAGEMENT COURSES (18 CR)**

BUSA	3334	Organizational Management (3)
BUSA	3335	Project Planning and Controls (3)
BUSA	3336	Project Communications and Stakeholder Management (3)
BUSA	4433	Project Quality and Risk Management (3)
BUSA	4437	Project Procurement and Contracts (3)
BUSA	4438	Project Leadership and HR Management (3)

### **Electives (21 cr)**

Electives may be chosen from any NNMC College or Department, subject to advisor consultation. A minimum of seven credit hours must be at 3000 level or above.

**TOTAL CREDITS: 120**

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## **Certificate**

### **PROJECT MANAGEMENT**

This program will prepare you for meeting the needs of 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.

### **PROGRAM REQUIREMENTS (15 CR)**

BUSA	3330	Principles of Project Management (3)
BUSA	3335	Project Planning and Controls (3)
BUSA	3336	Project Communications and Stakeholder Management (3)
BUSA	4433	Project Quality and Risk Management (3)
BUSA	4437	Project Procurement and Contracts (3)

**TOTAL CREDITS: 15**

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## 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 (15 CR)

#### Area I. Communications (6 cr)

- ENGL 1110 Composition I (3)
- COMM 1130 Public Speaking (3)

#### Area IV. Social/Behavioral Sciences (3 cr)

- Elective (3) Choose from Anthropology, Geography, Political Science, Psychology, or Sociology.

#### Area V. Humanities and Fine Arts (3 cr)

#### Area VI. Fine Arts (3 cr)

### SUPPORT COURSES (7 cr)

- BCIS 2110 Business Computer Applications (3)
- BUSA 1180 Business Math (3)
- PHED (1 cr) Elective (1)

### PROGRAM REQUIREMENTS (40 CR)

#### Office Administration (13 cr)

- BUSA 1210 Records Management (3)
  - BUSA 2175 Professional Development (3)
  - ACCT 2115 Survey of Accounting (3)
  - BUSA 1195 Introduction Project Management (3)
  - OA 2266 Microsoft Office Specialist Training (1)
- Prerequisites: BCIS 2215 or BCIS 2220 or BCIS 2210 or BCIS 2230*

#### Business Computing Information Systems (12 cr)

- BCIS 2220 Microsoft Word (3)
- BCIS 2210 Microsoft Access (3)
- BCIS 2215 Excel (3)
- BCIS 2230 PowerPoint (3)

#### Business Administration (15 cr)

- BUSA 1110 Introduction to Business (3)
- ACCT 2220 Computerized Accounting (3)
- MGMT 2110 Principles of Management (3)
- BUSA 2110 Business Communications (3)
- BCIS 2140 Business Technology (3)

**TOTAL CREDITS: 62**

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## 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)

ENGL 109NL Basic Composition II or higher-level course (4)

##### Mathematics (3 cr)

BUSA 1180 Business Math (3)

#### PROGRAM REQUIREMENTS (26 CR)

BUSA 2110 Business Communications (3)

BCIS 2110 Business Computer Applications (3)

BCIS 2215 Excel (3)

BUSA 2175 Professional Development (3)

OA 2236 Administrative Procedures (3)

OA 1103 Introduction to Keyboarding (1)

BUSA 1195 Introduction to Project Management (3)

OA 2266 Microsoft Office Specialist Training (1)

BCIS 2220 Microsoft Word (3)

BCIS 2210 Access (3)

**TOTAL CREDITS: 33**

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## 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)

ENGL 109NL Basic Composition II or higher-level course (4)

##### Mathematics (3 cr)

BUSA 1180 Business Math (3)

##### Health, Physical Education & Recreation (1 cr)

Elective (1)

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## **PROGRAM REQUIREMENTS (15 CR)**

BCIS	2110	Business Computer Applications (3)
BCIS	2215	Excel (3)
ACCT	2110	Accounting Principles I (3)
ACCT	2220	Computerized Accounting (3)
BUSA	2110	Business Communications (3)

**TOTAL CREDITS: 23**

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## **Certificate**

### **MICROSOFT OFFICE SUITE CERTIFICATE**

The purpose of the Microsoft Office Suite certificate is to focus on immediately obtainable office computer skills in order to allow certificate holders to take and pass the Microsoft Office Specialist exam as part of their employment application portfolio.

#### **GENERAL EDUCATION (4 CR)**

##### **Communications (4 cr)**

ENGL	109NL	Basic Composition II or higher-level course (4)
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#### **PROGRAM REQUIREMENTS (12 CR)**

BCIS	2220	Microsoft Word (3)
BCIS	2215	Excel (3)
BCIS	2210	Access (3)
BCIS	2230	PowerPoint (3)

**TOTAL CREDITS: 16**

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## **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)**

ENGL	109NL	Basic Composition or higher-level course (4)
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##### **Mathematics (3 cr)**

BUSA	1180	Business Math (3)
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#### **PROGRAM REQUIREMENTS (18 CR)**

ENTR	1110	Entrepreneurship (3)
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ACCT	2110	Accounting Principles I (3)
ENTR	2110	Small Business Management (3)
BUSA	2140	Integrated Management (3)
BUSA	2180	Introduction to E-commerce (3)
ACCT	2220	Computerized Accounting (3)

**TOTAL CREDITS: 25**

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## **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)**

ENGL 109NL Basic Composition II or higher-level course (4)

#### **Mathematics (3 cr)**

BUSA 1180 Business Math (3)

### **PROGRAM REQUIREMENTS (18 CR)**

HRTM	1115	Introduction to Management in the Hospitality Industry (3)
HRTM	3333	Casino Operations (3)
HRTM	3335	Hotel Operations (3)
HRTM	1145	Food and Beverage Service Management (3)
HRTM	1140	Introduction to Food Preparation (3)
HRTM	4450	Capstone (3)

**TOTAL CREDITS: 25**

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# 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 505.747.5473 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 (15 CR)

#### Area I. Communications (6 cr)

- |           |                     |
|-----------|---------------------|
| ENGL 1110 | Composition I (3)   |
| COMM 1130 | Public Speaking (3) |

#### Area IV. Social/Behavioral Sciences (3 cr)

- Elective (3) Choose from Anthropology, Geography, Political Science, Psychology, or Sociology.

#### Area V. Humanities and Fine Arts (3 cr)

#### Area VI. Fine Arts (3 cr)

### SUPPORT COURSES (7 )

- |             |                                    |
|-------------|------------------------------------|
| BCIS 2110   | Business Computer Applications (3) |
| BUSA 1180   | Business Math (3)                  |
| PHED (1 cr) | Elective (1)                       |

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## 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 1110 Barbering I (17)

BARB 1120 Barbering II (16)

*Prerequisite: BARB 1110*

BARB 2210 Barbering III (15)

*Prerequisite: BARB 1120*

**TOTAL CREDITS: 70**

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## 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)

ENGL 109NL Basic Composition II (4) or a higher level course

#### Mathematics (3)

BUSA 1180 Business Math (3)

### PROGRAM REQUIREMENTS (48 CR)

BARB 1110 Barbering I (17)

BARB 1120 Barbering II (16)

BARB 2210 Barbering III (15)

**TOTAL CREDITS: 55**

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## 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 505.747.5473 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.

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## 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 (15 CR)

#### Area I. Communications (6 cr)

- |           |                     |
|-----------|---------------------|
| ENGL 1110 | Composition I (3)   |
| COMM 1130 | Public Speaking (3) |

#### Area IV. Social/Behavioral Sciences (3 cr)

Elective (3) Choose from Anthropology, Geography, Political Science, Psychology, or Sociology.

#### Area V. Humanities and the Arts (3 cr)

### SUPPORT COURSES (7 cr)

- |             |                                    |
|-------------|------------------------------------|
| BCIS 2110   | Business Computer Applications (3) |
| BUSA 1180   | Business Math (3)                  |
| PHED (1 cr) | Elective (1)                       |

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**PROGRAM REQUIREMENTS (63 CR)**

COSM	1110	Cosmetology I (17)
COSM	1120	Cosmetology II (16)
COSM	2210	Cosmetology III (15)
COSM	2220	Cosmetology IV (15)

**TOTAL CREDITS: 85**

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**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)**

ENGL	109NL	Basic Composition II (4) or a higher level course
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**Mathematics (3)**

BUSA	1180	Business Math (3)
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**PROGRAM REQUIREMENTS (63 cr)**

COSM	1110	Cosmetology I (17)
COSM	1120	Cosmetology II (16)
COSM	2210	Cosmetology III (15)
COSM	2220	Cosmetology IV (15)

**TOTAL CREDITS: 70**

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# Department of ENGINEERING and TECHNOLOGY

The Department of Engineering and Technology offers Engineering Technology degrees. The following degrees are offered in the Engineering Technology 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 Engineering Technology, Software Engineering, and Pre-Engineering.

<b>Ashis Nandy, PhD</b>	Chair, EMET	747.2249	<i>ashis@nnmc.edu</i>
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<b>Daniel Falsafi, MS</b>	IET	747.5425	<i>daniel.falsafi@nnmc.edu</i>
<b>Bryan Malone, DCS</b>	IET	747.2264	<i>bryan.malone@nnmc.edu</i>
<b>Andrea Padilla, AA</b>	Administrative Assistant	747.5425	<i>andrea.padilla@nnmc.edu</i>

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## 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	1122L	Introduction to Math for Engineering Applications II
CS	2201	Mathematical Foundations of Computer Science
EECE	1152L	Computer Programming
EECE	2231L	Intermediate Programming

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EECE	1132	Computer Networks I
IT	2250	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	1122L	Introduction to Math for Engineering Applications II
ENGR	2217L	Physics for Engineers III
CAD	1100	Engineering Drawing & Computer Aided Design Fundamentals
MET	2201	Applied Mechanics I
EET	2200	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/Chair.

*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 Department 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/Chair of the Department 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 (3300 and 4400-level classes) unless they have earned a GPA of 2.50 or better in all coursework taken at the 1100 and 2200-level.



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## GRADUATION REQUIREMENTS FOR ASSOCIATE OF ENGINEERING STUDENTS

The Department of Engineering and Technology requires all students enrolled in an Associate of Engineering degree to fulfill 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 Department 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 50 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 Department 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.

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# PROGRAMS in ENGINEERING

## Associate in Engineering (AEng) in INFORMATION ENGINEERING TECHNOLOGY

The curriculum for the Associate of Engineering in Information Engineering Technology (AEng IET) is designed for those engineering students who intend to launch a career in the design, installation, maintenance, and repair 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 environments as network designer, network support and administrator, project manager, data applications or computer communications engineer, test and integration manager or technologist in business applications. The graduate of this curriculum will be a computer network specialist, but broadly versed in mathematics, physics, computer science, and business fundamentals. Failure to maintain an overall GPA of at least a 2.0 in all coursework is sufficient cause for being dropped from the program.

### 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 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 identify, analyze, and solve broadly defined engineering technology problems.
5. A commitment to quality, timeliness, and continuous improvement.

## GENERAL EDUCATION REQUIREMENTS (31 CR)

### Area I: Communications (6 Credits)

ENGL 1110 Composition I (3)

*Prerequisites: ENGL 109 or adequate score on the Course Placement Evaluation*

ENGL 1210 Technical Communications (3)

*Prerequisite: ENGL 1110*

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

ENGR 1121L Introduction to Math for Engineering Applications I (3)  
*Prerequisite: College Algebra, MATH 1220*

**Area III: Laboratory Sciences (4 cr)**

ENGR 1101/L An Introduction to Computational Science and Modeling  
 with Lab (4)

**Area IV: Social/Behavioral Sciences (3 cr)**

*Select one course from Area IV.*

*Prerequisite: ENGL 109 or adequate score on the Course Placement Evaluation*

**Area V: Humanities (3 cr)**

*Select one course from Area V.*

*Prerequisite: ENGL 109 or adequate score on the Course Placement Evaluation*

**Area VI: Fine Arts (3 cr)**

*Select one course from Area VI.*

**■ Additional Nine Credit Hours (9 cr)**

COMM 1130 Public Speaking (3)

*Prerequisite: ENG 109*

*Choose one of the following Civics Courses (3)*

POLS 1100 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

*Choose one of the following STEM-H recommended Courses (3)*

ENVS 2130 Critical Thinking in Science (3)

PSYC 2120 Developmental Psychology (3)

**SUPPORT COURSES (9 cr)**

MATH 1350 Introduction to Statistics (3)

*Prerequisite: MATH 1215*

ENGR 1122L Introduction to Math for Engineering Applications II (3)

*Prerequisite: ENGR 1121L*

ENGR 2215 Physics for Engineers I (3)

*Recommended Co-requisite: ENGR 1121L*

**PROGRAM REQUIREMENTS (21 cr)**

EECE 1105L Microcomputer Systems (3)

*Prerequisite: ENG 109 or adequate score on the Course Placement Evaluation*

EECE 1132 Computer Networks I (3)

*Prerequisite: None*

EECE 1152L Computer Programming (3)

*Prerequisite: None*

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EECE 2230 Introduction to Routing and Switching (3)

*Co-requisite: EECE 1132*

EECE 2231L Intermediate Programming (3)

*Prerequisite: EECE 1152L*

### **Information Technology (3 cr)**

IT 2250 Introduction to Databases (3)

*Prerequisite: EECE 1152L*

### **Support Technologies (3 cr)**

EECE 1110L Introduction to Engineering (3)

*Prerequisites: None*

**TOTAL CREDITS: 61**

## **SUGGESTED SEQUENCE OF COURSES**

### **FIRST SEMESTER (18 cr)**

Elective Area VI, Fine Arts (3)

ENGR 1110L Introduction to Engineering (3)

ENGR 1121L Introductory Math for Engineering Applications I (3)

ENGR 2215 Physics for Engineers I (3)

EECE 1132 Computer Networks I (3)

EECE 2230 Introduction to Routing and Switching (3)

### **SECOND SEMESTER (15 cr)**

ENGL 1110 Composition I (3)

EECE 1152L Computer Programming (3)

ENGR 1122L Introduction to Math for Engineering Applications II (3)

EECE 2230 Introduction to Routing and Switching (3)

Elective Social/Behavioral Sciences (3)

### **THIRD SEMESTER (13 cr)**

Elective Area IV, Social/Behavioral Sciences (3)

ENGL 1210 Technical Communications (3)

Elective Area III, Laboratory Sciences (4)

MATH 1350 Introduction to Statistics (3)

### **FOURTH SEMESTER (15 cr)**

COMM 1130 Public Speaking (3)

Elective Additional nine credit hours (3)

EECE 2231L Intermediate Programming (3)

Elective Area V, Humanities (3)

Elective Additional nine credit hours (3)

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## Associate in Engineering (AEng)

### PRE-ENGINEERING

The curriculum for the Associate of Engineering Pre-engineering (AEng PreE) will prepare students for a bachelor's degree in engineering. Students will obtain a general background in mathematics and the physical sciences, and will be introduced to the concepts and methods of engineering. This program is not a professional degree and does not prepare students for specific job opportunities. It does, however, provide a broad educational background on which to build a career in engineering 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 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 identify, analyze, and solve broadly defined engineering technology problems.
5. A commitment to quality, timeliness, and continuous improvement.

### GENERAL EDUCATION REQUIREMENTS (31 CR )

#### AREA I: Communications (6 cr)

ENGL 1110 Composition I (3)

*Prerequisites: ENG 109 or adequate score on the Course Placement Evaluation*

ENGL 1210 Technical Communications (3)

*Prerequisite: ENGL 1110*

#### AREA II: Mathematics (3 cr)

ENGR 1121L Introduction to Math for Engineering Applications I (3)

*Prerequisite: College Algebra, MATH 1220*

#### Area III: Laboratory Sciences (4 cr)

ENGR 1101L An Introduction to Computational Science and Modeling with Lab (4)

#### Area IV: Social/Behavioral Sciences (3 cr)

*Select one course from Area IV.*

*Prerequisite: ENG 109 or adequate score on the Course Placement Evaluation*

#### Area V: Humanities (3 cr)

*Select one course from Area V.*

*Prerequisite: ENGL 109 or adequate score on the Course Placement Evaluation*

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## Area VI: Fine Arts (3 cr)

*Select one course from Area VI.*

### ■ Additional Nine Credit hours (9 cr)

COMM 1130 Public Speaking (3)

*Prerequisite: ENG 109*

*Choose one of the following Civics Courses (3)*

POLS 1100 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

*Choose one of the following STEMH recommended Courses (3)*

ENVS 2130 Critical Thinking in Science (3)

PSYC 2120 Developmental Psychology (3)

## SUPPORT COURSES (12 cr)

ENGR 1122L Introduction to Math for Engineering Applications II (3)

*Prerequisites: ENGR 1121L*

ENGR 2215 Physics for Engineers I (3)

*Recommended Co-requisites: ENGR 1121L*

ENGR 2216L Physics for Engineers II (3)

*Prerequisites: ENGR 2215*

ENGR 2217L Physics for Engineers III (3)

*Recommended Co-requisites: ENGR 1122L*

## PROGRAM REQUIREMENTS (17 CR)

ENGR 1110L Introduction to Engineering (3)

*Prerequisite: None*

CAD 1100 Engineering Drawing & Computer Aided Design Fundamentals (3)

*Prerequisite: None*

MET 2201 Applied Mechanics I (3)

*Prerequisite: ENGR 2215*

EET 2200/L Electrical Systems I with lab (3)

*Prerequisite: ENGR 2217L*

Lower/Upper Division Engineering or Technical or Math Elective (5 cr)

*Recommended courses: Solar Energy I, II; Python I, II, III, IV; CAD 2200*

## TOTAL CREDITS: 60

## SUGGESTED SEQUENCE OF COURSES

### FIRST SEMESTER (15 cr)

Elective Area VI, Fine Arts (3)

ENGR 1110L Introduction to Engineering (3)

ENGR 1121L Introductory Math for Engineering Applications I (3)

ENGR 2215 Physics for Engineers I (3)

CAD 1100 Engineering Drawing & Computer Aided Design Fundamentals (3)

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**SECOND SEMESTER (15 cr)**

ENGL	1110	Composition I (3)
ENGR	1122L	Introductory Math for Engineering Applications II (3)
ENGR	2216	Physics for Engineers II (3)
ENGR	2217L	Physics for Engineers III (3)
MET	2201	Applied Mechanics I (3)

**THIRD SEMESTER (16 cr)**

Elective		Area IV, Social/Behavioral Sciences (3)
ENGL	1210	Technical Communications (3)
Elective		Area III, Laboratory Sciences (4)
EET	2200L	Electrical Systems I (3)
Elective		Lower/Upper Division Engineering or Technical or Math Elective (3)

**FOURTH SEMESTER (14 cr)**

COMM	1130	Public Speaking (3)
Elective		Additional nine credit hours (3)
Elective		Lower/Upper Division Engineering or Technical or Math Elective (2)
Elective		Area V, Humanities (3)
Elective		Additional nine credit hours (3)

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**Associate in Engineering (AEng) in  
SOFTWARE ENGINEERING**

The curriculum in the Associate Degree in Engineering (AEng) in Software Engineering Technology 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 practice-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 environments as software technician, computer systems technician, data applications or computer technician, or as a test and integration assistant. The graduate of this curriculum will be a software engineering technician versed in mathematics, physics, computer science, software development, and business fundamentals. Failure to maintain an overall GPA of at least a 2.00 in all coursework is sufficient cause for being dropped from the program.

**The program objectives are the following:**

1. Graduates will have demonstrated involvement in high-level technical roles.

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**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 identify, analyze, and solve broadly defined engineering technology problems.
5. A commitment to quality, timeliness, and continuous improvement.

**GENERAL EDUCATION (31 CR)**

**Area I. Communications (6 cr)**

- ENGL 1110 Composition I (3)  
ENGL 1210 Technical Communication (3)

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

- ENGR 1121L Introduction to Math for Engineering Applications I (3)  
*Prerequisite: College Algebra, MATH 1220*

**Area III. Laboratory Sciences (4 cr)**

- ENGR 1101/L Introduction to Computational Science & Modeling  
with Lab (4)

**Area IV. Social/Behavioral Sciences (3 cr)**

*Select one course from Area IV.*

**Area V. Humanities (3 cr)**

Elective (3) *Select one course from Area V.*

**Area VI. Fine Arts (3 cr)**

Elective (3) *Select one course from Area VI.*

**■ Additional Nine Credit Hours (9 cr)**

- COMM 1130 Public Speaking (3)  
*Prerequisite: ENG 109*

*Choose one of the following Civics Courses (3)*

- POLS 1100 Introduction to Political Science (3)  
POLS 1120 American National Government (3)  
HIST 1110 United States History I (3)  
HIST 1120 United States History II (3)

*Choose one of the following STEM-H recommended Courses (3)*

- ENVS 2130 Critical Thinking in Science (3)  
PSYC 2120 Developmental Psychology (3)



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**SUPPORT COURSES (9 cr)**

- MATH 1350 Introduction to Statistics (3)  
*Prerequisite: MATH 1215*
- ENGR 1122L Introduction to Math for Engineering Applications II (3)  
*Prerequisite: ENGR 1121L*
- ENGR 2215 Physics for Engineers I (3)  
*Recommended Co-requisite: ENGR 1121L*

**PROGRAM REQUIREMENTS (21 CR)**

- EECE 1105L Microcomputer Systems (3)  
*Prerequisite: ENG 109 or adequate score on the Course Placement Evaluation*
- EECE 1132 Computer Networks I (3)  
*Prerequisite: None*
- EECE 1152L Computer Programming (3)  
*Prerequisite: None*
- CS 2201 Mathematical Foundations of Computer Science (3)  
*Prerequisite: EECE 1152L*
- EECE 2231L Intermediate Programming (3)  
*Prerequisite: EECE 1152L*

**Information Technology (3 cr)**

- IT 2250 Introduction to Databases (3)  
*Prerequisite: EECE 1152L*

**Support Technologies (3 cr)**

- ENGR 1110L Introduction to Engineering (3)

**TOTAL CREDITS: 61****SUGGESTED SEQUENCE OF COURSES****First Semester (15 cr)**

- Elective Area VI, Fine Arts (3)
- ENGR 1110L Introduction to Engineering (3)
- ENGR 1121L Introductory Math for Engineering Applications I (3)
- ENGR 2215 Physics for Engineers I (3)
- EECE 1132 Computer Networks I (3)

**Second Semester (15 cr)**

- ENGL 1110 Composition I (3)
- EECE 1152L Computer Programming I (3)
- ENGR 1122L Introductory Math for Engineering Applications II (3)
- EECE 1105L Microcomputer Systems (3)
- IT 2250 Introduction to Databases (3)

**Third Semester (16 cr)**

- Elective Area IV, Social/Behavioral Sciences (3)
- ENGL 1210 Technical Communications (3)

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Elective		Area III, Laboratory Sciences (4)
MATH	1350	Introduction to Statistics (3)
CS	2201	Mathematical Foundations of Computer Science (3)

#### **Fourth Semester (15 cr)**

COMM	1130	Public Speaking (3)
Elective		Additional nine credit hours (3)
EECE	2231	Intermediate Programming (3)
Elective		Additional nine credit hours (3)
Elective		Humanities (3)

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## **Bachelor of Engineering (BEng) INFORMATION ENGINEERING TECHNOLOGY**

The curriculum of the Bachelor of Engineering in Information Engineering Technology (BEng IET) is designed for those engineering students who intend to launch a career in the design, installation, maintenance, and repair of computer networks used for critical data entry, transfer, retrieval, and management. Coursework in the program is practice-orientated 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 environments as network designer, network support and administrator, project manager, data applications or computer communications engineer, test and integration manager or technologist in business applications. The graduate of this curriculum will be a computer network specialist, but versed in mathematics, physics, computer science, and business fundamentals.

Students are advised to not attempt upper division coursework (300 and 400-level classes) until you have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 100 and 200-level. 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 ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline;

2. An ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the discipline;
3. An ability to apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. An ability to conduct standard tests, measurements, and experiments and to analyze and nts are advised not to attempt upper division coursework (3300 and 4400-level classes) unless they have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 1100 and 2200-level.

## GENERAL EDUCATION REQUIREMENTS (31 CR)

### Area I. Communications (6 cr)

ENGL 1110 Composition I (3)

*Prerequisites: ENG 109 or adequate score on the Course Placement Evaluation*

ENGL 1210 Technical Communication (3)

*Prerequisite: ENGL 1110*

### Area II. Mathematics (3 cr)

ENGR 1121L Introduction to Math for Engineering Applications I (3)

*Prerequisite: College Algebra, Math 1220*

### Area III. Laboratory Sciences (4 cr)

ENGR 1101/L An Introduction to Computational Science and Modeling with Lab (4)

### Area IV. Social/Behavioral Sciences (3 cr)

*Select one course from Area IV.*

*Prerequisite: ENG 109 or adequate score on the Course Placement Evaluation*

### Area V. Humanities (3 cr)

*Select one course from Area V.*

*Prerequisite: ENGL 109 or adequate score on the Course Placement Evaluation*

### Area VI. Fine Arts (3 cr)

*Select one course from Area VI.*

### ■ Additional Nine Credit hours (9 CR)

COMM 1130 Public Speaking (3)

*Prerequisite: ENG 109*

*Choose one of the following Civics Courses (3)*

POLS 1100 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

*Choose one of the following STEMH recommended Courses (3)*

ENVS 2130 Critical Thinking in Science (3)

PSYC 2120 Developmental Psychology (3)

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## SUPPORT COURSES (20 CR)

- MATH 1350 Introduction to Statistics (3)  
*Prerequisite: MATH 1215*
- ENGR 1122L Introduction to Math for Engineering Applications II (3)  
*Prerequisite: ENGR 1121L*
- ENGR 2215 Physics for Engineers I (3)  
*Recommended Co-requisite: ENGR 1121L*
- ENGR 2217L Physics for Engineers III (3)  
*Recommended Co-requisites: ENGR 1122L*
- MATH 1510 Calculus I (4)  
*Pre-requisites: MATH 1250 or adequate score on the Course Placement Evaluation*
- MATH 1520 Calculus II (4)  
*Pre-requisites: MATH 1510*

## PROGRAM REQUIREMENTS (69 CR)

### Computer Science (3)

- CS 2201 Math Foundations of Computer Science (3)  
*Pre-requisite: EECE 1152L*

### Electrical, Electronic, and Computer Engineering (33 cr)

- EECE 1105L Microcomputer Systems I (3)  
*Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation*
- EECE 1132 Computer Networks I (3)  
*Pre-requisite: none*
- EECE 1152L Computer Programming I (3)  
*Pre-requisite: none*
- EET 2201L Digital Systems (3)  
*Pre-requisite: ENGR 1121L*
- EECE 2230 Introduction to Routing and Switching (3)  
*Co-requisite: EECE 1132*
- EECE 2231L Intermediate Programming (3)  
*Pre-requisite: EECE 1152L*
- EECE 3329 Human Computer Interaction (3)  
*Pre-requisite: EECE 2231L*
- EECE 3330 Computer Networks II (3)  
*Pre-requisite: EECE 1132*
- EECE 3351L Advanced Programming I (3)  
*Pre-requisite: EECE 2231L*
- EECE 3355 Web Engineering (3)  
*Pre-requisite: EECE 2231L and IT 2250*
- EECE 4440 Advanced Computer Networks (3)  
*Pre-requisite: EECE 3330*

### Information Technology (15 cr)

- IT 2250 Introduction to Databases (3)  
*Pre-requisite: EECE 1152L*
- IT 3350 Database Management (3)  
*Pre-requisite: IT 2250*

IT 4410 Information Assurance/Security (3)

*Pre-requisite: EECE 2230 and EECE 3330*

IT 4490 IT Capstone I (3) (WIC)

*Pre-requisite: EECE 2231L, IT 2250, and EECE 2230*

IT 4491 IT Capstone II (3)

*Pre-requisite: IT 4490*

### **Business (3 cr)**

ENGR 4480 Engineering Management and Project Management (3)

*Pre-requisite: Permission of Academic Advisor*

### **Support Technologies (15 cr)**

ENGR 1110L Introduction to Engineering (3)

Electives EECE/CS/IT/MATH/ENGR courses (at least 9 upper division) (12)

**TOTAL CREDITS: 120**

## **SUGGESTED SEQUENCE OF COURSES**

### **First Semester (15)**

ENGR 1110L Introduction to Engineering (3)

ENGR 1121L Introductory Math for Engineering Applications I (3)

ENGR 2215 Physics for Engineers I (3)

EECE 1132 Computer Networks I (3)

EECE 2230 Introduction to Routing and Switching (3)

### **Second Semester (18)**

Elective Area VI, Fine Arts (3)

EECE 1152L Computer Programming I (3)

ENGR 1122L Introductory Math for Engineering Applications II (3)

ENGR 2217L Physics for Engineers III (3)

EECE 3330 Computer Networks II (3)

EECE 4440 Advanced Computer Networks (3)

### **Third Semester (16)**

ENGL 1110 Composition I (3)

ENGL 1210 Technical Communications (3)

MATH 1350 Introduction to Statistics (3)

Elective Area V, Humanities (3)

ENGR 1101/L Area III, Laboratory Science (4)

### **Fourth Semester (15)**

EECE 1105L Microcomputer Systems (3)

COMM 1130 Public Speaking (3)

EECE 2231L Intermediate Programming (3)

IT 2250 Introduction to Databases (3)

Elective EECE/CS/IT/MATH/ENGR Elective (3)

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### **Fifth Semester (15)**

EET	2201L	Digital Systems (3)
CS	2201	Math Foundations of Computer Science (3)
EECE	3329	Human Computer Interaction (3)
IT	4410	Information Assurance and Security (3)
IT	3350	Database Management (3)

### **Sixth Semester (16)**

MATH	1510	Calculus I (4)
EECE	3351L	Advanced Programming (3)
ENGR	4480	Engineering Management and Project Management (3)
Elective		Additional nine credit hours (3)
Elective		Additional nine credit hours (3)

### **Seventh Semester (13)**

EECE	3355	Web Engineering (3)
IT	4490	Capstone I (3)
MATH	1520	Calculus II (4)
Elective		EECE/CS/IT/MATH/ENGR Elective (3)

### **Eighth Semester (12)**

IT	4491	Capstone II (3)
Elective		EECE/CS/IT/MATH/ENGR Elective (3)
Elective		EECE/CS/IT/MATH/ENGR Elective (3)
Elective		Area IV, Social/Behavioral Sciences (3)

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## **Bachelor of Engineering (BEng) ELECTROMECHANICAL 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 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 two growing technical fields.

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.

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**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 apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline;
2. An ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the discipline;
3. An ability to apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes;
5. An ability to function effectively as a member as well as a leader on technical teams. Students are advised not to attempt upper division coursework (3300 and 4400-level classes) unless they have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 1100 and 2200-level.

**GENERAL EDUCATION REQUIREMENTS (31 CR)**

**Area I. Communications (6 cr)**

ENGL 1110 Composition I (3)

*Prerequisites: ENGL 109 or adequate score on the Course Placement Evaluation*

ENGL 1210 Technical Communication (3)

*Prerequisite: ENGL 1110*

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

ENGR 1121L Introduction to Math for Engineering Applications I (3)

*Prerequisite: College Algebra, Math 1220*

**Area III. Laboratory Sciences (4 cr)**

ENGR 1101/L An Introduction to Computational Science and Modeling with Lab (4)

**Area IV. Social/Behavioral Sciences (3 cr)**

*Select one course from Area IV.*

*Prerequisite: ENGL 109 or adequate score on the Course Placement Evaluation*

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## Area V. Humanities (3 cr)

Select one course from Area V.

Prerequisite: ENGL 109 or adequate score on the Course Placement Evaluation

## Area VI. Fine Arts (3 cr)

Select one course from Area VI.

### ■ Additional Nine Credit Hours (9 cr)

COMM 1130 Public Speaking (3)

Prerequisite: ENGL 109

Choose one of the following Civics Courses (3)

POLS 1100 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

Choose one of the following STEMH recommended Courses (3)

ENVS 2130 Critical Thinking in Science (3)

PSYC 2120 Developmental Psychology (3)

## SUPPORT COURSES (20 CR)

MATH 1510 Calculus I (4)

Pre-requisites: MATH 1250 or adequate score on the Course Placement Evaluation

MATH 1520 Calculus II (4)

Pre-requisites: MATH 1510

ENGR 1122L Introduction to Math for Engineering Applications II (3)

Pre-requisites: ENGR 1121L

ENGR 2215 Physics for Engineers I (3)

Recommended Co-requisite: ENGR 1121L

ENGR 2216L Physics for Engineers II (3)

Pre-requisite: ENGR 2215

ENGR 2217L Physics for Engineers III (3)

Recommended Co-requisite: ENGR 1122L

## PROGRAM REQUIREMENTS (69 CR)

ENGR 1110L Introduction to Engineering (3)

Pre-requisite: None

CAD 1100 Engineering Drawing & Computer Aided Design Fundamentals (3)

Pre-requisite: None

CAD 2200 Intermediate Engineering Drawing & Computer Aided Design (3)

Pre-requisite: CAD 1100

EECE 1152L Computer Programming I (3) or other programming course (3)

Pre-requisite: None

MET 2201 Applied Mechanics I (3)

Pre-requisite: ENGR 2215

MET 3301 Applied Mechanics II (3)

Pre-requisite: MET 2201



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MET	3302	Strength and Properties of Materials (3)
		<i>Pre-requisite: MET 2201</i>
MET	3310	Manufacturing Processes and Automation (3)
		<i>Pre-requisite: DRFT 1100</i>
EET	2200L	Electrical Systems I with lab (3)
		<i>Pre-requisite: ENGR 2217L</i>
EET	3300L	Electrical Systems II with lab (3)
		<i>Pre-requisite: EET 2200L</i>
EET	4400L	Control Systems and Instrumentation with lab (3)
		<i>Pre-requisite: EET 3300L</i>
EMET	4400	Advanced Electro-Mechanical Design (3)
		<i>Pre-requisite: DRFT 1100, EET 2200L, and MET 3302</i>
MET	3303	Thermodynamics (3)
		<i>Pre-requisite: ENGR 2216L</i>
MET	3317	Fluid Mechanics (3)
		<i>Pre-requisite: MET 3301</i>
EMET	4402	Robotics (3)
		<i>Pre-requisite: EET 4400</i>
MET	4421	Heat Transfer (3)
		<i>Pre-requisite: MET 3317</i>

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MATH 2410 Introduction to Applied Ordinary Differential Equations (3)  
**or**

MATH 3316 Applied Ordinary Differential Equations (3)  
*Pre-requisite: MATH 1520*

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ENGR 4480 Engineering Management and Project Management (3)  
*Pre-requisite: Junior status or permission of academic advisor*

EMET 4490 Capstone I (3)  
*Pre-requisite: Senior status*

Lower/Upper Division Engineering or Technical Elective (12)  
 At least 6 upper division credits

**TOTAL CREDITS: 120**

## SUGGESTED SEQUENCE OF COURSES

### First Semester (16 cr)

ENGR	1121L	Introductory Mathematics for Engineering Applications I (3)
ENGR	2215	Physics for Engineers I (3)
ENGR	1110L	Introduction to Engineering (3)
CAD	1100	Engineering Drawing & Computer Aided Design Fundamentals (3)
Elective		Area III, Laboratory Sciences (4)

### Second Semester (15 cr)

EECE	1152L	Computer Programming I (3)
ENGR	1122L	Introductory Mathematics for Engineering Applications II (3)
ENGR	2216	Physics for Engineers II (3)
ENGR	2217L	Physics for Engineers III (3)
CAD	2200	Intermediate Engineering Drawing & Computer Aided Design (3)

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### Third Semester (16 cr)

EET	2200L	Electrical Systems I with Lab (3)
MATH	1510	Calculus I (4)
ENGL	1110	Composition I (3)
MET	2201	Applied Mechanics I (3)
MET	3303	Thermodynamics (3)

### Fourth Semester (16 cr)

MATH	1520	Calculus II (4)
ENGL	1210	Technical Communications (3)
Elective		Area IV, Social/Behavioral Sciences (3)
EET	3300L	Electrical Systems II with Lab (3)
MET	3301	Applied Mechanics II (3)

### Fifth Semester (18 cr)

Elective		Area V, Humanities (3)
COMM	1130	Public Speaking (3)
MATH	296	Introduction to Applied Ordinary Differential Equations (3)
MET	3317	Fluid Mechanics (3)
EET	4400L	Control Systems and Instrumentation with Lab (3)
MET	3302	Strength and Properties of Materials (3)

### Sixth Semester (15 cr)

Elective		Additional nine credit hours (3)
MET	3310	Manufacturing Processes and Automation (3)
EMET	4402	Robotics (3)
Elective		Additional nine credit hours (3)
EMET	4400	Advanced Electro-Mechanical Design (3)

### Seventh Semester (12 cr)

MET	4421	Heat Transfer (3)
Elective		Lower Division Engineering or Tech or Math (3)
ENGR	4480	Engineering Management and Project Management (3)
Elective		Lower Division Engineering or Tech or Math (3)

### Eighth Semester (12 cr)

Elective		Lower/Upper Division Engineering or Tech or Math (3)
Elective		Lower/Upper Division Engineering or Tech or Math (3)
EMET	4490	Capstone I (3)
Elective		Area VI, Fine Arts (3)

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## Certificate

### ENGINEERING DRAWING AND COMPUTER AIDED DESIGN

The certificate program in Engineering Drawing and Computer Aided Design is developed in response to the consistently high demand from industry and consulting firms for professionals with technical backgrounds in engineering drawing, 3D modeling, product design and development. Coursework in the program is practice-oriented and uses an industry-leading Computer Aided Design software. The program prepares students for the workforce in wide variety of industries related to engineering design and prototyping, research and development, manufacturing, fabrication, metrology among others.

#### SUPPORT COURSES (9 CR)

FYEX	1110	First-Year Seminar (3)
ENGR	1110L	Introduction to Engineering (3)
MATH	1130	Survey of Mathematics (3)
<i>or</i>		
MATH	1170	Applied Trades Math (3)

#### PROGRAM REQUIREMENTS (9 CR)

CAD	1100	Engineering Drawing & Computer Aided Design Fundamentals (3)
<i>Pre-requisite: None</i>		
CAD	2200	Intermediate Engineering Drawing & Computer Aided Design (3)
<i>Pre-requisite: CAD 1100</i>		
CAD	3300	Advanced Computer Aided Design (3)
<i>Pre-requisite: CAD 2200</i>		

**TOTAL CREDITS: 18**

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## 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.

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**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 5547 Routing and Switching (3)

**Information Technology (9 cr)**

IT 5510 Information Assurance and Security (3)

IT 5530 Network Administration (3)

IT 5599 Topics in IT (3)

**Support Technology (3 cr)**

ENGR 5578 Engineering Ethics (3)

**TOTAL CREDITS: 15**

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## 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 to become 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 within Arts and Sciences. 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 now offers a new program: Certificate of Literary Editing and Publishing. This 15-credit certificate program introduces students to literary journals and supports students' learning editing and publishing skills to apply to the production of *Trickster* and other literary and artistic works.

Language and Letters also houses many core courses of general education, such as Composition, Public Speaking, Creative Writing, and literature 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 serve on our *Trickster* 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).

<b>Lori Franklin, MA Chair</b>	Language & Letters	747.2215	<i>lorig@nnmc.edu</i>
<b>Rachel Meiklejohn, PhD</b>	Language, Literacy, & Sociocultural Studies	747-5013	<i>r.meiklejohn@nnmc.edu</i>
<b>J.B.Moore, MFA</b>	Writing Center Director	747.2216	<i>jbmoore@nnmc.edu</i>
<b>Heather Winterer, PhD</b>	English	747.2247	<i>hwinterer@nnmc.edu</i>
<b>Rachel Begay</b>	Administrative Asst.	747.2229	<i>rbegay@nnmc.edu</i>

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## 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; provides development of essential skills of critical thinking, communication, and creativity; and supports awareness of community and diversity.

#### GENERAL EDUCATION (31 CR)

Area I. Communications (6 cr)

Area II. Mathematics (3 cr)

Area III. Laboratory Sciences (4 cr)

Area IV. Social/Behavioral Sciences (3 cr)

Area V. Humanities (3 cr)

Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours for Non-STEMH (9 cr)

COMM 1130 Public Speaking (3 cr)

Civics Course (3 cr)

Literature Course (3 cr)

#### PROGRAM REQUIREMENTS (24 CR)

##### Foundations in the Liberal Arts (12 cr)

LLLA 1101 Foundations in the Liberal Arts

ENGL 1410 Introduction to Literature or a 200-level literature course

ENGL 2310 Introduction to Creative Writing or a 200-level writing course

Language SPAN course or PINS 2996

##### Electives (17 cr)

*Twelve credits must be taken within the Discipline of Arts and Sciences.*

**TOTAL CREDITS: 60**

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## Certificate

### LITERARY EDITING AND PUBLISHING

This program introduces students to the world of literary journals and editing and publishing skills. Students will apply this knowledge to the production of NNMC's literary journal, Trickster, and other literary and creative works.

#### GENERAL EDUCATION (6 CR)

ENGL	1410	Introduction to Literature
ENGL	2310	Introduction to Creative Writing

#### PROGRAM REQUIREMENTS (9 CR)

BUSA	3330	Principles of Project Management
ENGL	3320	Creative Writing Editing Forum
ENGL	4420	Creative Writing Editing and Publishing Forum

**TOTAL CREDITS: 15**





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# Department of MATH AND PHYSICAL SCIENCES

The Department of Mathematics and Physical Sciences provides fundamental knowledge in mathematics by 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.

<b>David Torres, PhD</b> Chair	Mathematics 747.2174	<i>davytorres@nnmc.edu</i>
<b>Ana Vasilic, PhD</b>	Applied Mathematics 747.2231	<i>ana.vasilic@nnmc.edu</i>
<b>Lorraine Bowman</b>	Astrophysics 747-2268	<i>lorraine.bowman@nnmc.edu</i>
<b>Toni Atencio</b>	Administrative Assistant 747.2210	<i>tonia@nnmc.edu</i>

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## 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 (31 CR) SEE PAGES 21-24

#### Area I. Communications (6 cr)

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

MATH 1220 College Algebra (3)

#### Area III. Laboratory Sciences (4 cr)

#### Area IV. Social/Behavioral Sciences (3 cr)

#### Area V. Humanities (3 cr)

#### Area VI. Fine Arts (3 cr)

#### ■ Additional Nine Credit Hours for STEMH (9 cr)

COMM 1130 Public Speaking (3 cr)

Civics Course (3 cr)

ENVS 2130 Critical Thinking in Science (3 cr)

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## PROGRAM REQUIREMENTS (73 CR)

### ■ Required Supporting Courses in Physics and Chemistry (8 cr)

CHEM	1215/L	General Chemistry I with lab (4)
<i>and</i>		
CHEM	1225/L	General Chemistry II with lab (4)
<i>or</i>		
PHYS	1230/L	Applied Physics I with lab (4)
<i>and</i>		
PHYS	1240/L	Applied Physics II with lab (4)
<i>or</i>		
CHEM	1215/L	General Chemistry I with lab (4)
<i>and</i>		
PHYS	1230/L	Applied Physics I with lab (4)

### ■ Courses in Programming (6 cr)

EECE	1152L	Computer Programming (3)
EECE	2231L	Intermediate Programming (3)

*Choose one of the following courses (3 or 4 cr)*

EECE	3351	Advanced Programming (3)
CHEM	3301/L	Organic Chemistry I with lab (4)
CHEM	3311	Physical Chemistry (3)

## CORE CURRICULUM (32 CR)

MATH	1350	Introduction to Statistics (3)
MATH	1250	Trigonometry and Pre-calculus (4)
MATH	1510	Calculus I (4)
MATH	1520	Calculus II (4)
MATH	2530	Calculus III (4)
MATH	3314	Linear Algebra with Applications (3)
MATH	3316	Applied Ordinary Differential Equations (3)
MATH	3375	Numerical Computing (3) (WIC)
MATH	4401	Advanced Calculus I (4)

## MAJOR (24 CR)

### Applied Mathematics (21 cr)

MATH	3311	Vector Analysis (3)
MATH	3312	Partial Differential Equations for Engineering (3)
MATH	3313	Complex Variables for Engineering (3)
MATH	3327	Discrete Structures (3)
MATH	3345	Elements of Applied Statistics and Probability Theory (3)
MATH	3395	Practicum in Mathematics (3)
MATH	4466	Mathematical Methods in Science and Engineering (3)

*Choose one of the following (3):*

MATH	4441	Probability (3)
MATH	4464	Applied Matrix Theory (3)

### Electives (16 cr)

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Electives may be chosen from any NNMC college or department subject to advisor consultation. At least one of the electives needs to be a STEM (Science, Technology, Engineering, or Mathematics) course (3)

\*No course can count more than once toward a degree at Northern.

You must complete enough approved upper-division (300 or above) math, chemistry, engineering, or physics courses in order to fulfill the requirement of at least 40 credits of upper-division coursework. Your total hours need to sum to at least 120 credits.

**TOTAL CREDITS: 120**

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## Associate of Science MATHEMATICS

**GENERAL EDUCATION (31 CR) SEE PAGES 21-24**

**Area I. Communications (6 cr)**

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

MATH 1220 College Algebra (3)

**Area III. Laboratory Sciences (4 cr)**

**Area IV. Social/Behavioral Sciences (3 cr)**

**Area V. Humanities (3 cr)**

**Area VI. Fine Arts (3 cr)**

■ **Additional Nine Credit Hours for STEMH (9 cr)**

COMM 1130 Public Speaking (3 cr)

Civics Course (3 cr)

ENVS 2130 Critical Thinking in Science (3 cr)

**PROGRAM REQUIREMENTS (29 CR)**

**Core Curriculum (28 CR)**

MATH 1350 Introduction to Statistics (3)

MATH 1250 Trigonometry and Pre-calculus (4)

MATH 1510 Calculus I (4)

MATH 1520 Calculus II (4)

MATH 2530 Calculus III (4)

MATH 2420 Applied Linear Algebra (3)

MATH 2410 Applied Ordinary Differential Equations (3)

MATH 2140 Introduction to Numerical Computing (3) (WIC)

**ELECTIVE (1 CR)**

**TOTAL CREDITS: 60**

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## Certificate

### DATA SCIENCE

The Data Science Certificate provides students with the introductory skills needed for entry into the data science field.

#### PROGRAM REQUIREMENTS (15 CR)

MATH	1350	Introduction to Statistics (3)
MATH	2300	Mathematics for Data Science (3)
MATH	2310	Machine Learning (3)
MATH	2320	Data Analysis Using R (2)
MATH	2330	Data Science Capstone (2)
ENGR	1147	Python Programming I (3)

**TOTAL CREDITS: 16**

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# Department of NURSING & HEALTH SCIENCES

**Chair: Ellen Trabka, MSN, RN**  
505.747.2209, [etrabka@nmmc.edu](mailto:etrabka@nmmc.edu)

The Department 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 Phlebotomy Technician & Certificate of Practical Nursing, Associate of Applied Science in Nursing, and Bachelor of Science in Nursing (RN to BSN).

## ASSOCIATE DEGREE NURSING PROGRAM

<b>Theresa Lopez, MSN, RNC, CNE</b> <i>talopez@nmmc.edu</i>	Interim Program Director	747.2282
<b>Ana Malinalli X. Gutiérrez Sisnersos, PhD, MALAS, APRN, PMHCNS-BC, CCM, AHN-BC</b> <i>malinallix@nmmc.edu</i>	Clinical Coordinator	747.2256
<b>Ken Armstrong, DNP, MS, RN, CNE, CNOR</b> <i>ken.armstrong@nmmc.edu</i>	Faculty	747.2202
<b>Rebecca Hancock, MSN, RN</b> <i>rebecca.hancock@nmmc.edu</i>	Faculty	747.2250
<b>Melanie Colgan, MSN, RN</b> <i>melanie.colgan@nmmc.edu</i>	Faculty	747.2207
<b>Margaret Zak, MN, RN, CNM, IBCLC</b> <i>margaret.zak@nmmc.edu</i>	Faculty	747-5047
<b>Veronica O'Halloran</b> <i>vohalloran@nmmc.edu</i>	Success Coach	
<b>Tammy Uzzetta, ADN</b> <i>tammy.uzzetta@nmmc.edu</i>	Simulation Coordinator	
<b>Yuri Findlay, MA</b> <i>yuri.findlay@nmmc.edu</i>	Interim Instructor	747-2220

## RN TO BSN NURSING PROGRAM

<b>Joan Hodge, MSN, RN</b> <i>joan.hodge@nmmc.edu</i>	Associate Director Faculty	747-2278
<b>Ana Malinalli X. Gutiérrez Sisnersos, PhD, MALAS, APRN, PMHCNS-BC, CCM, AHN-BC</b> <i>malinallix@nmmc.edu</i>	Faculty	747.2256

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## 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 and phlebotomy.

#### GENERAL EDUCATION (15 CR)

##### Area I. Communications (6 cr)

ENGL 1110 Composition I (3)

*Choose one of the following courses:*

ENGL 1120 Composition II (3)

ENGL 1210 Technical Communications (3)

COMM 1130 Public Speaking (3)

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

*Choose one of the following courses:*

MATH 1130 Survey of Mathematics (3)

MATH 1350 Introduction to Statistics (3)

MATH 1220 College Algebra (3)

##### Area V. Humanities (3 cr)

Electives (3)

##### Area VI. Fine Arts (3 cr)

#### PROGRAM REQUIREMENTS (45 CR)

BIOL 2210/L Human Anatomy & Physiology I with lab (4)

BIOL 2225/L Human Anatomy & Physiology II with lab (4)

PSYC 1110 General Psychology (3)

PSYC 2120 Developmental Psychology (3)

HSCI 1103 Introduction to Health Care Professions (3)

HLED 1510 Medical Terminology (3)

NUTR 2110 Nutrition (3)

NURS 1100/L Nurse Aide with lab (5.5)

PHLB 1101 Introduction to Phlebotomy (3)

PHLB 1101L Phlebotomy Skills Practicum (1)

PHLB 1102 Special Practices in Phlebotomy (3)

PHLB 1102L Special Practices in Phlebotomy Skills Practicum (1)

PHLB 1104L Phlebotomy Clinical Internship (2.5)

Electives HLED or Laboratory Science electives (6)

**TOTAL CREDITS: 60**

## Certificate

### PHLEBOTOMY TECHNICIAN

The Phlebotomy Technician Certificate Program provides students with the specialized knowledge and skills required of an entry level phlebotomist. Students who complete the program are eligible to pursue national certification.

#### Pre-requisite (3 CR)

HLED 1510 Medical Terminology (3)

#### PROGRAM REQUIREMENTS (14 CR)

PHLB 1101 Introduction to Phlebotomy (3)  
 PHLB 1101L Phlebotomy Skills Practicum (1)  
 PHLB 1102 Special Practices in Phlebotomy (3)  
 PHLB 1102L Special Practices in Phlebotomy Skills Practicum (1)  
 PHLB 1104L Phlebotomy Clinical Internship (2.5)  
 HLED 1115 American Heart Association CPR (0.5)

#### Elective (3) Choose one of the following electives:

HSCI 1103 Introduction to Health Care Professions (3)  
 NUTR 2110 Nutrition (3)  
 PSYC 1110 General Psychology (3)  
 PSYC 2120 Developmental Psychology (3)

**TOTAL CREDITS: 17**

## 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 and nationally accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE Suite 1400, Atlanta, GA 30326, 404-975-5000, [www.acenursing.org](http://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.

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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 1119) 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. GPA of 2.75 or higher in the pre-requisite courses
3. Submission of a completed nursing application packet by May 31st for fall admission consideration.
4. A minimum score of 58.7 % on the ATI test of Essential Academic Skills (ATI TEAS®).



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5. 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	1110/L (4) or any other BIOL or CHEM course with a lab (4)
BIOL	2210/L (4) Human Anatomy & Physiology I with lab
PSYC	1110 (3) General Psychology
ENGL	1110 (3) Composition I

*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 ATI test of Essential Academic Skills (ATI TEAS®) admission test scores, 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 2245 Pathophysiology. 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 general education and support transfer courses with a grade of “C-” or better and all nursing 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:

Administrative Assistant  
 Department of Nursing & Health Sciences Office  
 505.747.2207 Quaye.oblie@nmmc.edu

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## 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 1119 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.

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## GENERAL EDUCATION (16 CR)

### Area I. Communications (3 cr)

*Required: (3)*

ENGL 1110 Composition I (3)

### Area III. Lab Science (4 cr)

*Required (4):*

BIOL 2210/L Human Anatomy & Physiology I with lab (4)

### Area IV. Social/Behavioral Sciences (6 cr)

*Required (6):*

PSYC 1110 General Psychology (3)

PSYC 2120 Developmental Psychology (3)

### Area V. Humanities (3 cr)

## SUPPORT COURSES (8 CREDITS)

*Required: Choose a minimum of 4 credits from a biology or chemistry lab course:*

CHEM 1110/L (4) or any other BIOL or CHEM course with a lab (4)

BIOL 2225/L Human Anatomy & Physiology II With Lab (4)

## PROGRAM REQUIREMENTS (28 CR)

NURS 1106 Pharmacology (3)

NURS 1113 Nursing Fundamentals (4)

NURS 1113L Nursing Fundamentals Lab (2)

NURS 1114L Health Assessment (2)

NURS 1125 Medical/Surgical Nursing I (3)

NURS 1125L Medical/Surgical Nursing I Clinical (3)

NURS 2214 Psychiatric/Mental Health Nursing (2)

NURS 2214L Psychiatric/Mental Health Nursing Clinical (1)

NURS 2217 Maternal/Newborn Nursing (2)

NURS 2217L Maternal/Newborn Nursing Clinical (1)

NURS 2218 Pediatric Nursing (2)

NURS 2218L Pediatric Nursing Clinical (1)

NURS 1119 Role transition-PN (2)

**TOTAL CREDITS: 52**

## 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 (16 CR)

##### Area I. Communications (3 cr)

*Required:*

ENGL 1110 Composition I (3)

##### Area III. Lab Science (4 cr)

*Required (4):*

BIOL 2210/L Human Anatomy & Physiology I with lab (4)

##### Area IV. Social/Behavioral (6 cr)

*Required:*

PSYC 1110 General Psychology (3)

PSYC 2120 Developmental Psychology (3)

##### Area V. Humanities (3 cr)

#### SUPPORT COURSES (8 CR)

*Required: Choose a minimum of 4 credits from a biology or chemistry lab course*

CHEM 1110/L (4) or any other BIOL or CHEM course with a lab (4)

BIOL 2225/L Human Anatomy & Physiology II with lab (4)

#### PROGRAM REQUIREMENTS (44 CR)

NURS 1106 Pharmacology (3)

NURS 1113 Nursing Fundamentals (4)

NURS 1113L Nursing Fundamentals Lab (2)

NURS 1114L Health Assessment (2)

NURS 1125 Medical/Surgical Nursing I (3)

NURS 1125L Medical/Surgical Nursing I Clinical (3)

NURS 2214 Psychiatric/Mental Health Nursing (2)

NURS 2214L Psychiatric/Mental Health Nursing Clinical (1)

NURS 2217 Maternal/Newborn Nursing (2)

NURS 2217L Maternal/Newborn Nursing Clinical (1)

NURS 2218 Pediatric Nursing (2)

NURS 2218L Pediatric Nursing Clinical (1)

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NURS	2225	Medical/Surgical Nursing II (3)
NURS	2225L	Medical/Surgical Nursing II Clinical (3)
NURS	2235	Medical/Surgical Nursing III (3)
NURS	2235L	Medical/Surgical Nursing III Clinical (3)
NURS	2240	Role Transition/RN (2)
NURS	2245	Pathophysiology (4)

**TOTAL CREDITS: 68**

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## **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 that include: 1) forty credits of lower-division courses, to include nursing courses from an Associate Degree in Nursing program that will be applied toward the BSN degree; 2) general education courses; 3) support courses; and 4) a total of thirty-four credits of upper-division courses: 31 nursing credits and 3 upper division elective credits.

The RN to BSN Program is offered in a fully online format.

### **GENERAL EDUCATION (31 CR)**

#### **Area I. Communications (6 cr)**

ENGL 1110 Composition I (3)

*Choose one of the following courses:*

ENGL 1120 Composition II (3)

ENGL 1210 Technical Communications (3)

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

*Required:*

MATH 1350 Introduction to Statistics (3)

#### **Area III. Laboratory Science (4 cr)**

*Required:*

BIOL 2210/L Human Anatomy & Physiology I with lab (4)

#### **Area IV. Social/Behavioral Sciences (3 cr)**

*Required:*

PSYC 1110 General Psychology (3)

**Area V. Humanities (3 cr)**

Elective (3)

**Area IV. Fine Arts (3 cr)**

Elective (3)

**■ Additional Nine Credit Hours (9 cr)**

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses (3)*

POLS 1110 Introduction to Political Science (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

SOCI 2310 Contemporary Social Problems (3)

*Choose one of the following STEMH recommended courses (3)*

ENVS 2130 Critical Thinking in Science (3)

PSYC 2120 Developmental Psychology (3) *Required***PROGRAM REQUIREMENTS****Required Lower-Division Coursework (40 cr)**

Forty credits of lower-division courses, to include nursing courses from ADN program, will be applied toward the BSN degree.

**SUPPORT COURSES (15-17 CR)**

NUTR 2110 Nutrition (3)

BIOL 2225/L Human Anatomy &amp; Physiology II with lab (4)

BIOL 2310/L Microbiology for Health Sciences with lab (4)

Pathophysiology (4-6 cr) can be lower-or upper division courses

**RN TO BSN PROGRAM CURRICULUM (34 CR)**

A minimum of 34 credits of upper-division courses must be completed, to include 31 credits of required upper-division nursing courses and 3 credits of upper division electives.

NURS 4400 Nursing in Transition and NURS 4401 Integral Nursing Theory must be the first two courses taken in the curriculum.

They may be taken concurrently with the following courses: NURS 4410 An Integral Approach to Evidence-Based Practice; NURS 4420 Integral Health Assessment; NURS 4430 Complementary and Alternative Therapies in Nursing; NURS 4440 Health Issues, Policy and Politics in Health Care; NURS 4450 Community and Global Health I.

NURS 4480 Integral Nursing Capstone Course is the last course taken in the program.

NURS 4400 Nursing in Transition (2)

NURS 4401 Integral Nursing Theory (3)

NURS 4410 An Integral Approach to Evidence-Based Practice (3)

NURS 4420 Integral Health Assessment (3)

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NURS	4430	Complementary and Integrative Therapies in Nursing (3)
NURS	4440	Health Issues, Policy and Politics in Health Care (3)
NURS	4450	Community and Global Health I (3)
NURS	4451	Community and Global Health II (4)
NURS	4460	Integral Communication and Teaching (2)
NURS	4470	Transformational Leadership in Nursing (3)
NURS	4480	Integral Nursing Capstone Course (2)
Electives		3 credits of upper-division electives (3)

**TOTAL CREDITS: 120-122**  
**(INCLUDES A TOTAL OF 135 CLINICAL HOURS)**

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## Department of TEACHER EDUCATION

The Department of Teacher Education at Northern New Mexico College is accredited by the New Mexico Public Education Department and Nationally accredited by NCATE and is CAEP Eligible. The Department is committed to preparing high quality teachers and advancing the profession in partnership with educational institutions and communities in the region and beyond.

Programs offered include an Associate of Arts and Bachelor of Arts degrees in Early Childhood 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 Department 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](mailto:COE@nnmc.edu) or (505) 747-5431.

<b>Sandra Rodriguez, PhD, Chair</b> Associate Professor	747.2194	<a href="mailto:sandra.rodriguez@nnmc.edu">sandra.rodriguez@nnmc.edu</a>
<b>April Barela, BBA</b> Data Analyst, Manager	747.5463	<a href="mailto:april.barela@nnmc.edu">april.barela@nnmc.edu</a>
<b>Delmeria Martinez, BBA</b> Coordinator of Student and Faculty Support	747.5431	<a href="mailto:delmeriamtz@nnmc.edu">delmeriamtz@nnmc.edu</a>
<b>Anne Gray, PhD</b> Assistant Professor	747.5462	<a href="mailto:anne.gray@nnmc.edu">anne.gray@nnmc.edu</a>
<b>Alberto Mares, PhD</b> Assistant Professor	747.5431	<a href="mailto:alberto.mares@nnmc.edu">alberto.mares@nnmc.edu</a>

### Admission to the Department of Teacher Education

In order to be officially accepted into a program of study and advised accordingly by the Department of Teacher Education, students must declare an Associate of Arts or a Bachelor of Arts Degree in Early Childhood or Elementary Education. Post graduate students must declare Alternative Licensure in Elementary, Secondary or Special Education.

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### Associate of Arts EARLY CHILDHOOD EDUCATION

The Early Childhood Education (ECED) program is a stackable AA to BA program. The program includes sixty (60) credits of coursework earned as part of the Associates of Arts in Early Childhood Education and an additional 60 credits that lead to a Bachelor of Arts in Early Childhood Education and Licensure in Early Childhood Education-Pre K- Grade 3. The program's coursework is focused on the social and

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developmental needs of young students ranging from age three to third grade.

The competency-based program is aligned to the New Mexico's Early Childhood Education & Development Articulation Catalog of Courses and Programs (2020). The Early Childhood Education Program is accredited by the New Mexico Public Education Department (November 2019).

## **GENERAL EDUCATION (31 CR)**

### **Area I. Communications (6 cr)**

ENGL 1110 Composition I (3)

*Choose one of the following courses:*

ENGL 1120 Composition II (3)

ENGL 1210 Technical Communications (3)

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

*Choose one of the following courses:*

MATH 1350 Introduction to Statistics (3)

MATH 1220 College Algebra (3)

MATH 1130 Survey of Mathematics (3)

### **Area III. Laboratory Sciences (4 cr)**

*Select one science course with a lab.*

### **Area IV. Social/Behavioral Sciences (3 cr)**

*Select one course from Area IV*

### **Area V. Humanities (3 cr)**

*Select one course from Area V*

### **Area VI. Fine Arts (3 cr)**

*Select one course from Area VI*

### **■ Additional Nine Credit Hours (9 cr)**

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Sciences (3)

POLS 1120 American National Politics (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

SOCI 2310 Contemporary Social Problems (3)

*Choose one of the following Literature Courses*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

## **EARLY CHILDHOOD EDUCATION FOUNDATIONAL COURSES (29 cr)**

ECED 1110 Child Growth, Development and Learning (3)



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ECED	1115	Health, Safety, and Nutrition (2)
ECED	1120	Guiding Young Children (3)
ECED	1125	Assessment of Children and Evaluation of Programs (3)
ECED	1130	Family and Community Collaboration (3)
ECED	2110	Professionalism (2)
ECED	2115	Introduction to Language, Literacy and Reading (3)
ECED	2120	Curriculum Development through Play-Birth through Age 4 (3)
		<i>Co-requisite ECED 2121</i>
ECED	2121	Curriculum Development Play-Birth through Age 4 Practicum (2)
		<i>Co-requisite ECED 2120</i>
ECED	2130	Curriculum Development & Implementation Age 3 through Grade 3 (3)
		<i>Co-requisite ECED 2131</i>
ECED	2131	Curriculum Development & Implementation Age 3 through Grade 3 Practicum (2)
		<i>Co-requisite ECED 2130</i>

**TOTAL CREDITS: 60**

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## 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. The program provides a seamless transition to Northern New Mexico College's Bachelor of Arts in Elementary Education.

#### GENERAL EDUCATION REQUIREMENTS (31 CR)

##### Area I. Communications (6 cr)

ENGL 1110 Composition I (3)

*Choose one of the following courses:*

ENGL 1120 Composition II (3)

ENGL 1210 Technical Communications (3)

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

*Choose one of the following courses:*

MATH 1350 Introduction to Statistics (3)

MATH 1220 College Algebra (3)

MATH 1130 Survey of Mathematics (3)

##### Area III. Laboratory Sciences (4 cr)

*Select one science course with a lab.*

##### Area IV. Social/Behavioral Sciences (3 cr)

*Select one course from Area IV.*

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**Area V. Humanities (3 cr)**

*Select one course from Area V.*

**Area VI. Fine Arts (3 cr)**

*Select one course from Area VI.*

**■ Additional Nine Credit Hours (9 cr)**

COM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Sciences (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

SOCI 2310 Contemporary Social Problems (3)

*Choose one of the following Literature Courses*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

**PROFESSIONAL PREPARATION REQUIREMENTS****(16 CR NMPED ADDITIONAL GENERAL EDUCATION REQUIREMENTS)**

Math Elective (3)

Laboratory Science Elective (4)

Social or Behavioral Science Elective (3)

Language (6)

**PROFESSIONAL PROGRAM REQUIREMENTS (13 CR)**

EDUC 1120 Introduction to Education (3)

EDUC 1190 Introduction to Education Practicum (1)

EDUC 2221 Educational Psychology (3)

EDUC 2330 The Effective Classroom (3)

EDUC 2440 Teaching Elementary School Math (3)

**TOTAL CREDITS: 60**

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**Bachelor of Arts****EARLY CHILDHOOD EDUCATION–LICENSURE**

Northern New Mexico College offers a Bachelor of Arts in Early Childhood Education degree leading to New Mexico Early Childhood Teacher Licensure.

This competency-based program is part of New Mexico Early Childhood Education and Development Articulation Catalog of Courses and Programs and it 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.

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## 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 Early Childhood Education,
4. *Cumulative GPA* of at least 2.75,
5. *Evidence of taking the basic assessments* required by the State of New Mexico is required. Students must pass these assessments as part of a battery of assessments in order to be eligible to apply for a teaching license from the New Mexico Public Education Department.

## APPLICATION PROCESS

1. *Students must declare a Bachelor of Arts in Early Childhood Education* to be officially accepted and advised accordingly by the Department of Teacher Education.
2. *Complete a BA Program application*: which can be found on the Early Childhood Education page on our website at [www.nnmc.edu](http://www.nnmc.edu).
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. *Evidence of taking the basic entrance assessments* required by the State of New Mexico is required.
6. *Signed Assurance form*: a) which can be found on the Early Childhood Education page on our website at [www.nnmc.edu](http://www.nnmc.edu), or at COE Administrative Office, Teacher Education Center, Room 201.
7. *Provide copies of all college transcripts*.

Completed application materials will be reviewed by the Department of Teacher Education and teacher candidates will be advised accordingly.

## ENTRANCE INTERVIEW

Once your application materials are received and prior to acceptance into the BA Program, you will be interviewed by the Department of Teacher 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

Northern New Mexico College will fully accept AA degrees earned from other institutions when transferring to NNMC to complete their BA degree. For non-degree holding students transferring to NNMC, a degree check will be completed by the Registrar and eligible credits will be transferred.

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## ASSESSMENT OF CANDIDATE LEARNING

Teacher candidates must maintain a cumulative minimum GPA of 2.75 to remain in good standing in the program. In addition, your progress will be evaluated by: 1) providing a plan or proof of scores for all the required State of New Mexico teacher assessments and 2) practicum and student teaching observations and assessments.

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

### GENERAL EDUCATION (31 CR)

#### Area I. Communications (6 cr)

ENGL 1110 Composition I (3)

*Choose one of the following courses:*

ENGL 1120 Composition II (3)

ENGL 1210 Technical Communications (3)

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

Choose one of the following courses:

MATH 1350 Introduction to Statistics (3)

MATH 1220 College Algebra (3)

MATH 1130 Survey of Mathematics (3)

#### Area III. Laboratory Sciences (4 cr)

*Select one science course with a lab.*

#### Area IV. Social/Behavioral Sciences (3 cr)

*Select one course from Area I.*

#### Area V. Humanities (3 cr)

*Select one course from Area V.*

#### Area VI. Fine Arts (3 cr)

*Select one course from Area VI.*

#### ■ Additional Nine Credit Hours (9 cr)

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Sciences (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

SOCI 2310 Contemporary Social Problems (3)

*Choose one of the following Literature Courses*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

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## PROGRAM PREPARATION REQUIREMENTS

### ■ Additional General Education Requirements (22 cr) NMPED 9 credits must be upper division – 300+

- Math Elective (3)
- Laboratory Science Elective (4)
- Social or Behavioral Science Elective (3)
- Humanities, Fine Arts, or Language Electives (6)
- Electives/Test Prep (6)

## PROFESSIONAL PREPARATION REQUIREMENTS

### ■ NMPED Licensure (67 cr)

- ECED 1110 Child Growth, Development and Learning (3)
- ECED 1115 Health, Safety, and Nutrition (2)
- ECED 1120 Guiding Young Children (3)
- ECED 1125 Assessment of Children and Evaluation of Programs (3)
- ECED 1130 Family and Community Collaboration (3)
- ECED 2110 Professionalism (2)
- ECED 2115 Introduction to Language, Literacy and Reading (3)
- ECED 2120 Curriculum Development through Play-Birth through Age 4 (3)  
*Co-requisite ECED 2121*
- ECED 2121 Curriculum Development through Play-Birth through Age 4  
Practicum (2)  
*Co-requisite ECED 2120*
- ECED 2130 Curriculum Development & Implementation Age 3 through Grade 3 (3)  
*Co-requisite ECED 2131*
- ECED 2131 Curriculum Development & Implementation Age 3 through  
Grade 3 Practicum (2)  
*Co-requisite ECED 2130*
- ECED 3302 Research in Child Growth and Development (3)
- ECED 3303 Family, Language and Culture (3)
- ECED 3304 Young Children with Diverse Abilities (3)
- EDUC 3310 Teaching and Diagnosis of Reading (3)
- ECED 4475 Teaching and Learning Math and Science (3)
- ECED 4476 Teaching and Learning Reading and Writing (3)
- ECED 4477 Teaching and Learning Social Studies, Fine Arts and Movement (3)
- ECED 4478 Teaching and Learning Practicum (2)
- EDUC 4495 Assessment and Evaluation of Student Learning in the  
Culturally Linguistically Diverse Classrooms (3)

### Capstone

- ECED 4479L Student Teaching (11)
- ECED 4480 Seminar (1)

## TOTAL CREDITS: 120

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## **Bachelor of Arts**

### **ELEMENTARY EDUCATION**

The Elementary Education program is designed for teacher candidates to earn a baccalaureate degree in Elementary Education. Upon successful 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 and TESOL endorsement through the New Mexico Public Education Department. This program meets the New Mexico Public Education Department's (PED) Entry-Level Teacher Competencies- the Interstate New Mexico Teacher Assessment and Support Consortium (INTASC) Standards and the TESOL competencies. This program prepares teacher candidates to work in diverse educational settings in grades kindergarten through eight and earn a TESOL endorsement. Teacher candidates must also choose from a bilingual endorsement or one of four (4) content area teaching fields:

#### **ENDORSEMENTS:**

**Bilingual Education** (24 cr)

#### **CONTENT AREA TEACHING FIELD:**

**Social Studies** (24 cr – minimum of 12 upper division)

**Language Arts** (24 cr – minimum of 12 upper division)

**Mathematics** (24 cr – minimum of 12 upper division)

**Science** (24 cr – minimum of 12 upper division)

#### **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 2.75,*
5. *Evidence of taking the basic entrance assessments* required by the State of New Mexico is required. Students must pass these assessments as part of a battery of assessments in order to be eligible to apply for a teaching license from the New Mexico Public Education Department.

#### **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 Department of Teacher Education.
2. *Completed BA Program application* which can be found on the Elementary Education page on our website at [www.nnmc.edu](http://www.nnmc.edu).
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. *Evidence of taking the basic entrance assessments* required by the State of New Mexico is required.

6. *Signed Assurance form* obtained at [www.nnmc.edu](http://www.nnmc.edu).

7. *Provide copies of all college transcripts.*

Completed application materials will be reviewed by the Department of Teacher Education and teacher candidates will be advised accordingly.

## ENTRANCE INTERVIEW

Once your application materials are received and prior to acceptance into the BA Program, you will be interviewed by the Department of Teacher 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

Northern New Mexico College will fully accept AA degrees earned from other institutions when transferring to NNMC to complete their BA degree. For non-degree holding students transferring to NNMC, a degree check will be completed by the Registrar and eligible credits will be transferred.

## ASSESSMENT OF STUDENT LEARNING

Teacher candidates must maintain a cumulative minimum GPA of 2.75 to remain in good standing in the program. In addition, your progress will be evaluated by: 1) providing a plan or proof of scores for all the required State of New Mexico teacher assessments and 2) practicum and student teaching observations and assessments.

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

## GENERAL EDUCATION (31 cr)

### Area I. Communications (6 cr)

ENGL 1110 Composition I (3)

*Choose one of the following courses:*

ENGL 1120 Composition II (3)

ENGL 1210 Technical Communications (3)

### Area II. Mathematics (3 cr)

*Choose one of the following courses:*

MATH 1350 Introduction to Statistics (3)

MATH 1220 College Algebra (3)

MATH 1130 Survey of Mathematics (3)

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**Area III. Laboratory Sciences (4 cr)**

*Select one science course with a lab.*

**Area IV. Social/Behavioral Sciences (3 cr)**

*Select one course from Area IV.*

**Area V. Humanities (3 cr)**

*Select one course from Area V.*

**Area VI. Fine Arts (3 cr)**

*Select one course from Area VI.*

**■ Additional Nine Credit Hours (9 cr)**

COMM 1130 Public Speaking (3)

*Choose one of the following Civics Courses:*

POLS 1110 Introduction to Political Sciences (3)

POLS 1120 American National Government (3)

HIST 1110 United States History I (3)

HIST 1120 United States History II (3)

SOCI 2310 Contemporary Social Problems (3)

*Choose one of the following Literature Courses*

ENGL 1410 Introduction to Literature (3)

ENGL 2310 Introduction to Creative Writing (3)

ENGL 2650 World Literature I (3)

ENGL 2660 World Literature II (3)

**PROGRAM PREPARATION REQUIREMENTS****(16 cr NMPED Additional General Education Requirements)**

Math Elective (3)

Laboratory Science Elective (4)

Social or Behavioral Science Elective (3)

(Humanities) Language Electives (6)

**PROFESSIONAL PREPARATION REQUIREMENTS (49 CR – NMPED LICENSURE)****LOWER DIVISION COURSES**

EDUC 1120 Introduction to Education (3)

EDUC 1190 Introduction to Education Practicum (1)

EDUC 2221 Educational Psychology (3)

EDUC 2330 The Effective Classroom (3)

EDUC 2440 Teaching Elementary School Math (3)

**UPPER DIVISION COURSES**

EDUC 3310 Teaching and Diagnosis of Reading (3)

EDUC 3314 Introduction to Linguistics (3)

EDUC 3322 Math for Educators (3)



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EDUC	4450	Foundations of Pedagogy and Learning in the Multicultural Classroom (3)
EDUC	4460	Reading and Writing across Content Areas in Culturally & Linguistically Diverse Classrooms (3)
EDUC	4475	Methods, Strategies, and Materials for Diverse Learners (3)
EDUC	4495	Assessment and Evaluation of Student Learning in the Culturally & Linguistically Diverse Classroom (3)
SPED	4455	The Special Education Program: The Self-Contained or Inclusive Multicultural Classroom (3)

**CAPSTONE**

EDUC	4479	Student Teaching (11)
EDUC	4480	Student Teaching Seminar (1)

**MINOR REQUIREMENTS**

*Choose one of the following concentrations: (24 cr)*

**Bilingual Education (24 cr)**

EDBE	3305	Spanish Literacy for Bilingual Education (3)*
EDBE	3306	Spanish for the Bilingual Classroom (3)*
EDBE	4403	Foundations of Bilingual/ESL Multicultural Education (3)
EDBE	4406	Methods and Materials of Teaching Bilingual/ESL (3)
EDBE	4416	Second Language Acquisition (3)
EDBE	4481	Linguistics and Phonetics for the Bilingual Teacher (3)*
EDBE	4482	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.*

**SOCIAL STUDIES (History, Geography, Economics, Civics, Government) (24 cr – minimum 12 upper division)**

*\*24 credits of Social Studies electives meet the remaining 6.64.6 NMAC Competencies for entry-level history, geography, economics, civics, and government teachers.*

**LANGUAGE ARTS (24 CR – minimum 12 upper division)**

*\* 24 credits of language arts electives that meet the NMPED remaining 6.64.2 Competencies for entry level language arts teachers.*

**MATHEMATICS (24 CR – minimum 12 upper division)**

*\* 24 credits of mathematics electives that meet the NMPED remaining 6.64.4. NMAC Competencies for entry-level mathematics teachers.*

**SCIENCE (24 cr – minimum 12 upper division)**

*\* 24 credits of science electives that meet the NMPED remaining 6.64.5 NMAC Competencies for entry-level science teachers.*

**TOTAL CREDITS: 120**

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## Alternative Licensure Program (Certificate) ELEMENTARY, SECONDARY, or SPECIAL EDUCATION

The Department of Teacher 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 (ALP)

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.

### APPLICATION PROCESS

1. *Students must declare a Certificate of Alternative Licensure Program in Elementary, Secondary or Special Education* to be officially accepted into a program of study and advised accordingly by the Department of Teacher Education.

2. *Complete an ALP Program application* which can be found on the Alternative Licensure Program page on our website at [www.nnmc.edu](http://www.nnmc.edu).

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. *Evidence of taking the basic assessments* required by New Mexico is required

6. *Signed Assurance form*: obtained at [www.nnmc.edu](http://www.nnmc.edu).

7. *Copy of transcripts* of highest degree conferred.

8. *Copy of favorable background check*.

Completed application materials will be reviewed by the Department of Teacher Education and teacher candidates will be advised accordingly.

### TRANSFER CREDITS

Up to 6 credits of professional preparation coursework will be considered on a case-by-case basis.

### ASSESSMENT OF CANDIDATE LEARNING

Teacher candidates must earn a (C-) or better in all courses to remain in good standing in the program. In addition, students' progress will be evaluated by:

- 
- 1) providing a plan or proof of passing all of the required State of New Mexico teacher assessments respective to their program, and
  - 2) practicum and student teaching observations and self-assessments.

### ELEMENTARY (K-8)

EDUC	3310	Teaching and Diagnosis of Reading (3)
EDUC	3322	Math for Educators (3)
EDUC	4450	Foundations of Pedagogy and Learning in the Multicultural Classroom (3)
SPED	4455	The Special Education Program: The Self-contained or Inclusive Multicultural Classroom (3)
EDUC	4460	Reading and Writing Across Content Areas in Culturally & Linguistically Diverse Classrooms (3)
EDUC	4480	Student Teaching Seminar (1)
EDUC	4495	Assessment and Evaluation of Student Learning in the Culturally and Linguistically Diverse Classroom (3)
EDUC	4479L	Student Teaching (2)

**TOTAL CREDITS: 21**

### SECONDARY (7-12)

EDUC	4450	Foundations of Pedagogy and Learning in the Multicultural Classroom (3)
SPED	4455	The Special Education Program: The Self-contained or Inclusive Multicultural Classroom (3)
EDUC	4460	Reading and Writing across Content Areas in Culturally & Linguistically Diverse Classrooms (3)
EDUC	4475	Methods, Strategies, and Materials for Diverse Learners (3)
EDUC	4495	Assessment & Evaluation of Student Learning in the Culturally & Linguistically Diverse Classroom (3)
EDUC	4480	Student Teaching Seminar (1)
EDUC	4479L	Student Teaching (2)

**TOTAL CREDITS: 18**

### SPECIAL EDUCATION (K-12)

EDUC	3310	Teaching and Diagnosis of Reading (3)
EDUC	3322	Math for Educators (3)
EDUC	4450	Foundations of Pedagogy and Learning in the Multicultural Classroom (3)
SPED	4455	The Special Education Program: The Self-contained or Inclusive Multicultural Classroom (3)
EDUC	4475	Methods, Strategies, and Materials for Diverse Learners (3)
EDUC	4480	Student Teaching Seminar (1)

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EDUC 4495 Assessment and Evaluation of Student Learning  
in the Culturally and Linguistically Diverse Classroom (3)  
EDUC 4479L Student Teaching (2)

**TOTAL CREDITS: 21**

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# Department of TECHNICAL TRADES @NNMC Branch Community College

The Branch Community College has one Academic Department, the Department of Technical Trades. This department offers the following Technical Trades programs: Associate in Applied Science (AAS) in Technical Trades (Electrical Technology), Certificate in Technical Trades (Electrical Technology), Associate in Applied Science (AAS) in Technical Trades (Plumbing), Certificate in Technical Trades (Plumbing), and Certificate in Technical Trades (Pipefitting).

**Frank Loera, Instructor, Chair**  
*frank.loera@nnmc.edu*

NNMC Branch Trades  
575-581-4108

**Marvin Romero, Instructor**  
*marvin.romero@nnmc.edu*

Technical Trades Electrical  
575-581-4117

**Stephen Skelton, Instructor**  
*stephen.skelton@nnmc.edu*

Technical Trades Plumbing  
575-581-4104

## ADMISSION REQUIREMENTS FOR ASSOCIATE OF TECHNICAL TRADES 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.

## ADVISEMENT REQUIREMENT FOR ALL TECHNICAL TRADES STUDENTS

All declared Technical Trades 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 Chair of the Department of Technical Trades the first time and then will be assigned to a faculty academic advisor.

## GRADUATION REQUIREMENTS FOR ASSOCIATE OF TECHNICAL TRADES STUDENTS

The Department of Technical Trades requires that all the students enrolled in an Associate of Applied Science Technical Trades degree fulfill all of the following requirements before they can graduate:

1. Have been admitted to the Branch NNMCC Associate of Technical Trades Program
2. Have fulfilled all Branch NNMCC graduation requirements
3. An overall GPA of at least 2.50 in all coursework
4. Have a minimum of 50 hours of community/college service\*

\*Mentoring, tutoring, internships, and community 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 Chair.

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## Associate in Applied Science TECHNICAL TRADES (ELECTRICAL TECHNOLOGY)

The Associate of Applied Sciences in Technical Trades (Electrical Technology) program will provide you with opportunities to develop marketable skills in five broad areas of the industry, including residential and commercial wiring, industrial electrical maintenance, and troubleshooting techniques.

Our graduates are well prepared for wide range of career opportunities. From wiring a single-family home to installing large switchgear. From lighting, control, phone, and data systems in large commercial buildings to system analysis, design, installation, and troubleshooting of industrial automated control systems, and variable frequency drives.

### GENERAL EDUCATION REQUIREMENTS (15 CR)

#### Area I: Communications (6 Credits)

ENGL	1110	Composition I (3)
COMM	1130	Public Speaking (3)

#### Area IV: Social/Behavioral Sciences (3 cr)

#### Area V: Humanities (3 cr) or Area VI: Fine Arts (3 cr)

#### ■ Additional Three Credit Hours (3 cr)

ENVS	2130	Critical Thinking in Science (3)
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### SUPPORT COURSES (16 CREDITS)

#### Non-transfer option

ENGR	1101/L	Introduction to Computational Science & Modeling Lab (4)
MATH	1170	Applied Trades Math (3)
BCIS	2220	Microsoft Word (3)
BCIS	2215	MS Excel (3)
BA	1110	Introduction to Business (3)

#### Transfer option

(For students who are interested to transfer to the  
NNMC Electro-Mechanical Engineering Technology Program)

Electives from EET/MET/EECE/IT/EMET (15 cr) for support courses

### PROGRAM REQUIREMENTS (29 CREDITS)

PLBT	1000	OSHA 10 for the Construction Industry (1)
ELEC	1140	Electrical Theory I (4)
ELEC	1141	Electrical Code I (2)
ELEC	1143L	Electrical Industrial Applications I (3)
ELEC	1150	Electrical Theory II (4)
ELEC	1151	Electrical Code II (3)

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ELEC	1153L	Electrical Industrial Applications Lab II (3)
ELEC	2240	Transformers (1)
ELEC	2241	Power Quality and Distributed Generation (2)
ELEC	2250	Digital Electronics (2)
ELEC	2260	Motor Theory (2)
ELEC	2260L	Motor Controls Lab (2)

**TOTAL CREDITS: 60**

### SUGGESTED SEQUENCE OF COURSES

#### FIRST SEMESTER (13 cr)

PLBT	1000	OSHA 10 for the Construction Industry (1)
ELEC	1140	Electrical Theory I (4)
ELEC	1141	Electrical Code I (2)
ELEC	1143L	Electrical Industrial Applications Lab I (3)
MATH	1170	Applied Trades Math (3) OR EET/MET/EECE/IT/EMET(3)

#### SECOND SEMESTER (16 cr)

ENVS	2130	Critical Thinking in Science (3) OR EET/MET/EECE/IT/EMET(3)
ENGL	1110	Composition I (3)
ELEC	1153L	Electrical Industrial Applications Lab II (3)
ELEC	1150	Electrical Theory II (4)
ELEC	1151	Electrical Code II (3)

#### THIRD SEMESTER (15 cr)

ENGR	1101/L	An Introduction to Computational Science & Modeling Lab (4)
ELEC	2240	Transformers (1)
ELEC	2241	Power Quality and Distributed Generation (2)
ELEC	2250	Digital Electronics (2)
BCIS	2220	Microsoft Word (3) OR EET/MET/EECE/IT/EMET(3)
BCIS	2215	MS Excel (3) OR EET/MET/EECE/IT/EMET(3)

#### FOURTH SEMESTER (16 cr)

ELEC	2260	Motor Theory (2)
ELEC	2260L	Motor Controls Lab (2)
HUM/FA		Elective (3)
BA	1110	Introduction to Business (3) OR EET/MET/EECE/IT/EMET(3)
SBS		Elective (3)
COMM	1130	Public Speaking (3)

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## Certificate

### ELECTRICAL TECHNOLOGY

The Certificate in Technical Trades (Electrical Technology) will provide you with opportunities to develop entry-level marketable skills in five broad areas of the industry, including residential and commercial wiring, industrial electrical maintenance, and troubleshooting techniques.

Our graduates are well prepared for wide range of career opportunities. From wiring a single-family home to installing large switchgear. From lighting, control, phone, and data systems in large commercial buildings to system analysis, design, installation, and troubleshooting of industrial automated control systems, and variable frequency drives.

#### GENERAL EDUCATION (3 CR)

##### Area I: Communications (3 Credits)

ENGL 1110 Composition I (3)

#### PROGRAM REQUIREMENTS (32 CR)

MATH 1170 Applied Trades Math (3)  
PLBT 1000 OSHA 10 for the Construction Industry (1)  
ELEC 1140 Electrical Theory I (4)  
ELEC 1141 Electrical Code I (2)  
ELEC 1143L Electrical Industrial Applications I (3)  
ELEC 1150 Electrical Theory II (4)  
ELEC 1151 Electrical Code II (3)  
ELEC 1153L Electrical Industrial Applications Lab II (3)  
ELEC 2240 Transformers (1)  
ELEC 2241 Power Qualify and Distributed Generation (2)  
ELEC 2250 Digital Electronics (2)  
ELEC 2260 Motor Theory (2)  
ELEC 2260L Motor Controls Lab (2)

**TOTAL CREDITS: 35**

#### SUGGESTED SEQUENCE OF COURSES

##### FALL SEMESTER (16 cr)

MATH 1170 Applied Trades Math (3)  
PLBT 1000 OSHA 10 for the Construction Industry (1)  
ELEC 1140 Electrical Theory I (4)  
ELEC 1141 Electrical Code I (2)  
ELEC 1143L Electrical Industrial Applications Lab I (3)  
ENGL 1110 Composition I (3)



**SPRING SEMESTER (15 cr)**

ELEC	1150	Electrical Theory II (4)
ELEC	1151	Electrical Code II (3)
ELEC	1153L	Electrical Industrial Applications Lab II (3)
ELEC	2240	Transformers (1)
ELEC	2241	Power Quality and Distributed Generation (2)
ELEC	2250	Digital Electronics (2)

**SUMMER TERM (4 cr)**

ELEC	2260	Motor Theory (2)
ELEC	2260L	Motor Controls Lab (2)

## Associate in Applied Science TECHNICAL TRADES (PLUMBING CONCENTRATION) Non-Apprenticeship

The Associate of Applied Sciences in Technical Trades (Plumbing Concentration) program will provide you with opportunities to develop marketable skills installing, repairing, and maintaining common residential and commercial plumbing systems. The core principles and concepts of plumbing systems are covered in each course.

**GENERAL EDUCATION REQUIREMENTS (15 CR)****Area I: Communications (6 Credits)**

ENGL	1110	Composition I (3)
COMM	1130	Public Speaking (3)

**Area IV: Social/Behavioral Sciences (3 cr)****Area V: Humanities (3 cr) or Area VI: Fine Arts (3 cr)****■ Additional Three Credit Hours (3 cr)**

ENVS	2130	Critical Thinking in Science (3)
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**SUPPORT COURSES (16 CREDITS)****Non-transfer option**

ENGR	1101/L	Introduction to Computational Science & Modeling Lab (4)
MATH	1170	Applied Trades Math (3)
BCIS	2220	Microsoft Word (3)
BCIS	2215	MS Excel (3)
BA	1110	Introduction to Business (3)

**PROGRAM REQUIREMENTS (29 CREDITS)**

PLBT	1000	OSHA 10 for the Construction Industry (1)
PLBT	1001	Use and Care of Tools (2)

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PLBT	1002	Soldering and Brazing (2)
PLBT	1200	Rigging and Signaling (2.5)
PLBT	1201	Plan Reading/Drawing (1)
PLBT	1202	Pipes, Valves, Fitting (2)
PLBT	1203	Plastic Piping Installer (2)
PLBT	1204	Plumbing Fixtures and Appliances (1.5)
PLBT	1205	Water Supply (2)
PLBT	1300	Drainage (1)
PLBT	1301	Gas Installations (1.5)
PLBT	2100	Basic Electricity (2.5)
PLBT	2102	Hydronics (2.5)
PLBT	2200	Mechanical Code (2.5)
PLBT	2201	Plumbing Code (2.5)
PLBT	2300	Pneumatic & Electrical Controls (0.5)

**TOTAL CREDITS: 60**

## **SUGGESTED SEQUENCE OF COURSES**

### **FIRST SEMESTER (15 cr)**

PLBT	1000	OSHA 10 for the Construction Industry (1)
PLBT	1001	Use and Care of Tools (2)
PLBT	1002	Soldering and Brazing (2)
MATH	1170	Applied Trades Math (3)
ENGR	1101/L	An Introduction to Computational Science & Modeling Lab (4)
SBS		Elective (3)

### **SECOND SEMESTER (16.5 cr)**

BCIS	2220	Microsoft Word (3)
ENVS	2130	Critical Thinking in Science (3)
ENGL	1110	Composition I (3)
PLBT	1200	Rigging and Signaling (2.5)
PLBT	1201	Plan Reading/Drawing (1)
PLBT	1202	Pipes, Valves, Fitting (2)
PLBT	1203	Plastic Piping Installer (2)

### **THIRD SEMESTER (14 cr)**

PLBT	1204	Plumbing Fixtures and Appliances (1.5)
PLBT	1205	Water Supply (2)
PLBT	1300	Drainage (1)
PLBT	1301	Gas Installations (1.5)
PLBT	2100	Basic Electricity (2.5)
PLBT	2102	Hydronics (2.5)
BCIS	2215	Excel (3)

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## FOURTH SEMESTER (14.5 CR)

COMM	1130	Public Speaking (3)
BA	1110	Introduction to Business (3)
PLBT	2200	Mechanical Code (2.5)
PLBT	2201	Plumbing Code (2.5)
PLBT	2300	Pneumatic & Electrical Controls (0.5)
HUM/FA		Elective (3)

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## Certificate PLUMBING CONCENTRATION

The Certificate in Technical Trades (Plumbing Concentration) program will provide you with opportunities to develop marketable skills installing, repairing, and maintaining common residential and commercial plumbing systems. The core principles and concepts of plumbing systems are covered in each course. Students completing this program may continue to an Associate Degree in Technical Trades (Plumbing).

### GENERAL EDUCATION (6 CR)

#### Area I: Communications (3 Credits)

ENGL	1110	Composition I (3)
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#### Area II: Mathematics (3 Credits)

MATH	1170	Applied Trades Math (3)
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### PROGRAM REQUIREMENTS (29 CR)

PLBT	1000	OSHA 10 for the Construction Industry (1)
PLBT	1001	Use and Care of Tools (2)
PLBT	1002	Soldering and Brazing (2)
PLBT	1200	Rigging and Signaling (2.5)
PLBT	1201	Plan Reading/Drawing (1)
PLBT	1202	Pipes, Valves, Fitting (2)
PLBT	1203	Plastic Piping Installer (2)
PLBT	1204	Plumbing Fixtures and Appliances (1.5)
PLBT	1205	Water Supply (2)
PLBT	1300	Drainage (1)
PLBT	1301	Gas Installations (1.5)
PLBT	2100	Basic Electricity (2.5)
PLBT	2102	Hydronics (2.5)
PLBT	2200	Mechanical Code (2.5)
PLBT	2201	Plumbing Code (2.5)
PLBT	2300	Pneumatic & Electrical Controls (0.5)

**TOTAL CREDITS: 35**

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## SUGGESTED SEQUENCE OF COURSES

### FIRST SEMESTER (11 cr)

PLBT	1000	OSHA 10 for the Construction Industry (1)
PLBT	1001	Use and Care of Tools (2)
PLBT	1002	Soldering and Brazing (2)
MATH	1170	Applied Trades Math (3)
ENGL	1110	Composition I (3)

### SECOND SEMESTER (11 cr)

PLBT	1200	Rigging and Signaling (2.5)
PLBT	1202	Pipes, Valves, Fitting (2)
PLBT	1203	Plastic Piping Installer (2)
PLBT	1204	Plumbing Fixtures and Appliances (1.5)
PLBT	1205	Water Supply (2)

### THIRD SEMESTER (13 cr)

PLBT	1300	Drainage (1)
PLBT	1301	Gas Installations (1.5)
PLBT	2100	Basic Electricity (2.5)
PLBT	2102	Hydronics (2.5)
PLBT	2200	Mechanical Code (2.5)
PLBT	2201	Plumbing Code (2.5)
PLBT	2300	Pneumatic & Electrical Controls (0.5)

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## Certificate

### PIPEFITTING CONCENTRATION

The Certificate in Technical Trades (Pipefitting Concentration) program will provide you with opportunities to develop marketable skills installing, repairing, and maintaining common residential and commercial pipes for plumbing systems. The core principles and concepts of pipefitting for plumbing systems are covered in each course. Students completing this program may continue to an Associate Degree in Technical Trades (Plumbing).

### GENERAL EDUCATION (3 CR)

#### Area I: Communications (3 Credits)

ENGL	1110	Composition I (3)
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### PROGRAM REQUIREMENTS (32 CR)

MATH	1170	Applied Trades Math (3)
PLBT	1000	OSHA 10 for the Construction Industry (1)
PLBT	1001	Use and Care of Tools (2)

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PLBT	1002	Soldering and Brazing (2)
PLBT	1200	Rigging and Signaling (2.5)
PLBT	1201	Plan Reading/Drawing (1)
PLBT	1202	Pipes, Valves, Fitting (2)
PLBT	1203	Plastic Piping Installer (2)
PLBT	1204	Plumbing Fixtures and Appliances (1.5)
PLBT	1205	Water Supply (2)
PLBT	1302	Metallurgy (2.5)
PLBT	1303	Layout and Design (2.0)
PLBT	1304	Cutting and Beveling (2.0)
PLBT	1305	Shielded Metal Arc Welding (SMAW) (2.0)
PLBT	2200	Mechanical Code (2.5)
PLBT	2202	Pipefitter Installer Code (2.0)

**TOTAL CREDITS: 35**

### SUGGESTED SEQUENCE OF COURSES

#### FIRST SEMESTER (11 cr)

PLBT	1000	OSHA 10 for the Construction Industry (1)
PLBT	1001	Use and Care of Tools (2)
PLBT	1002	Soldering and Brazing (2)
MATH	1170	Applied Trades Math (3)
ENGL	1110	Composition I (3)

#### SECOND SEMESTER (11 cr)

PLBT	1200	Rigging and Signaling (2.5)
PLBT	1201	Plan Reading/Drawing (1)
PLBT	1202	Pipes, Valves, Fitting (2)
PLBT	1203	Plastic Piping Installer (2)
PLBT	1204	Plumbing Fixtures and Appliances (1.5)
PLBT	1205	Water Supply (2)

#### THIRD SEMESTER (13 cr)

PLBT	1302	Metallurgy (2.5)
PLBT	1303	Layout and Design (2.0)
PLBT	1304	Cutting and Beveling (2.0)
PLBT	1305	Shielded Metal Arc Welding (SMAW) (2.0)
PLBT	2200	Mechanical Code (2.5)
PLBT	2202	Pipefitter Installer Code (2.0)

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## Associate in Applied Science

### TECHNICAL TRADES

### (PLUMBING APPRENTICESHIP)

The Associate of Applied Sciences in Technical Trades (Plumbing Apprenticeship) program will provide you with opportunities to develop marketable skills installing, repairing, and maintaining common residential and commercial plumbing systems. The core principles and concepts of plumbing systems are covered in each course.

#### GENERAL EDUCATION REQUIREMENTS (15 CR)

##### Area I: Communications (6 Credits)

ENGL	1110	Composition I (3)
COMM	1130	Public Speaking (3)

##### Area IV: Social/Behavioral Sciences (3 cr)

##### Area V: Humanities (3 cr) or Area VI: Fine Arts (3 cr)

##### ■ Additional Three Credit Hours (3 cr)

ENVS	2130	Critical Thinking in Science (3)
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#### SUPPORT COURSES (16 CR)

##### Non-transfer option

ENGR	1101/L	Introduction to Computational Science & Modeling Lab (4)
MATH	1170	Applied Trades Math (3)
BCIS	2220	Microsoft Word (3)
BCIS	2215	MS Excel (3)
BA	1110	Introduction to Business (3)

#### PROGRAM REQUIREMENTS (29 CR)

PLAP	1117	Plumbing Apprenticeship I (5)
PLAP	1127	Plumbing Apprenticeship II (3)
PLAP	1217	Plumbing Apprenticeship III (5)
PLAP	1227	Plumbing Apprenticeship IV (3)
PLAP	1317	Plumbing Apprenticeship V (2.5)
PLAP	1327	Plumbing Apprenticeship VI (2.5)
PLAP	1417	Plumbing Apprenticeship VII (3)
PLAP	1427	Plumbing Apprenticeship VIII (5)

**TOTAL CREDITS: 60**

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## SUGGESTED SEQUENCE OF COURSES

### FIRST SEMESTER (5 cr)

PLAP 1117 Plumbing Apprenticeship I (5)

### SECOND SEMESTER (6 cr)

PLAP 1127 Plumbing Apprenticeship II (3)

MATH 1170 Applied Trades Math (3)

### THIRD SEMESTER (6 cr) Summer

HUM/FA Elective (3)

SBS Elective (3)

### FOURTH SEMESTER (5 cr)

PLAP 1217 Plumbing Apprenticeship III (5)

### FIFTH SEMESTER (6 cr)

PLAP 1227 Plumbing Apprenticeship IV (3)

BCIS 2220 Microsoft Word (3)

### SIXTH SEMESTER (6 cr) Summer

ENVS 2130 Critical Thinking in Science (3)

ENGL 1110 Composition I (3)

### SEVENTH SEMESTER (5.5)

PLAP 1317 Plumbing Apprenticeship V (2.5)

COMM 1130 Public Speaking (3)

### EIGHTH SEMESTER (6.5 cr)

PLAP 1327 Plumbing Apprenticeship VI (2.5)

ENGR 1101/L An Introduction to Computational Science & Modeling Lab (4)

### NINTH SEMESTER (6 cr) Summer

BCIS 2215 Excel (3)

BA 1110 Introduction to Business (3)

### TENTH SEMESTER (3)

PLAP 1417 Plumbing Apprenticeship VII (3)

### ELEVENTH SEMESTER (5 cr)

PLAP 1427 Plumbing Apprenticeship VIII (5)

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## Certificate

### PLUMBING APPRENTICESHIP

The Certificate in Technical Trades (Plumbing Apprenticeship) program will provide you with opportunities to develop marketable skills installing, repairing, and maintaining common residential and commercial plumbing systems. The core principles and concepts of plumbing systems are covered in each course. Students completing this program may continue to an Associate Degree in Technical Trades (Plumbing).

#### GENERAL EDUCATION (6 CR)

##### Area I: Communications (3 Credits)

ENGL 1110 Composition I (3)

#### PROGRAM REQUIREMENTS (32 CREDITS)

MATH 1170 Applied Trades Math (3)  
PLAP 1117 Plumbing Apprenticeship I (5)  
PLAP 1127 Plumbing Apprenticeship II (3)  
PLAP 1217 Plumbing Apprenticeship III (5)  
PLAP 1227 Plumbing Apprenticeship IV (3)  
PLAP 1317 Plumbing Apprenticeship V (2.5)  
PLAP 1327 Plumbing Apprenticeship VI (2.5)  
PLAP 1417 Plumbing Apprenticeship VII (3)  
PLAP 1427 Plumbing Apprenticeship VIII (5)

**TOTAL CREDITS: 35**

#### SUGGESTED SEQUENCE OF COURSES

##### FIRST SEMESTER (5 cr)

PLAP 1117 Plumbing Apprenticeship I (5)

##### SECOND SEMESTER (6 cr)

PLAP 1127 Plumbing Apprenticeship II (3)  
MATH 1170 Applied Trades Math (3)

##### THIRD SEMESTER (8 cr) Summer

PLAP 1217 Plumbing Apprenticeship III (5)  
ENG 1110 Composition I (3)

##### FOURTH SEMESTER (3 cr)

PLA 1227 Plumbing Apprenticeship IV (3)

##### FIFTH SEMESTER (2.5 cr)

PLAP 1317 Plumbing Apprenticeship V (2.5)



**SIXTH SEMESTER (2.5 cr)**

PLAP	1327	Plumbing Apprenticeship VI (2.5)
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**SEVENTH SEMESTER (3)**

PLAP	1417	Plumbing Apprenticeship VII (3)
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**EIGHTH SEMESTER (5 cr)**

PLAP	1427	Plumbing Apprenticeship VIII (5)
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**Certificate****PIPEFITTING APPRENTICESHIP**

The Certificate in Technical Trades (Pipefitter Apprenticeship) program will provide you with opportunities to develop marketable skills installing, repairing, and maintaining common residential and commercial pipefitting for plumbing systems. The core principles and concepts of piping for plumbing systems are covered in each course. Students completing this program may continue to an Associate Degree in Technical Trades.

**GENERAL EDUCATION (3 CR)****Area I: Communications (3 Credits)**

ENGL	1110	Composition I (3)
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**PROGRAM REQUIREMENTS (32 CREDITS)**

MATH	1170	Applied Trades Math (3)
PLAP	1117	Plumbing Apprenticeship I (5)
PLAP	1127	Plumbing Apprenticeship II (3.0)
PLAP	1217	Plumbing Apprenticeship III (5)
PLAP	1227	Plumbing Apprenticeship IV (3.0)
PLAP	1318	Plumbing Apprenticeship IX (4.0)
PLAP	1328	Plumbing Apprenticeship X (2.5)
PLAP	1418	Plumbing Apprenticeship XI (2.0)
PLAP	1428	Plumbing Apprenticeship XII (4.5)

**TOTAL CREDITS: 35****SUGGESTED SEQUENCE OF COURSES****FIRST SEMESTER (5 cr)**

PLAP	1117	Plumbing Apprenticeship I (5)
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**SECOND SEMESTER (6.0 cr)**

PLAP	1127	Plumbing Apprenticeship II (3.0)
MATH	1170	Applied Trades Math (3)

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**THIRD SEMESTER (8 cr) Summer**

PLAP 1217 Plumbing Apprenticeship III (5)

ENG 1110 Composition I (3)

**FOURTH SEMESTER (3.0 cr)**

PLAP 1227 Plumbing Apprenticeship IV (3.0)

**FIFTH SEMESTER (4.0 cr)**

PLAP 1318 Plumbing Apprenticeship IX (4.0)

**SIXTH SEMESTER (2.5 cr)**

PLAP 1328 Plumbing Apprenticeship X (2.5)

**SEVENTH SEMESTER (2.0)**

PLAP 1418 Plumbing Apprenticeship XI (2.0)

**EIGHTH SEMESTER (4.5 cr)**

PLAP 1428 Plumbing Apprenticeship XII (4.5)

## Course Descriptions

1. Freshman courses are numbered 1100-1199; sophomore courses numbered 2200-2299; junior courses numbered 3300-3399; senior courses numbered 4400-4499, and graduate courses numbered 5500-5599. Lower-division topic courses are number 1147 and 1247; upper-division topic courses are numbered 3399 and 4499.

2. Courses labeled with an “N” immediately after the course number are considered to be remedial in nature and will not be accepted to fill the requirements for any degree at Northern. Remedial courses will normally not transfer to other colleges.

3. Courses designated with WIC are Writing Intensive Courses required for a bachelor’s degree. See page 23 for more information.

4. No course with a grade of less than a C- or CR (as appropriate) will be accepted for graduation.

5. Any course which is designated as a Prerequisite to another course must be passed with at least a grade of C- or CR (as appropriate) in order to proceed to the next level course.

6. Immediately after the course description appears an entry inside parentheses. This number is read in two parts. For example, (3, 1T+2S) is read as: course value = 3 credits; 1 credit of theory, 2 credits of activity/shop/studio. If the course were a laboratory, it might read (1, 0T+1L). Each credit of theory (T) requires the equivalent per week of 50 minutes of instructional time; each credit of shop/activity (S) requires 100 minutes per week; and each credit of laboratory (L) requires 150 minutes per week. Therefore, an entry of 3, 1T+2S would be scheduled to meet a total of 250 minutes per week of instructional time. These calculations refer to a course offered over a full sixteen-week semester. The amount of time per week for a course offered over a shorter period of time is increased to meet the required time in a shorter period.

7. Courses listed in this catalog are subject to change or deletion through normal academic channels. New courses and changes in existing course work are initiated by the responsible department chairperson, approved by the faculty curriculum committee, the faculty senate, and the Provost. [Strikethrough text indicates that a course is no longer offered.]

### ACCOUNTING (ACCT)

**2110 PRINCIPLES OF ACCOUNTING I** An introduction to financial accounting concepts emphasizing the analysis of business transactions in accordance with generally accepted accounting principles (GAAP), the effect of these transactions on the financial statements, financial analysis, and the interrelationships of the financial statements. *Prerequisite:* MATH 100N. (3, 3T+0L)

**2115 SURVEY OF ACCOUNTING** Designed to provide a basic understanding of accounting procedures for small businesses. Provides a foundation of the accounting cycle for a small business enterprise and a practical understanding of business financial statements. (3, 3T+0L)

**2120 PRINCIPLES OF ACCOUNTING II** An introduction to the use of accounting information in the management decision making processes of planning, implementing, and controlling business activities. In addition, the course will discuss the accumulation and classification of costs as well as demonstrate the difference between costing systems. *Prerequisite:* ACCT 2110. (3, 3T+0L)

**2220 COMPUTERIZED ACCOUNTING** This course requires the prior knowledge from Survey of Accounting or Principles of Accounting I (Financial). It employs integrated

accounting software for payroll, inventory control, accounts payable, accounts receivable and general ledger functions. Course reviews the accounting cycle. *Prerequisites:* ACCT 2110 or ACCT 2115. (3, 3T+0L)

**3304 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:* ACCT 2120. (3, 3T+0L)

**3305 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:* ACCT 2120. (3, 3T+0L)

**3306 INTERMEDIATE ACCOUNTING III** Topics in accounting pertaining to public reporting of company financials. Review of recent FASB rules. *Prerequisite:* ACCT 2120. (3, 3T+0L)

**3324 FEDERAL 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:* ACCT 2110. (3, 3T+0L)

**3352 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:* ACCT 2120. (3, 3T+0L)

**4405 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:* ACCT 2120 (Spring) (3, 3T+0L)

**4411 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:* ACCT 2120 (3, 3T, 0L)

**4429 ADVANCED ACCOUNTING** Advanced study of corporate financial analysis and planning, including capital budgeting, cost of funds, and capital structure and valuation. *Prerequisites:* ACCT 2120 and BFIN 2110. (3, 3T+0L)

**4445 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:* ACCT 2120. (3,3T+0L)

**4446 AUDITING THEORY AND PRACTICE** Accepted principles, practices, and procedures used by public accountants for certifying corporate financial statements. *Prerequisite:* ACCT 3304 (3,3T+0L)

## ANTHROPOLOGY (ANTH)

**Note:** Each course in this department bears a Prerequisite of ENG 109N or an adequate score on the Course Placement Evaluation.

**1140 INTRODUCTION TO CULTURAL ANTHROPOLOGY** This is an introductory course that provides an overview of cultural anthropology as a subfield within the broader

discipline of anthropology and as a research approach within the social sciences more generally. The course presents core concepts and methods of cultural anthropology that are used to understand the ways in which human beings organize and experience their lives through distinctive cultural practices. More specifically, this course explores social and cultural differences and similarities around the world through a variety of topics such as: language and communication, economics, ways of making a living, marriage and family, kinship and descent, race, ethnicity, political organization, supernatural beliefs, sex and gender, and globalization. This course ultimately aims to present a broad range of perspectives and practices of various cultural groups from across the globe. (Fall only) (3, 3T+0L)

**1155 INTRODUCTION TO LINGUISTIC ANTHROPOLOGY** This is an introductory course, which provides an overview of the discipline of Linguistic Anthropology. The course will discuss the implications of language within anthropology, as well as within the sciences and social sciences more generally. The course explores the core concepts and methods of linguistic anthropology, such as the basic structure of language, first and second language acquisition, bilingualism, and social and regional variations that are used to help students understand what it means to be human and the role of language in human societies. *Prerequisite:* ENG 109N. (3, 3T+0L)

**2140 INDIGENOUS PEOPLES OF NORTH AMERICA** This course is a general survey of the history and ethnology of indigenous groups in North America. The course is designed to give students a comprehensive view of major issues pertaining to the indigenous cultures of North America, such as family structure, social organization, subsistence and contemporary economies, environmental adaptation, Indian-White relations, religious practices, and contemporary issues. (3, 3T+0L)

**2110 HISTORY OF ART I** This survey course explores the art and architecture of ancient pre-historic cultures through the end of the fourteenth century. While focused primarily on the art of the Western civilizations, this course will also provide insights into the works of other major cultures in order to provide alternate views of art and history. Emphasis will be placed on the relationship of artworks to political, social, spiritual, intellectual, and cultural movements that affect and are affected by their creation and development. *Prerequisite:* ENGL 109N (3, 3T+0L)

**2120 HISTORY OF ART II** This survey course will explore the architecture, sculpture, ceramics, paintings, drawings, and glass objects from the 14th century to the modern era. While focused primarily on the art of the Western civilizations, this course will also provide insights into the works of other major cultures in order to provide alternate views of art and history. Emphasis will be placed on the relationship of artworks to political, social, spiritual, intellectual, and cultural movements that affect and are affected by their creation and development. *Prerequisite:* ENGL 109n (3, 3T+0L)

## ARTS (ARTS)

**All studio courses may be repeated without penalty; however, no course may be counted more than once toward graduation requirements.**

**1120 INTRODUCTION TO ART** In this class, students will be introduced to the nature, vocabulary, media and history of the visual arts, illustrated by examples drawn from many cultures, both Western and non-Western and across many centuries. We will begin with a general overview of the subject, including basic concepts and themes that shed light on the continuity of the artistic enterprise across the span of human experience. We will study the visual elements from which art is made, including how artists use these elements and

how the artists' use of visual elements affects our experience of looking at art. We will examine both two-dimensional and three-dimensional media including drawing, painting, printmaking, camera and computer arts, graphic design, sculpture, installation, crafts and architecture. Selected works will be examined in context, including the history of the time and place in which they were created, as well as their function, patronage, and the character and intent of individual artists. (3, 3T+0S). *Prerequisite:* ENGL 109N.

**1312L MICACEOUS POTTERY I** Micaceous Clay is a unique type of clay found in Northern New Mexico. It has been used for centuries by Jicarilla Apache, Pueblo and Hispanic potters to produce cooling vessels. This course presents the history of its traditional use as well as traditional and nontraditional techniques for working with this clay. Students produce a variety of open bowls, closed bowls and lidded forms using hand-building techniques, electric kilns and open-pit firing processes. (3, 1T+2S)

**1320 CERAMICS I** An introduction to the medium of clay incorporating hand building and wheel throwing to introduce the student to both the sculptural and utilitarian uses of clay. The student will also be introduced to a variety of glazing and firing techniques. (3, 1T+2S)

**1410 INTRODUCTION TO PHOTOGRAPHY** This course introduces the making of photographic images from a broad viewpoint to consider both as an art practice and as a cultural practice. The course covers technical information on camera use and functionality, composition and visual design, digital workflow and editing, professional functions of manipulating and enhancing images, and printing correctly and effectively. The historical aspects of photography are also covered. (3, 1T+2S)

**1610 DRAWING I** This course introduces the basic principles, materials, and skills of observational drawing. Emphasis is placed on rendering a 3-D subject on a 2-D surface with visual accuracy. Other topics include historical and contemporary references as well as an investigation of linear perspective, line, value, shape, space & composition. (3, 1T+2S)

**1630 PAINTING I** This course introduces the tradition of painting as a medium for artistic expression. Students will investigate materials, tools, techniques, history and concepts of painting. Emphasis is placed on developing descriptive and perceptual skills, color theory, and composition. (3, 1T+2S)

**1640 WATERCOLOR I** This course introduces watercolor painting materials and techniques with an emphasis on capturing light, shadow, color and spatial manipulation to describe form. Covers both traditional and contemporary approaches to watercolor painting. (3, 1T+2S)

**1710 INTRODUCTION TO PRINTMAKING** This course provides direct experience of exploring basic printmaking processes, including relief, intaglio, and monoprint processes, as well as the investigation of materials/media, tools, techniques, history, and concepts of printmaking. Emphasis is given to solving problems through thematic development while producing a portfolio of prints. (3, 1T+2S)

**2310 CERAMICS II** This course continues the students' instruction in ceramics, with an emphasis given to the continuing development of form, surface, and firing processes, expanded critical awareness, and the development of a personal aesthetic. *Prerequisite:* ARTS 1320. (3, 1T+2S)

**2327 MICACEOUS POTTERY II** You will learn micaceous clay pottery in the tradition of northern New Mexico through a continuation of the techniques learned in Micaceous Potter I. You will also experiment with advanced techniques of hand-building and out-door firing. *Prerequisite:* ARTS 1312L. (3, 1T+2S)

**2328 POTTERY GLAZE MAKING AND STUDIO PRACTICES** Instruction and experience in making and altering pottery glazes, in maintaining and firing a kiln, in recycling clay and in maintaining a pottery studio. *Prerequisite:* ARTS 1320. (1, 0.5T+0.5S)

**2329 POTTERY III** A continuation of Ceramics II 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:* ARTS 2310. (3, 1T+2S)

**2426 PHOTOGRAPHY II** This course is a continuation of Photography I in which students 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:* ARTS 1410. (3, 1T+2S)

**2428 PHOTOGRAPHY III** In this continuation of Photography II, 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:* ARTS 2426. (3, 1T+2S)

**2433 PHOTOGRAPHY PORTFOLIO** To assist students in entering the world of professional photography, they will create your own portfolio with a strong emphasis on editing, content, printing, and presentation. Students will engage in discussions on how to market their work to enter graduate schools; includes publications, shows, and galleries. *Prerequisite:* ARTS 2426. (3, 1T+2S)

**2610 DRAWING II** This course introduces color and colored media as an element of composition while emphasizing descriptive and perceptual drawing skills and conceptual approaches to contemporary drawing. *Prerequisite:* ARTS 1610. (3, 1T+2S)

**2630 PAINTING II** This course focuses on the expressive and conceptual aspects of painting, building on the observational, compositional, technical, and critical skills gained previously. Students will investigate a variety of approaches to subject matter, materials, and creative processes through in-class projects, related out-of-class assignments, library research or museum/gallery attendance, written responses, and critiques. *Prerequisite:* ARTS 1630. (3, 1T+2S)

## ASTRONOMY (ASTR)

**1115 INTRODUCTION TO ASTRONOMY** This course surveys observations, theories, and methods of modern astronomy. The course is predominantly for non-science majors, aiming to provide a conceptual understanding of the universe and the basic physics that governs it. Subjects include the general movements of the sky and history of astronomy, followed by an introduction to basic physics concepts like Newton's and Kepler's laws of motion. The course will also provide modern details and facts about celestial bodies in our solar system and differentiate between them – Terrestrial and Jovian planets, exoplanets, the practical meaning of “dwarf planets”, asteroids, comets, and Kuiper Belt and Trans-Neptunian Objects. Beyond this we will study stars and galaxies, star clusters, nebulae, black holes, clusters of galaxies and dark matter. Finally, we may study cosmology – the structure and history of the universe. *Prerequisite:* ENGL 109N and MATH 100N. *Co-requisite:* ASTR 1115L. (3, 3T+0L)

**1115L INTRODUCTION TO ASTRONOMY LAB** Introduction to Astronomy Lab will include hands-on exercises that work to reinforce concepts covered in the lecture, and may include additional components that introduce students to the night sky. *Co-requisite:* ASTR 1115. (1, 0T+1L)

**BARBERING (BARB)**

**Prerequisite any Barbering course is completion of ENG 108N or adequate scores on the Course Placement Evaluation instrument.**

**1110 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, haircutting, shampooing, hairstyling, and shaving. *Prerequisites:* ENG 109, BUSA 1180 (17, 7T+10L)

**1120 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, haircutting, shampooing, hairstyling and shaving. *Prerequisite:* BARB 1110. (16, 5T+11L)

**2210 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, haircutting, shampooing, hairstyling, and shaving. *Prerequisite:* BARB 1120. (15, 3T+12L)

**2222 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 1120 or 2210 or 2220. (6, 0T+6L)

**2230 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+2L)

**BIOLOGY (BIOL)**

**1110 GENERAL BIOLOGY** This course introduces nonscience majors to basic biological concepts including, but not limited to, the properties of life, biochemistry, cell biology, molecular biology, evolution, biodiversity, and ecology. *Prerequisite:* ENGL 109N. *Co-requisite:* BIOL 1110. (3, 3T+0L)

**1110L GENERAL BIOLOGY LAB** This laboratory course for non-science majors complements the concepts covered in the associated general biology lecture course. Students will learn quantitative skills involved in scientific measurement and data analysis. Students will also perform experiments related to topics such as biochemistry, cell structure and function, molecular biology, evolution, taxonomic classification and phylogeny, biodiversity, and ecology. (1, 0T+1L) *Co-requisite:* BIOL 1110.

**2110 PRINCIPLES OF BIOLOGY: CELLULAR AND MOLECULAR BIOLOGY** This course introduces students to major topics in general biology. This courses focuses on the principles of structure and function of living things at the molecular, cellular and organismic levels of organization. Major topics included are introduction to the scientific process, chemistry of cells, organization of cells, cellular respiration, photosynthesis, cell division, DNA replication, transcription, and translation. *Prerequisites:* CHEM 1120/L or BIOL 1110/L and ENGL 1110; *Co-requisite:* BIOL 2110L. (3, 3T+0L)



**2110L PRINCIPLES OF BIOLOGY: CELLULAR AND MOLECULAR AND BIOLOGY LAB**

This course introduces students to major topics in general biology. This course focuses on the principles of structure and function of living things at the molecular, cellular and organismic levels of organization. Major topics included are introduction to the scientific process, chemistry of cells, organization of cells, cellular respiration, photosynthesis, cell division, genetics, DNA replication, transcription, and translation. *Co-requisite:* BIOL 2110. (1, 0T+1L)

**2210 HUMAN ANATOMY AND PHYSIOLOGY I** This course is the first of two that serve as an introduction to human anatomy and physiology for biology majors and allied health students. The course entails describing, explaining, and analyzing structure and function from the submicroscopic to the organismal level with emphasis on anatomic, directional, and sectional terminology, basic cellular structure and metabolism, tissue differentiation and characteristics, and organ system structure and function; Specifically the integumentary, skeletal, muscular, and nervous systems. *Co-requisite:* BIOL 2210L. (3, 3T+0L)

**2210L HUMAN ANATOMY AND PHYSIOLOGY I LAB** This is the first in a series of two laboratory courses designed to introduce laboratory practices and techniques for human anatomy and physiology, from the basic cell structure through the organ system level; specifically the integumentary, skeletal, muscle, and nervous systems. *Co-requisite:* BIOL 2210. (1, 0T+1L)

**2225 HUMAN ANATOMY AND PHYSIOLOGY II** This course is the second of two that serve as an introduction to human anatomy and physiology for biology majors and allied health students. The course entails describing, explaining, and analyzing structure and function from the submicroscopic to the organismal level with emphasis on specific cellular, tissue, and organ structure and physiology, and organ system structure and function; specifically the endocrine, cardiovascular, respiratory, urinary, and reproductive systems. Additionally, an analysis of these concepts is included: fluid and electrolyte balance, pregnancy, growth and development from zygote to newborn, and heredity. *Prerequisite:* BIOL 2210/L; *Co-requisite:* BIOL 2225L. (3, 3T+0L)

**2225L HUMAN ANATOMY AND PHYSIOLOGY II LAB** This is the second in a series of two laboratory courses designed to introduce laboratory practices and techniques for human anatomy and physiology, from the basic cell structure through the organ system level; specifically the endocrine, cardiovascular, lymphatic, respiratory, urinary, and reproductive systems. *Co-requisite:* BIOL 2225. (1, 0T+1L)

**2310 MICROBIOLOGY** Introduction to the basic principles of microbiology, microbial pathogenesis, host defenses and infectious diseases. The course will emphasize concepts related to the structure and function of microorganisms, including their mechanisms of metabolism and growth. Host parasite interactions will also be emphasized, including mechanisms of microbial pathogenesis and mechanisms of host defenses against infectious diseases. *Co-requisite:* BIOL 2310L. (3, 3T+0L)

**2310L MICROBIOLOGY LAB** This course will emphasize both the theory and hands-on application of techniques used in a microbiology laboratory for the growth and identification of bacterial species. Students will learn microscopy skills and staining techniques for the observation of bacteria. Students will also learn aseptic techniques used for isolation of bacteria, inoculation of cultures, and interpretation of selective and differential growth media for the identification of bacterial species. *Co-requisite:* BIOL 2310. (1, 0T+1L)

**2410 PRINCIPLES OF BIOLOGY: GENETICS** This course introduces the fundamental principles of heredity; DNA structure and replication; the processes of transcription, translation, and regulation of gene expression; and structural, functional, and comparative genom-

ics. The course covers the application of major genetic concepts, principles, and techniques to understand and solve biological questions. *Prerequisite:* BIOL 2110/L; *Co-requisite:* BIOL 2410L. (3, 3T+0L)

**2410L PRINCIPLES OF BIOLOGY: GENETICS LAB** This laboratory course introduces the fundamental principles of heredity and uses scientific method to understand and solve genetic questions. Emphasis is placed on transmission genetics, molecular genetics, genomics, and biotechnology, with work focused on discussion and problem-solving activities. Students must engage with primary literature (e.g., written paper or annotated bibliography). Students must give oral presentations. Wet lab work is not required. *Co-requisite:* BIOL 2410. (1, 0T+1L)

**3101 EVOLUTION** We will use critical thinking skills and evidence to examine the processes of evolution and the patterns generated by these processes. We will cover the history of evolutionary thought, evidence for evolution, phylogeny, selection and drift, quantitative genetics, gene networks, evolutionary-development, where sexes come from, sexual selection, life-history, origin of species, macro and microevolution, co-evolutionary dynamics, brains and behavior, human evolution, and evolutionary medicine. *Prerequisite:* BIOL 2410/L. (4, 4T + 0L)

**3105 ORGANISMAL BIOLOGY** 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 2110/L. (4, 4T + 0L)

**3115 CANCER CELL BIOLOGY** This course covers the fundamental concepts of cancer biology including terminology, cellular and molecular basis of carcinogenesis, oncogenic viruses, environmental carcinogens and present cancer treatments. Prepares biology majors and allied- health profession students to take advanced oncology courses. *Prerequisites:* BIOL 2110/L or (BIOL 2210/L and BIOL 2225/L). 4(4T, 0L).

**3310 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:* BIOL 1110/L or BIOL 2110/L. (4, 4T+0L)

**3329 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 2640/L. (4, 4T+0L)

**3360 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. *Co-requisite:* BIOL 3360. (3, 3T+0L)

**3360L PLANT BIOLOGY LAB** You will engage in laboratory experiences supportive of BIOL 3360. *Co-requisite:* BIOL 3360. (1, 0T+1L)

**3371 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 2640/L; *Co-requisite:* 3371L. (3, 3T+0L)

**3371L INVERTEBRATE BIOLOGY LAB** You will engage in laboratory experiences supportive of BIOL 3371. (1, 0T+1L)

**3372 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)

**3382 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)

**3386 VERTEBRATE BIOLOGY** You will study the ecology, behavior, sociology, adaptations, and evolution of the vertebrates. *Prerequisite:* BIOL 2640/L or BIOL 2225L (4, 4T+0L)

**3390-3397 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)

**3398 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)

**3399 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)

**4405 ANIMAL BEHAVIOR** The study of animal behavior brings together research on the proximate causes of behavior such as genetics, neurobiology, and endocrinology, as well as the ultimate functions of behavior that affect an animal's evolutionary fitness integrating aspects such as communication, aggression, sexual reproduction, parental investment and mating systems. The course will focus on theory and experimental/observational hypothesis testing, with many examples from nature. (4, 4T+0L)

**4406 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 2610/L; *Co-requisite:* BIOL 4406L (4, 3T+1L)

**4406L STREAM ECOLOGY AND FIELD METHODS LAB** You will engage in laboratory experiences supportive of BIOL 4406. (1, 0T+1L)

**4410 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 2610/L. (Fall) (3, 3T+0L)

**4412 DEVELOPMENTAL BIOLOGY** You will study comparative biology of animal development, with emphasis on regulatory mechanisms. *Prerequisite:* BIOL 2640/L and BIOL 3349/L. *Co-requisite:* BIOL 4412L. (3, 3T+0L)

**4412L DEVELOPMENTAL BIOLOGY LAB** You will engage in laboratory experiences supportive of BIOL 4412. (1, 0T+1L)

**4425 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 3329. (Spring) (4, 4T+0L)

**4426 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 2640/L and BIOL 3349/L or BIOL 2210/L and 2225/L; *Co-requisite:* BIOL 4426L. (Spring) (3, 3T+0L)

**4426L 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 4426. (1, 0t+1L)

**4431 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 2110/L, BIOL 2310/L or BIOL 2640/L (4, 4T+0L)

**4451 GENERAL ECOLOGY** You will cover a comprehensive survey of the ecology of individuals, populations, communities, and ecosystems. *Prerequisite:* BIOL 2640/L *Co-requisite:* BIOL 4451L (3, 3T+0L)

**4451 GENERAL ECOLOGY LABORATORY** You will engage in laboratory experiences supportive of BIOL 4451. *Co-requisite:* BIOL 4451. (1, 0T+1L)

**4456 IMMUNOLOGY** You will study experientially immunoglobulin structure, antigen-antibody reactions, immunity, and hypersensitivity. *Prerequisites:* BIOL 2110/L, BIOL 2310/L or BIOL 2640/L (4, 4T+0L)

**4472 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)

**4492 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)

**4497 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)

**4499-4505 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 (BUSA)

**1110 INTRODUCTION TO BUSINESS** Fundamental concepts and terminology of business including areas such as management, marketing, accounting, economics, personnel, and finance; and the global environment in which they operate. *Prerequisite:* ENGL 109N. (3, 3T+0L)

**1180 BUSINESS MATH** Applies basic mathematical operations to business and accounting applications. (3, 3T+0L)

**1195 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+0L)

**1210 RECORDS MANAGEMENT** Principles, methods and procedures for the selection, operation and control of manual and automated records systems. (Fall) (3, 3T+0L)

**2110 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. Included are strategies for effective oral communication in a professional environment. *Prerequisite:* ENG 109N. (3, 3T+0L)

**2130 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 1215 or higher. (3,3T+0L)

**2140 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:* ENTR 2110 (Spring) (3, 3T+0L)

**2175 PROFESSIONAL DEVELOPMENT** Development of a marketable, employable office systems person, to include interview, voice, manners, and apparel. (3, 3T+0L)

**2180 INTRODUCTION TO E-COMMERCE** Survey of methods and practices in e-commerce. Topics include the evolution and forms of e-commerce, secure online business transactions, and basic business concepts of e-commerce. (Spring) (3, 3T+0L)

**3313 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:* MGMT 2110. (3, 3T+0L)

**3330 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+0L)

**3334 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, func-

tional 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:* BUSA 3330 (3,3T+0L)

**3335 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:* BUSA 3330. (3,3T+0L)

**3336 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:* BUSA 3330. (3,3T+0L)

**3354 E-COMMERCE** Techniques, problems, and solutions in e-commerce. Marketing plan considerations, online catalogs, payment methods, security, outsourcing options, and the technologies behind e-commerce web sites. *Prerequisites:* MGMT 2110 and MKTG 2110. (3, 3T+0L)

**3361 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:* BCIS 2140, BUSA 3354 and IT 3350. (3, 3T +0L)

**4410 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. *Prerequisite:* ECON 2110 and BFIN 2110. (3, 3T+0L)

**4433 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:* BUSA 3330. (3, 3T+0L)

**4437 PROJECT PROCUREMENT AND CONTRACTS** This course examines the processes of sourcing, tendering and contract award, as well as the fundamental elements of contract development to ensure compliance with contract terms and conditions and avoid cost overruns and late delivery. It provides a systematic approach to the planning, development, negotiation and formulation of effective contracts and highlights the critical activities

to be performed during the pre-award, award, and post-award stages of the tendering and contracting processes. The material covered follows the Project Management Institutes' (PMI) 5th edition of the Guide to the Project management Body of Knowledge (PMBOK). *Prerequisite:* BUSA 3330. (3,3T+0S)

**4438 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:* BUSA 3330. (3,3T+0L)

**4460 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+0L)

**4464 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 BUSA courses or instructor permission and BUSA 3354. (3, 3T+0L)

**4470 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:* BUSA 3330 (3, 3T+0L)

**4485 INTERNSHIP** Service learning in field of interest within a job-related environment. Course will also include completion of a Major Field Test. *Prerequisite:* You must petition to enroll in this course and complete at least 18 hours of Common BBA requirements. (6, 6T+0L)

**4490 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+0L)

## BUSINESS COMPUTING INFORMATION SYSTEMS (BCIS)

**1110 FUNDAMENTALS OF INFORMATION LITERACY & SYSTEMS** Examination of information systems and their impact on commerce, education, and personal activities. Utilization of productivity tools for communications, data analysis, information management and decision making. (3, 3T+0L)

**1120 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+0L)

**1210 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+0L)



**1215 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+0L)

**1220 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+0L)

**1230 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+0L)

**2110 BUSINESS COMPUTER APPLICATIONS** The owner/manager approach to the use of microcomputers: systems design, software, business applications, and the Windows environment. (3, 3T+0L)

**2140 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:* ENGL 1110, (3, 3T+0L)

**2210 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+0L)

**2215 MS Excel** Microsoft Excel 2010 is intended to provide comprehensive instruction in the major features of this spreadsheet application. (3, 3T+0L)

**2220 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+0L)

**2230 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+0L)

### BUSINESS FINANCE (BFIN)

**2110 INTRODUCTION TO FINANCE** Introduces tools and techniques of financial management. Includes time value of money; financial planning, diversification and risk; debt and equity investment decisions; and financial statement analysis. *Prerequisites:* BUSA 2130. (3, 3T+0L)

**4408 CORPORATE FINANCE** In-depth analysis of financial concepts including valuation capital budgeting, cost of capital, leasing, financial analysis, and working capital management. *Prerequisites:* ACCT 2110, BFIN 2110. (Spring) (3,3T+0L)

### BUSINESS LAW (BLAW)

**2110 BUSINESS LAW I** Survey of the legal environment of business and common legal principles including: the sources of law, dispute resolution and the U.S. court systems, administrative law, tort law, contract law, agency and employment law, business structure



and governance, ethics and corporate social responsibility. Explores sources of liability and presents strategies to minimize legal risk. *Prerequisites:* ENGL 1110. (3, 3T+0L)

**4461 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:* BLAW 2110. (3, 3T+ 0L)

## CHEMISTRY (CHEM)

**1120 INTRODUCTION TO CHEMISTRY** This course covers qualitative and quantitative areas of non-organic general chemistry for nonscience majors and some health professions. Students will learn and apply principles pertaining, but not limited to, atomic and molecular structure, the periodic table, acids and bases, mass relationships, and solutions. *Prerequisite:* MATH 102N and ENGL 109N; *Co-requisite:* CHEM 1120L. (3, 3T+0L).

**1120L INTRODUCTION TO CHEMISTRY LAB** Introduction to Chemistry Laboratory is a laboratory course designed to complement the theory and concepts presented in the Introduction to Chemistry lecture component and will introduce students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment. *Co-requisite:* CHEM 1120. (1, 0T+1L)

**1215 GENERAL CHEMISTRY I FOR STEM MAJORS** This course is intended to serve as an introduction to General Chemistry for students enrolled in science, engineering, and certain preprofessional programs. Students will be introduced to several fundamental concepts, including mole, concentration, heat, atomic and molecular structure, periodicity, bonding, physical states, stoichiometry, and reactions. *Prerequisite:* MATH 1215, high school chemistry, or an ACT score of 19 or higher in Natural Science, and ENGL 1110. *Co-requisite:* CHEM 1215L. (3, 3T+0L)

**1215L GENERAL CHEMISTRY FOR STEM MAJORS I LAB** General Chemistry I Laboratory for Science Majors is the first semester laboratory course designed to complement the theory and concepts presented in General Chemistry I lecture. The laboratory component will introduce students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment. *Co-requisite:* CHEM 1215. (1, 0T+1L)

**1225 GENERAL CHEMISTRY FOR STEM MAJORS II LAB** This course is intended to serve as a continuation of general chemistry principles for students enrolled in science, engineering, and certain preprofessional programs. The course includes, but is not limited to, a theoretical and quantitative coverage of solutions and their properties, kinetics, chemical equilibrium, acids and bases, entropy and free energy, electrochemistry, and nuclear chemistry. Additional topics may include (as time permits) organic, polymer, atmospheric, and biochemistry. *Prerequisite:* CHEM 1215L. *Co-requisite:* CHEM 1225L. (3, 3T+0L)

**1225L GENERAL CHEMISTRY II LABORATORY FOR STEM MAJORS** General Chemistry II Laboratory for Science Majors is the second of a two-semester sequence of laboratory courses designed to complement the theory and concepts presented in General Chemistry II lecture. The laboratory component will introduce students to techniques for obtaining and analyzing experimental observations pertaining to chemistry using diverse methods and equipment. *Co-requisite:* CHEM 1225. (1, 0T+1L)

**2120 INTEGRATED ORGANIC & BIOCHEMISTRY** This course is a one semester introduction to Organic Chemistry and Biochemistry designed for students in health and environmental occupations. The course surveys organic compounds in terms of structure, physical, and chemical properties, followed by coverage of the chemistry of specific classes of organic compounds in the biological environment. Students will apply course concepts to everyday organic and biological chemistry problems in preparation for careers in health

and environmental fields. *Prerequisite:* CHEM 1120/L or CHEM 1215/L; *Co-requisite:* CHEM 2120L. (3, 3T+0L)

**2120L INTEGRATED ORGANIC & BIOCHEMISTRY LAB** This course provides experiences with the physical properties and laboratory synthesis of organic compounds. *Co-requisite:* CHEM 2120. (1, 0T+1L)

**2310 QUANTITATIVE ANALYSIS** Analytical Chemistry is the science of chemical characterization. In this course, you will learn how particular chemical species of interest can be detected and how the amounts of those species can be determined. You will learn how chemical characterization involves chemical reactivity, physical measurement, and data interpretation. All these aspects of chemical characterization will be explored in lecture, reading, and problem solving. The study of precise and reliable chemical characterization is fundamental to further study and practice in chemistry, biology, medicine, geology, chemical engineering, and many other related fields. The understanding of the methods and limitations of chemical characterization is helpful in making informed judgments on a large variety of social and political issues. *Co-requisite:* CHEM 2310L. *Prerequisites:* CHEM 1225L and MATH 1350. (2, 2T+0L)

**2310L QUANTITATIVE ANALYSIS 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 2310. *Prerequisites:* CHEM 1215/L. (2, 0T+2L)

**3301 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 1225/L; *Co-requisite:* CHEM 3301L. (Fall) (3, 3T+0L)

**3301L ORGANIC CHEMISTRY I LAB** Introduction to the techniques involved in the preparation, isolation, purification, and characterization of organic compounds. *Co-requisite:* CHEM 3301. (Fall) (1, 0T+1L)

**3302 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 3301/L; *Co-requisite:* CHEM 3302L (Spring). (3, 3T+0L)

**3302L 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 3302. (Spring) (1, 0T+1L)

**3311 PHYSICAL CHEMISTRY** You will study the quantitative principles of chemistry, gases, thermodynamics, quantum systems, equilibrium, kinetics, and spectroscopy. *Prerequisites:* MATH 1520, PHYS 1240, CHEM 1225/L, 2310/L; *Co-requisite:* CHEM 3311. (3, 3T+0L)

**3311L PHYSICAL CHEMISTRY LAB** You will engage in laboratory experiences supportive of CHEM 3311. *Co-requisite:* CHEM 3311. (1, 0T+1L)

**3341 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 2120/L or 3301/L. (Spring) (3, 3T+0L)

**4421 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 3311/L, 3301/L, 3302/L; *Co-requisite:* CHEM 4421L. (3, 3T+0L)

**4421L BIOCHEMISTRY LAB** A laboratory to support the study the fundamentals of general and organic chemistry to understand the complex array of structures and chemical processes that occur in living organisms. *Co-requisite:* CHEM 4421. (1, 0T+1L)

### CHICANA/O STUDIES (CCST)

**2110 INTRODUCTION TO CHICANA & CHICANO STUDIES** Introductory survey of the Mexican American experience in the United States, with special reference to New Mexico. Exploration of historical, political, social and cultural dimensions. *Prerequisite:* ENG 109N or permission of the Instructor. (3, 3T+0L)

### COMMUNICATION (COMM)

**1130 PUBLIC SPEAKING** This course introduces the theory and fundamental principles of public speaking, emphasizing audience analysis, reasoning, the use of evidence, and effective delivery. Students will study principles of communication theory and rhetoric and apply them in the analysis, preparation and presentation of speeches, including informative, persuasive, and impromptu speeches. *Prerequisite:* ENGL 109N. (3, 3T+0L)

### COMPUTER AIDED DESIGN (CAD)

**1100 ENGINEERING DRAWING AND COMPUTER AIDED DESIGN FUNDAMENTALS** The course introduces engineering drawing and design concepts, practices and applications using computer-aided design software- SolidWorks. Students will learn to read, interpret and create basic engineering drawings with 2- and 3- view orthographic projection, isometric view, basic dimensioning and tolerancing. Students will be able to use basic sketching tools and features of SolidWorks to create 3D models, and 2D drawings incorporating appropriate design intent. *Prerequisite:* none. (3, 2T+1S)

**2200 INTERMEDIATE ENGINEERING DRAWING AND COMPUTER AIDED DESIGN** In this course students will develop intermediate level design and drawing skills using computer-aided drafting software- SolidWorks. The course focuses on creating and editing parts to incorporate design changes, and on creating bottom-up assembly models, and 2D drawings including advanced view techniques and detailing. Students will also be introduced to the concept of geometric dimensioning and tolerancing. *Prerequisite:* CAD 1100. (3, 1T+2S)

**3300 ADVANCED COMPUTER AIDED DESIGN** This course reinforces basic and intermediate-level skills in engineering drawing, 3D part and assembly modeling, and exposes students to advanced-level drawing and 3D part modeling techniques. Students will create detailed assembly drawings, sketch complex 3D geometries using advanced 3D sketching tools, and prepare complex 3D models using advanced part modeling techniques such as multibody design, advanced sweeping, boundary and lofting, advanced filleting, wrap, direct editing, etc. Students will be working on individual and team projects/ case studies of practical and real-world significance. *Prerequisite:* CAD 2200 (3, 1T+2S)

### COMPUTER SCIENCE (CS)

**2201 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. *Prerequisite:* EECE 1152L. (3, 3T+0L)

**COSMETOLOGY (COSM)**

**Prerequisite for any Cosmetology course is completion of ENG 108N or adequate scores on the Course Placement Evaluation instrument.**

**1110 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:* ENGL109, BUSA 1180 (17, 7T+10L)

**1120 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 1110. (16, 5T+11L)

**2210 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 1120. (15, 3T+12L)

**2220 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 1120. (15, 3T+12L)

**2222 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 1120 or 2210 or 2220. (6, 0T+6L)

**2230 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+2L)

**CRIMINAL JUSTICE (CJUS)**

**Note: Each course in this program has a *Prerequisite* of ENG 109N or an adequate score on the Course Placement Evaluation.**

**1110 INTRODUCTION TO CRIMINAL JUSTICE** This course provides an overall exploration of the historical development and structure of the United States criminal justice system, with emphasis on how the varied components of the justice system intertwine to protect and preserve individual rights. The course covers critical analysis of criminal justice processes and the ethical, legal, and political factors affecting the exercise of discretion by criminal justice professionals. (3, 3T+0L)

**1120 CRIMINAL LAW** This course covers basic principles of substantive criminal law including elements of crimes against persons, property, public order, public morality, defenses to crimes, and parties to crime. (3, 3T+0L)

**1130 FORENSIC SCIENCE I** This course covers the application of science in criminal investigations. This includes the techniques, limitations, and significance of crime laboratory analysis, with emphasis on physical evidence and how it relates to the crime solving process. Proper techniques in collection and preservation of evidence will be covered. (3, 3T+0L)

**1140 JUVENILE JUSTICE** This course covers the diversity of the informal and formal juvenile justice system, the process of identifying delinquent behavior, the importance of legislation, law enforcement, courts, diversion, referrals, and juvenile correctional facilities. (3, 3T+0L)

**1170 INTRODUCTION TO CRIMINOLOGY** This course focuses on the problem of crime, its context, and explains the various causes of crime. It provides a foundational understanding of criminology, theories of crime, and types of crime. Class discussions involve topics on the nature and extent of crime, victims and victimization, and the intersectionality between race, ethnicity, gender, class and crime. Students also explore issues related to terrorism and political, economic, public order and violent crimes. (3, 3T+0L)

**1196 TOPICS IN CRIMINAL JUSTICE: PENOLOGY I:** Explore basic concepts of the history and role of corrections; correctional practice, relationship to law, prison society, working in prisons, special needs of prisoners, capital punishment, administration, privatization. *Prerequisite* of ENG 109N, 3, 3T+0L

**2120 CRIMINAL COURTS AND PROCEDURES** This course covers the structures and functions of American trial and appellate courts, including the roles of attorneys, judges, and other court personnel, the formal and informal process of applying constitutional law, rules of evidence, case law and an understanding of the logic used by the courts. (3, 3T+0L)

**2130 POLICE AND SOCIETY** The course presents a focused practical introduction to the key principles and practices of policing. Topics covered include issues of law enforcement fragmentation and jurisdiction, philosophies of policing, enforcement discretion, deployment strategies, use of force, personnel selection, socialization, tactics, and stress. (3, 3T+0L)

**2140 CRIMINAL INVESTIGATIONS** This course introduces criminal investigations within the various local, state, and federal law enforcement agencies. Emphasis is given to the theory, techniques, aids, technology, collection, and preservation procedures, which ensure the evidentiary integrity. Courtroom evidentiary procedures and techniques will be introduced. (3, 3T+0L)

**2150 CORRECTIONS SYSTEM** This course introduces the corrections system in the United States, including the processing of an offender in the system and the responsibilities and duties of correctional professionals. The course covers the historical development, theory, and practice, as well as the institutional and community-based alternatives available in the corrections process. (3, 3T+0L)

**2153 COMMUNITY-BASED CORRECTIONS** A detailed analysis of community-based corrections. The philosophical basis of community corrections will be explored in the context of diversion, pretrial release programs, probation, parole, intermediate sanctions, alternative sanctions, mental health and substance abuse treatment in both the juvenile and adult systems. (3, 3T+0L)

**2235 CONSTITUTIONAL CRIMINAL PROCEDURE** An examination of the constitutional principles related to the investigation of crimes, arrests, confessions and pre-trial processing of offenders. The focus will be on individual rights found in the First, Fourth, Fifth, Sixth, Eighth and Fourteenth Amendments of the United States Constitution and the comparable provisions of the New Mexico Constitution. *Prerequisite:* ENG 109N, (3, 3T+0L)

**2360 CRIMINAL PROCEDURE** Criminal procedure, including laws of arrest, search and seizure, and leading case law. *Prerequisite:* ENG 109N, (3, 3T+0L)

**3320 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+0L)

**3321 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:* ENGL 1110, PSY 2340. Cross listed with PSYC 3321. (3, 3T+0L)

**4400 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:* ENGL 1110. (3, 3T+0L)

**4411 WRITING IN THE SOCIAL SCIENCES** The course immerses students in research and writing in the social sciences with the aim of refining writing to prepare students for graduate level work in the field. The focus is on developing the ability to apply writing tools and techniques to document research and present data. The students gain skills related to editing, referencing and critical analysis in an attempt to improve scholarly writing. *Prerequisite:* ENGL 109N. (3, 3T+0L)

**4412 RESTORATIVE AND COMMUNITY BASED JUSTICE** Students explore the origins, theories, controversies, and practices of restorative justice as an alternative to resolve conflicts. Students will investigate the meaning of restorative processes by examining the ways in which they are practiced to address crime, school discipline, and other types of conflict around the world. (This is modeled on CSU Global's course description of a similar course.) (3, 3T+0L)

**4413 PENOLOGY II** Explore advanced understandings in the study of punishment, such as racial and ethnic disparities, gender and corrections, restorative and alternative justice models, global comparisons of corrections, and decarceration and reentry. (The EAC membership developed this course description.) *Prerequisite* Intro to Penology (3, 3T+0L)

**4410 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, court procedures and decision-making through a comparative perspective. It introduces students to the recent developments and issues in the American criminal justice system, based on a basic understanding of criminal justice systems in other countries and explores topics related to crime and justice with a global outlook. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**4421 INDEPENDENT RESEARCH PROJECT** Each student will implement, interpret, and report on individually designed research projects. *Prerequisite:* CJUS 3321. 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 PSYC 4421. (3, 3T+0L)

**4488 INTERNSHIP/PRACTICUM/SERVICE LEARNING** The Integrated Studies practicum is a supervised professional or volunteer experience in several role specialization areas. The general purpose of the practicum is to give students an opportunity: to implement the theories and principles acquired in class; to complete portions of the program competencies and; to experience diverse working situations.(3-12)

**4499 RESTORATIVE AND COMMUNITY BASED JUSTICE** Students explore the origins, theories, controversies, and practices of restorative justice as an alternative to resolve conflicts. Students will investigate the meaning of restorative processes by examining the ways in which they are practiced to address crime, school discipline, and other types of conflict around the world. *Prerequisite:* ENGL 109N.(3, 3T+0L)

### EARLY CHILDHOOD EDUCATION (ECED)

**1110 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)

**1115 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)

**1120 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)

**1125 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).

**1130 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)

**2110 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)

**2115 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)

**2120 CURRICULUM DEVELOPMENT THROUGH PLAY BIRTH THROUGH AGE 4 (PreK)** 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:* ECED 2121 (3, 3T+0L)

**2121 PRACTICUM (CURRICULUM DEVELOPMENT THROUGH PLAY)-BIRTH THROUGH AGE 4** The field-based component of this course will provide experiences that address curriculum content that is relevant for children birth through age four in developmentally and culturally sensitive ways of integrating content into teaching and learning experiences. Information on adapting content areas to meet the needs of children with special needs and the development of IFSPs is included. Curriculum development in all areas, including literacy, numeracy, the arts, health science, social skills, and adaptive learning for children birth through age four, is emphasized. 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:* ECED 2120. (2, 0T+2L).

**2130 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:* ECED 2131. (3,3T+0L)

**2131 PRACTICUM-AGE 3 (PRE K) THROUGH GRADE 3** The field-based component of this course will provide experiences that address developmentally appropriate curriculum content in early childhood programs, age 3 through third grade. Development and implementation of curriculum in all content areas, including literacy, numeracy, the arts, health



and emotional wellness, science, motor and social skills is emphasized. Information on adapting content areas to meet the needs of children with special needs and the development of IEPs is included. *Co-requisite:* ECED 2130 (2, 0T+2L)

**3302 RESEARCH IN CHILD GROWTH AND DEVELOPMENT** This advanced course in child growth, development, and learning builds upon the foundational material covered in the basic course ECED 1110 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, methodological aspects of research in early childhood development and education. This course focuses 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. *Prerequisite:* DTE permission. (3, 3T+0L)

**3303 FAMILY, LANGUAGE AND CULTURE** 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. *Prerequisite:* DTE permission. (3, 3T+0L)

**3304 YOUNG CHILDREN WITH DIVERSE ABILITIES** 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. Legal requirements of educating the child with disabilities or other special needs will be identified. *Prerequisite:* DTE permission. (3, 3T+0L)

**3310 EDUC TEACHING AND DIAGNOSIS OF READING** This course will focus on the science of reading instruction for diverse learners. A theoretical base will be established by examining reading as a complex, interactive, and constructive process that involves the understanding of language development, cognition and learning. Linguistic and cultural factors in literacy learning are explored. A variety of teaching strategies are studied, including both word identification and skill instruction (e.g., phonics, phonemic awareness, fluency, vocabulary and comprehension). *Co-requisite:* EDUC 3311. (3, 3T+0L).

**4475 TEACHING AND LEARNING MATH AND SCIENCE** 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. *Prerequisite:* DTE permission. (3, 3T+0L)

**4476 TEACHING AND LEARNING READING AND WRITING** 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 literature. *Prerequisite:* DTE permission. (3, 3T+0L)

**4477 TEACHING AND LEARNING SOCIAL STUDIES, FINE ARTS AND MOVEMENT**

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. *Prerequisite:* COE permission. (3, 3T+0L)

**4478L TEACHING AND LEARNING PRACTICUM (2)**

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. *Prerequisite:* DTE permission. *Co-requisites:* ECED 4475 or ECED 4477. (2, 0T+2L)

**4479 STUDENT TEACHING**

The student teaching experience is the capstone field experience in the teacher preparation program. Students must demonstrate an understanding of state competencies for beginning teachers and be able to manage all aspects of the classroom life. Student teaching requires 16 weeks of a full-time placement in an approved classroom (a full day being 100% of the school day). Students must demonstrate appropriate teaching methodologies and subject area knowledge for all children in diverse settings. *Prerequisite:* Department of Teacher Education permission. *Co-requisite* ECED 4480 (2-11, 0T + 2-11L).

**4480 ECED STUDENT TEACHING SEMINAR**

This course is designed to provide both professional and personal support during a teacher candidate’s student teaching experience. Teacher candidates will engage in discussion and assignments related to lesson planning, assessment, classroom management, communication, and collaboration in their student teaching environment. *Co-requisite* ECED 4479L (1, 1T+0L).

**4495 EDUC ASSESSMENT AND EVALUATION OF STUDENT LEARNING IN THE CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOM**

A focus on formal and informal assessment measures are explored. Students will develop an understanding of the legal requirements regarding equity in administering assessments to students with special needs or English Language Learners. A study on the importance of data collection and analysis to guide classroom instruction and measure student learning is explored. (3, 3T+0L).

## ECONOMICS (ECON)

**2110 MACROECONOMIC PRINCIPLES**

Macroeconomics is the study of national and global economies. Topics include output, unemployment and inflation; and how they are affected by financial systems, fiscal and monetary policies. *Prerequisite:* ENGL 109N (3, 3T+0L)

**2120 MICROECONOMIC PRINCIPLES**

This course will provide a broad overview of microeconomics. Microeconomics is the study of issues specific to households, firms, or industries with an emphasis on the role of markets. Topics discussed will include household and firm behavior, demand and supply, government intervention, market structures, and the efficient allocation of resources. *Prerequisite:* ENGL 109N (3, 3T+0L)

**EDUCATION – ALTERNATIVE LICENSURE (ALP) – ELEMENTARY**

**3322 MATH FOR EDUCATORS** This course is designed to prepare teaching of the National Council of Teachers of Mathematics Standards, which include numbers and operations, algebra, problem solving, reasoning and proof, communications, connections, and representations. (3, 3T+0L).

**4450 FOUNDATIONS OF PEDAGOGY AND LEARNING IN THE MULTICULTURAL CLASSROOM** Students will 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. An emphasis on developing a deeper understanding of the culturally diverse student, their families and communities as it relates to learning is explored. This course requires a 15-hour field experience that must be completed as part of the course requirements. (3, 3T+0L).

**4460 READING AND WRITING ACROSS CONTENT AREAS IN CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOMS** Methods of teaching reading and writing across content areas are explored. The development and implementation of research-based reading and writing instructional approaches using informational text and alternative assessments are explored. Culturally relevant pedagogy is stressed. The course includes technology applications, experiential learning, and thematic instruction. (3, 3T+0L)

**4479L STUDENT TEACHING** The student teaching experience is the capstone field experience in the teacher preparation program. Students must demonstrate an understanding of state competencies for beginning teachers and be able to manage all aspects of the classroom life. Student teaching requires 16 weeks of a full-time placement in an approved classroom (a full day being 100% of the school day). Students must demonstrate appropriate teaching methodologies and subject area knowledge for all children in diverse settings. *Prerequisite:* Department of Teacher Education permission. *Co-requisite:* EDUC 4480 (2-11, 0T+9 11 2-11L)

**4480 STUDENT TEACHING SEMINAR** This course is designed to provide both professional and personal support during a teacher candidate's student teaching experience. Teacher candidates will engage in discussion and assignments related to lesson planning, assessment, classroom management, communication, and collaboration in their student teaching environment. *Co-requisite:* EDUC 4479. (1, 1T+0L).

**4495 ASSESSMENT AND EVALUATION OF STUDENT LEARNING IN THE CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOM** A focus on formal and informal assessment measures are explored. Students will develop an understanding of the legal requirements regarding equity in administering assessments to students with special needs or English Language Learners. A study on the importance of data collection and analysis to guide classroom instruction and measure student learning is explored. (3, 3T+0L).

**4455 SPED** This course addresses the planning and implementation of effective programs in a tier i, ii, or iii setting. Exceptionalities, least restrictive environment, and classroom management are explored through the understanding of human growth and development. Major components include assessment and evaluation, diagnostics, placement and the individual education plan (IEP). An understanding of professional leadership through the role of advocacy is developed through reflective practice. *Prerequisite:* DTE permission. (3, 3t+0l)

**EDUCATION – ALTERNATIVE LICENSURE (ALP) – SECONDARY**

**4450 FOUNDATIONS OF PEDAGOGY AND LEARNING IN THE MULTICULTURAL CLASSROOM** Students will 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. An emphasis on developing a deeper understanding of the culturally diverse student, their families and communities as it relates to learning is explored. This course requires a 15-hour field experience that must be completed as part of the course requirements. (3, 3T+0L).

**4460 READING AND WRITING ACROSS CONTENT AREAS IN CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOMS** Methods of teaching reading and writing across content areas are explored. The development and implementation of research-based reading and writing instructional approaches using informational text and alternative assessments are explored. Culturally relevant pedagogy is stressed. The course includes technology applications, experiential learning, and thematic instruction. (3, 3T+0L)

**4475 METHODS, STRATEGIES, AND MATERIALS FOR TEACHING IN THE CLD CLASSROOM** A focus on teacher knowledge and application skills in teaching content curricula to diverse learners in a K-12 setting. Instructional strategies in meeting the needs of the learner with emphasis on the application of technology to support teaching and learning. (3, 3T+0L)

**4479L STUDENT TEACHING** The student teaching experience is the capstone field experience in the teacher preparation program. Students must demonstrate an understanding of state competencies for beginning teachers and be able to manage all aspects of the classroom life. Student teaching requires 16 weeks of a full-time placement in an approved classroom (a full day being 100% of the school day). Students must demonstrate appropriate teaching methodologies and subject area knowledge for all children in diverse settings. *Prerequisite:* Department of Teacher Education permission. *Co-requisite:* EDUC 4480 (2-11, 0T+9 11 2-11L)

**4480 STUDENT TEACHING SEMINAR** This course is designed to provide both professional and personal support during a teacher candidate's student teaching experience. Teacher candidates will engage in discussion and assignments related to lesson planning, assessment, classroom management, communication, and collaboration in their student teaching environment. *Co-requisite:* EDUC 4479. (1, 1T+0L).

**4495 ASSESSMENT AND EVALUATION OF STUDENT LEARNING IN THE CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOM** A focus on formal and informal assessment measures are explored. Students will develop an understanding of the legal requirements regarding equity in administering assessments to students with special needs or English Language Learners. A study on the importance of data collection and analysis to guide classroom instruction and measure student learning is explored. (3, 3T+0L).

**4455 SPED** This course addresses the planning and implementation of effective programs in a tier i, ii, or iii setting. Exceptionalities, least restrictive environment, and classroom management are explored through the understanding of human growth and development. Major components include assessment and evaluation, diagnostics, placement and the individual education plan (IEP). An understanding of professional leadership through the role of advocacy is developed through reflective practice. *Prerequisite:* DTE permission. (3, 3t+0l)

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**EDUCATION – ALTERNATIVE LICENSURE (ALP) – SPECIAL EDUCATION (SPED) (K-12)**

**3310 TEACHING AND DIAGNOSIS OF READING** This course will focus on the science of reading instruction for diverse learners. A theoretical base will be established by examining reading as a complex, interactive, and constructive process that involves the under-

standing of language development, cognition and learning. Linguistic and cultural factors in literacy learning are explored. A variety of teaching strategies are studied, including both word identification and skill instruction (e.g., phonics, phonemic awareness, fluency, vocabulary and comprehension). (3, 3T+0L).

**3322 MATH FOR EDUCATORS** This course is designed to prepare teaching of the National Council of Teachers of Mathematics Standards, which include numbers and operations, algebra, problem solving, reasoning and proof, communications, connections, and representations. (3, 3T+0L).

**4450 FOUNDATIONS OF PEDAGOGY AND LEARNING IN THE MULTICULTURAL CLASSROOM** Students will 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. An emphasis on developing a deeper understanding of the culturally diverse student, their families and communities as it relates to learning is explored. This course requires a 15-hour field experience that must be completed as part of the course requirements. (3, 3T+0L).

**4475 METHODS, STRATEGIES, AND MATERIALS FOR TEACHING IN THE CLD CLASSROOM** A focus on teacher knowledge and application skills in teaching content curricula to diverse learners in a K-12 setting. Instructional strategies in meeting the needs of the learner with emphasis on the application of technology to support teaching and learning. (3, 3T+0L)

**4479L STUDENT TEACHING** The student teaching experience is the capstone field experience in the teacher preparation program. Students must demonstrate an understanding of state competencies for beginning teachers and be able to manage all aspects of the classroom life. Student teaching requires 16 weeks of a full-time placement in an approved classroom (a full day being 100% of the school day). Students must demonstrate appropriate teaching methodologies and subject area knowledge for all children in diverse settings. *Prerequisite:* Department of Teacher Education permission. *Co-requisite:* EDUC 4480 (2-11, 0T+9 11 2-11L)

**4480 STUDENT TEACHING SEMINAR** This course is designed to provide both professional and personal support during a teacher candidate's student teaching experience. Teacher candidates will engage in discussion and assignments related to lesson planning, assessment, classroom management, communication, and collaboration in their student teaching environment. *Co-requisite:* EDUC 4479. (1, 1T+0L).

**4495 ASSESSMENT AND EVALUATION OF STUDENT LEARNING IN THE CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOM** A focus on formal and informal assessment measures are explored. Students will develop an understanding of the legal requirements regarding equity in administering assessments to students with special needs or English Language Learners. A study on the importance of data collection and analysis to guide classroom instruction and measure student learning is explored. (3, 3T+0L).

**4455 SPED** This course addresses the planning and implementation of effective programs in a tier i, ii, or iii setting. Exceptionalities, least restrictive environment, and classroom management are explored through the understanding of human growth and development. Major components include assessment and evaluation, diagnostics, placement and the individual education plan (IEP). An understanding of professional leadership through the role of advocacy is developed through reflective practice. *Prerequisite:* DTE permission. (3, 3t+0l)

**EDUCATION – BILINGUAL ENDORSEMENT (EDBE)**

**3305 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 1110 and 1120. (3, 3T+0L)

**3306 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 1110 and 1120. (3, 3T+0L)

**4403 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 1110 and 1120. (Cross-listed with EDTE 4403). (3, 3T+0L)

**4406 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 1110 and 1120. (Cross-listed with EDTE 4406) (3, 3T+0L)

**4416 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 1110 and 1120. (Cross-listed with EDTE 4416) (3, 3T+0L)

**4481 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, morphology, syntax, and dialectology of the Spanish language. *Prerequisites:* SPAN 1101 and 1102. (3, 3T+0L)

**4482 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 1110 and 1120. (3, 3T+L)

**EDUCATION–ELEMENTARY (EDUC)**

**1120 INTRODUCTION TO EDUCATION** Introduction to the historical, philosophical, sociological foundations of education, current trends, and issues in education; especially as it relates to a multicultural environment. 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. Students will use those foundations to develop effective strategies related to problems, issues and responsibilities in the field of education. *Co-requisite:* EDUC 1190 (3, 3T+0L)

**1190 INTRODUCTION TO EDUCATION PRACTICUM** The practicum applies understanding of the field of teacher education in a field-based 45-hour practicum in a K-12

school-based setting in general or special education. Students will observe and apply understanding of educational theory to classroom practice. Observations focus on students, teachers, administrations, and educator behaviors and interactions. Students must successfully pass a background check to complete the course requirements. *Co-requisite:* EDUC 1120. (1, 0T+1L)

**2221 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. (3, 3T+0L)

**2330 THE EFFECTIVE CLASSROOM** This course is designed to prepare future teachers with the necessary classroom management skills needed for student success by providing instruction on classroom processes, techniques, and procedures. Systematic motivational strategies for a diverse student body are covered. The impact on student learning due to emotional, social, physical, and cognitive development from birth through adolescence is explored. Also covered are educational strategies to assist student with exceptional needs. (3, 3T+0L).

**2440 TEACHING ELEMENTARY SCHOOL MATH** This course offers methods, materials, and curriculum of modern mathematics in the elementary school. Observation and laboratory periods are required. (3, 3T+0L).

**3310 TEACHING AND DIAGNOSIS OF READING** This course will focus on the science of reading instruction for diverse learners. A theoretical base will be established by examining reading as a complex, interactive, and constructive process that involves the understanding of language development, cognition and learning. Linguistic and cultural factors in literacy learning are explored. A variety of teaching strategies are studied, including both word identification and skill instruction (e.g., phonics, phonemic awareness, fluency, vocabulary and comprehension). (3, 3T+0L).

**3314 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. This course studies the ways language works and provides an introduction to the scientific study of language and linguistics. (3, 3T+0L).

**3322 MATH FOR EDUCATORS** This course is designed to prepare teaching of the National Council of Teachers of Mathematics Standards, which include numbers and operations, algebra, problem solving, reasoning and proof, communications, connections, and representations. (3, 3T+0L).

**4450 FOUNDATIONS OF PEDAGOGY AND LEARNING IN THE MULTICULTURAL CLASSROOM** Students will 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. An emphasis on developing a deeper understanding of the culturally diverse student, their families and communities as it relates to learning is explored. This course requires a 15-hour field experience that must be completed as part of the course requirements. (3, 3T+0L).

**4455 SPED** This course addresses the planning and implementation of effective programs in a tier i, ii, or iii setting. Exceptionalities, least restrictive environment, and classroom management are explored through the understanding of human growth and development. Major components include assessment and evaluation, diagnostics, placement and the individual



education plan (IEP). An understanding of professional leadership through the role of advocacy is developed through reflective practice. *Prerequisite:* DTE permission. (3, 3T+0L)

**4460 READING AND WRITING ACROSS CONTENT AREAS IN CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOMS** Methods of teaching reading and writing across content areas are explored. The development and implementation of research-based reading and writing instructional approaches using informational text and alternative assessments are explored. Culturally relevant pedagogy is stressed. The course includes technology applications, experiential learning, and thematic instruction. (3, 3T+0L)

**4475 METHODS, STRATEGIES, AND MATERIALS FOR TEACHING IN THE CLD CLASSROOM** A focus on teacher knowledge and application skills in teaching content curricula to diverse learners in a K-12 setting. Instructional strategies in meeting the needs of the learner with emphasis on the application of technology to support teaching and learning. (3, 3T+0L)

**4479L STUDENT TEACHING** The student teaching experience is the capstone field experience in the teacher preparation program. Students must demonstrate an understanding of state competencies for beginning teachers and be able to manage all aspects of the classroom life. Student teaching requires 16 weeks of a full-time placement in an approved classroom (a full day being 100% of the school day). Students must demonstrate appropriate teaching methodologies and subject area knowledge for all children in diverse settings. *Prerequisite:* Department of Teacher Education permission. *Co-requisite:* EDUC 4480 (2-11, 0T+9 11 2-11L)

**4480 STUDENT TEACHING SEMINAR** This course is designed to provide both professional and personal support during a teacher candidate's student teaching experience. Teacher candidates will engage in discussion and assignments related to lesson planning, assessment, classroom management, communication, and collaboration in their student teaching environment. *Co-requisite:* EDUC 4479. (1, 1T+0L).

**4495 ASSESSMENT AND EVALUATION OF STUDENT LEARNING IN THE CULTURALLY & LINGUISTICALLY DIVERSE CLASSROOM** A focus on formal and informal assessment measures are explored. Students will develop an understanding of the legal requirements regarding equity in administering assessments to students with special needs or English Language Learners. A study on the importance of data collection and analysis to guide classroom instruction and measure student learning is explored. (3, 3T+0L).

## EDUCATION – TESOL ENDORSEMENT (EDBE)

**4403 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 1110 and 1120. (Cross-listed with EDTE 4403). (3, 3T+0L)

**4406 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 1110 and 1120. (Cross-listed with EDTE 4406) (3, 3T+0L)

**4412 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 1110 and 1120. (Cross-listed with EDTE 4412). (3, 3T+0L)

**4416 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 1110 and 1120. (Cross-listed with EDTE 4416) (3, 3T+0L)

## ELECTRICAL, ELECTRONIC, AND COMPUTER ENGINEERING (EECE)

**1105L 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)

**1132 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)

**1152L 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)

**2230 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. Be 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. *Co-requisite:* EECE 1132. (3, 3T+0L)

**2231L INTERMEDIATE PROGRAMMING** This class teaches hoe 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 1152L (3, 2T+1L)

**3329 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 2231L. (3, 3T+0L)

**3330 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 1132. (3, 2T+1S)

**3342L 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 1132 (3, 2T+1L)

**3351L 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 2231L. (Spring) (3, 2T+1L)

**3355 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 2250 and EECE 2231L. (3, 2T+1S)

**3380 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. *Prerequisites:* EECE 2230. (3,3T+0L)

**4435 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 2231L and IT 2250. (Fall) (3, 3T+0L)

**4440 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. *Recommended Co-requisite:* EECE 3330. (3,2T+1S)

**4451 ADVANCED PROGRAMMING APPLICATIONS** This course aims to expose the students to concepts of advanced programming and industry level programming applications. It focuses on Graphical User Interface (GUI), multithreading, networking, and database manipulation. Current industry standard programming language is used. At the completion of this course, the students are expected to write sophisticated industry level applications using standard language such as JAVA. *Prerequisite:* EECE 3351L. (1, 0T+1L)

**4472 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 2200/L. (3, 3T+0L)

**ELECTRICAL ENGINEERING TECHNOLOGY (EET)**

**2200L ELECTRICAL SYSTEMS I WITH LAB** Study basic DC electrical elements and sources; resistor networks, network theorems, capacitance, inductance, RC and RL circuits. 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 equivalency. *Prerequisite:* ENGR 2217L. (3, 2T+1L)

**2201L DIGITAL SYSTEMS WITH LAB** Students will be introduced to digital circuits and will learn Boolean logic, logic gates, combinatorial and sequential circuits. Students will learn to implement and analyze digital circuits using VHDL to develop combinatorial and sequential circuits. *Prerequisite:* ENGR 1121L. (3, 2T+1L)

**3300L ELECTRICAL SYSTEMS II WITH LAB** 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. 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 2200L, (3, 2T+1L)

**4400L CONTROL SYSTEMS AND INSTRUMENTATION WITH LAB** The course covers control systems terminology, analog and digital feedback control system, PID and relay controls, data-acquisition system, stability, actuators and sensors. 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 3300L (3, 2T+1L)

**ELECTRICAL TECHNOLOGY (ELEC)**

**1140 ELECTRICAL THEORY I** Basic electrical theory, OHMs Law, series and parallel circuits, electrical symbols, AC and DC circuits. (4, 4T+0L)

**1141 ELECTRICAL CODE I** National Electrical Code (NEC) requirements and use of NEC specifications in wiring devices. (2, 2T+0L)

**1143L ELECTRICAL INDUSTRIAL APPLICATIONS I LAB** In this course, students will learn practical applications and operations in wiring techniques and codes for industrial projects; tools safety, hardware use and installation. (3, 0T+3L)

**1150 ELECTRICAL THEORY II** This course exposes students to electrical fundamental and basic AC circuits. Students learn inductance/inductors and capacitance/capacitors. Students learn about RC, LC, RCL circuits in series and parallel. Finally, students can analyze and work safely with these types of AC circuits. *Prerequisites:* ELEC 1140. (4, 4T+0L)

**1151 ELECTRICAL CODE II** Students will continue to learn about National Electrical Code (NEC) requirements related to building wiring, conductor ampacity, branch circuits, boxes and fittings and raceway calculations. *Prerequisites:* ELEC 1141 (3, 3T+0L)

**1153L ELECTRICAL INDUSTRIAL APPLICATIONS II LAB** In this course, students will continue to learn practical applications and operations in wiring techniques and codes for industrial projects: tools safety, hardware use and installation. (3, 0T+3L)

**2240 TRANSFORMERS** Students will learn the fundamentals of transformer operations including the basic physical laws of magnetism and electromagnetism that govern the

operation of a transformer. Similarly, students will be exposed to the principles of power generation and distribution. (1, 1T+0L) *Prerequisites:* ELEC 1150

**2241 POWER QUALITY and DISTRIBUTED GENERATION** Students will learn the concept of power quality, how to assess it safely and how to collect data through practical examples. Similarly, students will learn about the applications and installation of UPS and fuel cell systems. *Prerequisites:* ELEC 1150 (2, 2T+0L)

**2250 DIGITAL ELECTRONICS** Students will learn Boolean algebra and its role in digital electronics. Similarly, students will learn about basic logic operations and how they are used to build digital circuits. *Prerequisite:* ELEC 1140 (2, 2T+0L)

**2260 MOTOR THEORY** Students will learn the underlying theory of motor operations. Both DC and AC motors will be covered. Topics such as motor protection and sizing will be also covered. *Co-requisite:* ELEC 2260L; *Prerequisites:* ELEC 1150 (2, 2T+0L)

**2260L MOTOR CONTROLS LAB** Students will learn apply different techniques to control motors. Both DC and AC motors will be cover. Topics such as magnetic control, manual/automatic pilot devices, control transformers, relays, timers, and starters will be covered. *Co-requisite:* ELEC 2260; *Prerequisites:* ELEC 1150 (2, 0T+2L)

**2270 INDUSTRIAL CONTROLS** Students will learn basic theory of industrial controls, logic functions, and the hardware needed to implement controllers in an industrial setup. *Prerequisites:* ELEC 1153L (3, 3T+0L)

## ELECTROMECHANICAL ENGINEERING TECHNOLOGY (EMET)

**4400 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:* EET2200L, CAD 1100 and MET 3302. (3, 3T+0L)

**4402 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 4400L (3, 3T+0L)

**4454 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 2217L (4, 4T+0L)

**4490L CAPSTONE (WIC)** In this project course, students will exercise their knowledge of Electromechanical Engineering Technology, design and associated course work. EMET 4490 is a Writing, Intensive Course. (3, 1T+2L).

## ENGINEERING (ENGR)

**1101 COMPUTER SCIENCE FOR ALL** This course will use the NetLogo Environment to explore the nature and methods of computational thinking prior to composing and

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studying computational models of interacting agents in problems drawn from the physical and social sciences. *Co-requisite* : ENGR 1101L. (3, 3T+0L)

**1101L COMPUTER SCIENCE FOR ALL 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. *Co-requisite*: ENGR 1101. (1,0T+1L)

**1110 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 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 (3, 2T+1S)

**1121L 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 1220 (3, 2T+1L)

**1122L 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 1121L. (3, 2T+1L)

**2140 PROCESS CONTROL I** This class teaches how to communicate with measurement and control professionals, apply specific ISA standards to interpret symbols and drawings associated with process control documentation, discuss and apply the most common methods and devices used in temperature, pressure, level, and flow measurement, and Differentiate between control system architectures including single loop controllers, Distributed Control Systems (DCS), and Programmable Logic Controllers (PLC). *Prerequisites*: none. (2, 2T+0L)

**2150 PROCESS CONTROL II** This course will teach students to apply instrumentation systems and process control system knowledge in the field specific to nuclear operations. *Prerequisites* : none. (2, 2T+0L)

**2215 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 static equilibrium problems. Finally, the concepts of work, energy, power and energy conservation principle will be introduced. *Recommended Co-requisite*: ENGR 1121L (3, 3T+0L)

**2216L 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 motion. Finally, students will learn fundamental concepts of fluid mechanics. *Prerequisite*: ENGR 2215 (3, 2T+1L)

**2217L 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. *Recommended Co-requisite:* ENGR 1122L (3, 2T+1L)

**2230 HYDRAULICS I** This course will identify various components used in hydraulics systems; evaluate hydraulic components by inspection and testing; and explain the theory, circuits, and application of hydraulics. *Prerequisites :* none. (2, 2T+0L)

**4472 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 1110, with Senior standing recommended. (Spring) (3, 3T+0L)

**4478 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 1110, with Senior standing recommended. (Spring) (3, 3T+0L)

**4480 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. *Prerequisite:* Junior standing or permission of Engineering academic adviser. (3, 3T+0L)

## ENGLISH (ENGL)

**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-requisites:* RDG 108 N Reading Improvement and FYEX 1110 First Year Seminar. (4, 4T+0L)

**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:* ENGL 1110 and FYEX 1110. (3, 3T+0L)

**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, paraphrasing, and quoting, using MLA format. *Prerequisite:* English 108N, or adequate score on Course Placement Evaluation. *Co-requisite:* FYEX 1110. (4, 4T+0L)

**1110 COMPOSITION I** In this course, students will read, write, and think about a variety of issues and texts. They will develop reading and writing skills that will help with the writing required in their fields of study and other personal and professional contexts. Students will learn to analyze rhetorical situations in terms of audience, contexts, purpose, mediums, and technologies and apply this knowledge to their reading and writing. They will also gain an understanding of how writing and other modes of communication work together for rhetorical purposes. Students will learn to analyze the rhetorical context of any writing task and compose with purpose, audience, and genre in mind. Students will reflect on their own writing processes, learn to workshop drafts with other writers, and practice techniques for writing, revising, and editing. *Prerequisite:* ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0L)

**1120 COMPOSITION I** In this course, students will explore argument in multiple genres. Research and writing practices emphasize summary, analysis, evaluation, and integration of secondary sources. Students will analyze rhetorical situations in terms of audience, contexts, purpose, mediums, and technologies and apply this knowledge to their reading, writing, and research. Students will sharpen their understanding of how writing and other modes of communication work together for rhetorical purposes. The emphasis of this course will be on research methods. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**1210 TECHNICAL COMMUNICATIONS** This is an introductory study of written and verbal communications used in the technical professions with emphasis in the planning, execution, and editing of professional and technical documents and other communication media. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**1240 WRITING FOR THE MASS MEDIA I** The course introduces you to journalistic writing, including conventions of journalism, and the gathering and writing of news articles for print and broadcast media. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**1410 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:* ENGL 1110. (3, 3T+0L)

**2310 INTRODUCTION TO CREATIVE WRITING** This course will introduce students to the basic elements of creative writing, including short fiction, poetry, and creative non-fiction. Students will read and study published works as models, but the focus of this “workshop” course is on students revising and reflecting on their own writing. Throughout this course, students will be expected to read poetry, fiction, and non-fiction closely, and analyze the craft features employed. They will be expected to write frequently in each of these genres. May be taken two times for credit. (3, 3T+0L)

**2520 FILM AS LITERATURE** The purpose of this course is to teach students how to analyze film as a visual text. Students will learn to analyze films, film techniques, eras, and genres. Students will also identify significant trends and developments in filmmaking, examining the ways in which film reflects and creates cultural trends and values. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**2550 INTRODUCTION TO SOUTHWEST LITERATURE** New Mexico and the greater Southwest has long been a contested region. Through novels, poetry, and drama, the course focuses on the social, historical, and political issues that create complex portrayals of the beauty, borders, and violence that give the Southwest such a unique history. By



the end of the course, students will have a broader appreciation for the many voices that make up literature from the American Southwest. *Prerequisite:* ENGL 1120. (3, 3T+0L)

**2560 INTRODUCTION TO NATIVE AMERICAN LITERATURE** This course will introduce students to the literature produced by Native American authors as well as explore issues relevant to the study of Native American literature. The course will also introduce the basic elements of literary analysis. *Prerequisite :* ENGL 1110. Cross-listed as PINS 2265. (3, 3T+0L)

**2650 WORLD LITERATURE I** In this course, students will read representative world masterpieces from ancient, medieval, and Renaissance literature. Students will broaden their understanding of literature and their knowledge of other cultures through exploration of how literature represents individuals, ideas and customs of world cultures. The course focuses strongly on examining the ways literature and culture intersect and define each other. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**2660 WORLD LITERATURE II** In this course, students will read representative world masterpieces from the 1600L to the present. Students will broaden their understanding of literature and their knowledge of other cultures through exploration of how literature represents individuals, ideas and customs of world cultures. The course focuses strongly on examining the ways literature and culture intersect and define each other. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**2680 WOMEN'S LITERATURE** Surveys women writers from the English-speaking tradition. Includes various genres that represent the diversity of women's experiences. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**2720 MYTHOLOGY** This course is an introduction to the nature and function of mythology. In this class we will study and compare mythologies of different cultures, keeping an eye on the ways in which myths express the inexpressible. If one aspect of myth is that it tends to speak in the indigenous layer of the psyche (what Freud called "primary thinking"), then the fascination with myth can be understood, at least partly, as a fascination with the archaic (or archetypal) aspect of life. From that perspective, the study of myth is partly the study of inner life, the life of the imagination, which is why myth has been central to so many other disciplines. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**3318 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:* ENGL 1120. Cross-listed as HUMN 3318. (3, 3T+0L)

**3320 EDITING FORUM** This course will introduce students to the world of creative or professional writing and editing opportunities. Students will explore and review online and print examples of creative or professional publications to familiarize themselves with various editorial and design styles. Students will engage in the first stage of producing publications, which includes deciding on content, organizing and reading submissions and collaboratively deciding on work to be accepted. Student editors will develop skills in recognizing talent in various genres and will learn to appropriately communicate with contributors and designers. (3, 3T+0S)

**3390 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:* ENGL 1120 (3, 3T, 0L)

**4420 EDITING AND PUBLISHING FORUM** This course is an extension of the Editing Forum in which student editors began the process of producing publications that serve the NNMC community. Student editors will continue to read and organize submissions, collaboratively decide on work to be accepted, and work as a group to print, market, and distribute the final products. Students will learn the basic components of desktop publishing and design. Students may also host events that highlight the work they have produced. (3, 3T+0S)

**4456 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:* ENGL 1120. (3, 3T+0L)

**4468 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:* ENGL 1120. (3, 3T+0L)

### ENTREPRENEURSHIP (ENTR)

**1110 ENTREPRENEURSHIP** Introduces students to the concept of entrepreneurship and to the process of business startups. (3, 3T+0L)

**2110 SMALL BUSINESS MANAGEMENT** This course is designed to acquaint the student with the opportunities encountered in the management and operations of a small business enterprise. *Prerequisite:* ENGL 1110. (Fall) (3, 3T+0L)

### ENVIRONMENTAL SCIENCE (ENVS)

**1110 ENVIRONMENTAL SCIENCE I** Introduction to environmental science as related to the protection, remediation, and sustainability of land, air, water, and food resources. Emphasis on the use of the scientific method and critical thinking skills in understanding environmental issues. *Co-requisite:* ENVS 1110L. (3, 3T+0L)

**1110L ENVIRONMENTAL SCIENCE I LAB** Covers general principles and theory relating to environmental science and management. Focal areas for the course include: water management, climate, pollution and waste management. Students taking this course will come

away with a basic understanding of the main issues faced by technicians and managers of environmental science departments. *Co-requisite:* ENVS 1110. (1, 0T+1L)

**2130 CRITICAL THINKING IN SCIENCE** #Critical Thinking in Science will improve and/or develop student's 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)

**2140 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). *Prerequisite:* permission of instructor. (3, 2T+1L)

**2150 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+0L)

**2160 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:* ENVS 1110/L and BIOL 2610/L. (3, 3T+0L)

**2201 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 2110/L and CHEM 1215/L; *Co-requisite:* ENVS 2201L. (3, 3T+0L)

**2201L 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:* ENVS 2201. (1, 0T+1L)

**3307 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:* ENVS 1110/L, BIOL 2610/L, CHEM 1215/L. (3, 3T+0L)

**3308 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:* ENVS 1110/L and BIOL 2610/L (3, 3T+0L)

**3311 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:* ENVS 1110/L and BIOL 2610. (3, 3T+0L)

**3316 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:* ENVS 1110/L, ENVS 2140, and BIOL 2610/L. (3, 3T+0L)

**3317 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:* ENVS 1110/L, and BIOL 2610/L. (3, 3T+0L)

**3318 SILVICULTURE** 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:* ENVS 1110/L and BIOL 2610/L. (3, 3T+0L)

**3319 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:* ENVS 1110/L and BIOL 2610/L. (3, 3T+0L)

**3320 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)

**3325 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:* ENVS 1110/L, MATH 1510 (3, 3T+0L)

**3333 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 RDPR 2233. (3, 3T+0L)

**3336 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 sparg-

ing 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, soil vapor extraction, and air sampling systems, and pilot tests. *Prerequisites:* ENVS 1110/L, or CHEM 1225/L, MATH 1350, and BIOL 2610/L. (3, 3T+0L)

**3336L 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:* ENVS 1110/L, ENVS 2201 or CHEM 1225/L; *Co-requisite:* ENVS 3336. (1, 0T+1L)

**3338 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:* ENVS 1110/L. (3, 3T+0L)

**3340 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:* ENVS 2160. (3, 3T+0L)

**3365 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:* ENVS 2160 and BIOL 2610/L. (3, 3T+0L)

**3380-3387 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)

**4404 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:* ENVS 1110/L and ENVS 3318. (3, 3T+0L)

**4410 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:* ENVS 1110/L, ESNV 2201/L, BIOL 2610/L; *Co-requisite:* ENVS 4410L. (3, 3T+0L)

**4410L 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*: ENVS 4410. (1, 0T+1L)

**4412 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*: ENVS 1110/L, ENVS 2201/L or CHEM 1225/L, BIOL 2610/L, and BIOL 2310/L. (3, 3T+0L)

**4414 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*: ENVS 3318. (3, 3T+0L)

**4416 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*: ENVS 1110/L and MATH 1510. (3, 3T+0L)

**4420 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)

**4480-4487 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)

**4499 PROBLEM** Topic developed between student and advisor (Var. 1-6)(1-6T)

## FILM & DIGITAL MEDIA ARTS (FDMA)

**1110 FILM HISTORY** This course surveys the history of cinema - investigating the process by which the original “cinema of attractions” evolved into a globally dominant form of visual storytelling. We will explore the development of cinema both as an art form and as an industry, and consider the technological, economic, cultural factors, and key international

movements that shape it. *Prerequisite:* ENGL 109N (3, 3T+0S)

**1210 DIGITAL VIDEO PRODUCTION I** An introduction to digital video production. Students learn camera operation, lights and audio equipment. Hands-on production is completed in the studio and on location. (4, 3T+1S)

**1255 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)

**1265 DIGITAL MEDIA LITERACY** You will create a personal web page, which will serve as the foundation for exploring communication and web publication/syndication in the modern world. (3, 1T+2S)

**1310 INTRODUCTION TO TELEVISION PRODUCTION** This course will provide students with an introduction to producing programming for television broadcast. Students will learn basic shooting, editing and broadcast live and recorded media. Work is performed on location and in the studio. (4, 3T+1S)

**1410 AUDIO PRODUCTION I** Students will learn about and apply essential tools and techniques in analog and digital audio production. Topics include acoustic science, microphones, recording and mixing techniques, analog and digital audio hardware and software, including multi-track, computer-based recording and editing systems. (4, 3T+1S)

**1515 INTRODUCTION TO DIGITAL IMAGE EDITING – PHOTOSHOP** In this course, students will learn how to use the tools in Adobe Photoshop to create new images and edit existing images. Tools used will include selections, layers, and adjustments, among other pixel editing tools. Basic composition and output will be emphasized in all projects. (4, 3T+1S)

**1540 INTRODUCTION TO MOTION GRAPHICS** This course introduces students to digital animation using Adobe After Effects. Students will use After Effects to create layers, compositions, typefaces, visual effects, and rendering. Students will also design short animations of their own and will work through lessons and tutorials. (4, 3T+1S)

**1560 SCREENWRITING I** An introduction to writing scripts for media and film. Students are introduced to narrative film structure and produce a short script. (3, 3T+0S)

**1660 sUAS (DRONE) TECHNOLOGY I** This course includes; pilot operation, FAA Part 107 certification preparation, and commercial deployment of Small Unmanned Aerial Vehicles (sUAVs), more commonly known as drones. Topics covered will be Still and Moving Imagery, Surveying, and Mapping. (3, 3T+0S)

**1665 sUAS (DRONE) TECHNOLOGY II** This course includes; pilot operation, FAA Part 107 certification preparation, and commercial deployment of Small Unmanned Aerial Vehicles (sUASs), more commonly known as drones. Topics covered will be Still and Moving Imagery, Surveying, and Mapping. (3, 3T+0S)

**2245 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 1210 (4, 3T+1S)

**2250 DIGITAL IMAGING & DESIGN** The creation of a professional quality original media soundtrack is possible for relatively low production/postproduction costs. This class is designed to give the student an overview of creating sound for a variety of digital media.

Topics include acoustic principles, sound design, audio hardware, recording techniques; and editing, processing, and multi-track mixing, using software applications. *Prerequisite:* FDMA 1515 (4, 3T+1S)

**2265 DIGITAL MEDIA PRODUCTION II** This course covers the theory of visual communication, storytelling, aesthetics, and the production of digital video content. Emphasis will be placed on narrative filmmaking, whether it is fiction or documentary film. Emphasis will also be placed on creative expression, personal vision, and productive collaboration. ARTS 1520 (4, 2T+2S)

**2315 DOCUMENTARY FILM PRODUCTION I** An introduction to planning and producing a short documentary film. In this workshop-based class, students work individually and in teams. (4, 3T+1S)

**2415 TV PRODUCTION II** A continuation of TV Production I 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)

**2540 INTRODUCTION TO NON LINEAR VIDEO** This course is an introduction to digital video editing using Adobe Premiere. Students will learn how to create simple and complex video sequences in a non-linear video editing system. Video projects will be optimized for web, eBook, mobile devices, and DVD distribution. (4, 3T+1S)

**2823 FILMMAKING IN SCIENCE** Students will examine, study and practice filmmaking as an essential skill in a scientist's toolkit. They will: explore how the art and history of filmmaking is similar to practices within the history of science and technology; examine the relationships between data collection, documentation, interpretation and presentation. They will explore the technical nature of film and video and become aware of how dependent film and video are upon developments in science and technology. They will study ways to popularize science to lay persons and how to use film and video as a career building, promotional and fundraising art. (4, 3T+1S)

**2994 PORTFOLIO DESIGN & DEVELOPMENT** 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 work force. *Prerequisite:* FDMA 22458 or permission of instructor. (2, 1T+1S)

**2996 TOPICS IN FILM & DIGITAL MEDIA** Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits.

**2998 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:* ARTS 1520 and FDMA 2265 (Summer) (6, 0T+6S)

**3396 SCREENWRITING II** Screenwriting II focuses on techniques and examples in the craft of screenwriting that develop students' ability to write a tight and efficient description and avoid the pitfalls of exposition. (3, 3T+0S)

**4496 SCREENWRITING III** Screenwriting III focuses on coordinating the expected and essential screenwriting elements into a viable three-act screenplay. (3, 3T+0S)

## FIRST YEAR EXPERIENCE (FYEX)

**1110 FIRST YEAR SEMINAR** This course is designed to help students achieve greater success in college and in life. Students will learn many proven strategies for creating greater



academic, professional, and personal success. Topics may include career exploration, time management, study and test-taking strategies to adapt to different learning environments, interpersonal relationships, wellness management, financial literacy, and campus and community resources. (3, 3T + 0S)

### GEOGRAPHY (GEOG)

**1120 WORLD REGIONAL GEOGRAPHY** Overview of the physical geography, natural resources, cultural landscapes, and current problems of the world's major regions. Students will also examine current events at a variety of geographic scales. (3, 3T+0L)

### GEOLOGY (GEOL)

**1110 PHYSICAL GEOLOGY** Physical Geology is an introduction to our dynamic Earth, introducing students to the materials that make up Earth (rocks and minerals) and the processes that create and modify the features of our planet. The course will help students learn how mountains are formed, how volcanoes erupt, where earthquakes occur, and how water, wind, and ice can shape the landscape. Students will also develop a basic understanding of the ways humans have altered the planet including our impact on natural resources and global climate change. *Co-requisite:* GEOL 1110L. (3, 3T+0L)

**1110L PHYSICAL GEOLOGY LAB** Physical Geology Lab is the laboratory component of Physical Geology. Students will learn to identify rocks and minerals in hand samples, work with topographic maps, geologic maps, and geologic cross-sections, and apply stratigraphic principles to explore geologic time. *Co-requisite:* GEOL 1110. (1, 0T+1L)

**2110 HISTORICAL GEOLOGY** This course reviews the major geological and biological processes and events over the Earth's 4.6-billion-year history. Students will learn about the formation of the Earth and its development through time including changes in the lithosphere, atmosphere, hydrosphere, and biosphere. The interrelationships between the physical aspects of Earth's history and biological origins, evolution of species, and causes of extinctions will be explored. *Co-requisite:* GEOL 2110L. (3, 3T+0L)

**2110L HISTORICAL GEOLOGY LAB** Historical Geology Laboratory is the laboratory component of Historical Geology. This course applies geologic principles and techniques to reconstruct the history of Earth. Students will explore key concepts of geologic time and stratigraphy, identify fossils and use fossils to make stratigraphic correlations. Students will employ actualism to determine past depositional environments. *Co-requisite:* GEOL 2110. (1, 0T+1L)

### HEALTH EDUCATION (HLED)

**1115 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)

**1120 AMERICAN RED CROSS FIRST AID & CPR/AED** Introduces students to the fundamentals, techniques and practices of standard First Aid, Safety and CPR/AED. Upon successful completion of the course, students will become eligible for ARC certification. Graded on a Credit/No Credit basis. (0.5, 0.5T+0L)

**1510 MEDICAL TERMINOLOGY** Prefixes, suffixes and root words of Greek and/or Latin origin frequently used in medical terminology. Word part combination practices, pronunciation, spelling and common medical abbreviations. (3, 3T + 0L)



**HEALTH SCIENCE (HSCI)**

**1103 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)

**1160L 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:* HLED 1115; 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:* HLED 1115 or current American Heart Association CPR certification. (8, 6T+2L)

**3301 THE ART AND SCIENCE OF SELF CARE** The focus of this course is on guiding the student to an understanding of the art and science of self-care as the key to living a balanced and healthy life. Both the art and science of self-care are examined; the art as the appreciation, values, aesthetics, and awareness regarding self-care and the science as the valid research surrounding self-care practices. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**3302 HERBAL THERAPEUTICS** In this course, students will be introduced to bioregional herbal plants, including their botanical name, medicinal categories, and energetic properties. Gathering and harvesting plant medicines, medicinal applications, and safety concerns will be discussed. Students will explore hands-on methods for making herbal preparations such as salves, tinctures, liniments, and teas. This course applies herbal therapeutic knowledge to the practical use of preparing and utilizing herbs using best practice methods. *Prerequisite:* ENGL 1110. 3 credits (3T+0L)

**3303 INTRODUCTION TO MEDICAL CANNABIS FOR HEALTH CARE PROFESSIONALS** This course introduces the endocannabinoid system (ECS) and provides foundational knowledge for healthcare professionals for the safe and effective use of cannabis medicine for healing. Topics include the physiology of the human ECS, cannabis pharmacology, safety considerations, special populations, and legal and ethical considerations. *Prerequisite:* Permission of instructor. Open to healthcare professionals (Registered Nurses, nursing faculty/educators, nursing students, Medical Doctors, Nurse Practitioners, Physician Assistants, Doctors of Oriental Medicine, and others with proof of licensure/credentials). 3 credits (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.**

**1110 UNITED STATES HISTORY I** The primary objective of this course is to serve as an introduction to the history of the United States from the pre-colonial period to the immediate aftermath of the Civil War. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of the United States within the context of world societies. (3, 3T+0L)

**1120 UNITED STATES HISTORY II** The primary objective of this course is to serve as an introduction to the history of the United States from reconstruction to the present. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of the United States within the context of world societies. (3, 3T+0L)

**1150 WESTERN CIVILIZATION I** This course is a chronological treatment of the history of the western world from ancient times to the early modern era. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of western civilization within the context of world societies. Selective attention will be given to "non-western" civilizations which impact and influence the development of "western" civilization. (3, 3T+0L)

**1160 WESTERN CIVILIZATION II** This course is a chronological treatment of the history of the western world from the early modern era to the present. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of western civilization within the context of world societies. Selective attention will be given to "non-western" civilizations which impact and influence the development of "western" civilization. (3, 3T+0L)

**2110 SURVEY OF NEW MEXICO HISTORY** The primary objective of this course is to serve as an introduction to the history of New Mexico from the pre-Columbian times to the present day. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the development of New Mexico within the context of the Americas. (3, 3T+0L)

**2122 CHICANO EXPERIENCE IN THE U.S.** In 1848, the United States violently wrested over half of the landmass of Mexico, displacing and forcing indigenous and traditional peoples of the Southwest to re-establish citizenry in their own homelands. The Treaty of Guadalupe-Hidalgo (1848) assured Mexicans the full rights to citizenship in the United States, but the imposition of a new governmental system often left the new "ethnic minority group" to deal with economic and psychological hardships. Despite these hardships, Chicanas/os have not only survived, but in many cases thrived, in the country that often treated them as "second class citizens." In this class we will examine the historical, cultural, political, and economic conditions of Chicanas/os in the U.S. through the major court cases that have shaped Mexican American identity. (3, 3T+0L)

**2130 SURVEY OF NATIVE AMERICAN HISTORY** The primary objective of this course is to serve as a survey of the history of Native American History from pre-colonial times until the present. This course will explore the cultural diversity of the Native Americans. The elements of this course are designed to inform students on the major events and trends that are essential in the understanding of the history of Native Americans. (3, 3T+0L)

**2155 SOUTHWESTERN WOMEN'S HISTORY** In this course, we will examine the multiple ways in which women helped to shape the U.S. Southwest. History has often left out the perspectives of women, but we will research and discuss women's involvement in Southwestern history, including politics, economics, and culture. (3, 3T+0L)

**3301 HISTORY OF JUDEO-CHRISTIAN MUSLIM RELATIONS** 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+0L)

**3340 TOPICS IN AMERICAN HISTORY** 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:* ENGL 1120. (Fall) (3, 3T+0L)

**3360 INDIGENOUS HISTORY** 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:* ENGL 1110 (SPRING) (3, 3L+0L)

### HONORS (HON)

**1210 HONORS SEMINAR** A lower division seminar for students enrolled in the Honors Program. The course will emphasize the continued development of critical thinking, enhancement of study skills, and encourage participation in campus activities. The class usually involves off-campus travel. This course may be taken for credit up to four times. *Prerequisite:* ENGL 1120 and a minimum 3.2 cumulative GPA. (3, 3T+0L)

### HOSPITALITY, RESTAURANT AND TOURISM MANAGEMENT (HRTM)

**1115 INTRODUCTION TO MANAGEMENT IN THE HOSPITALITY INDUSTRY** An overview of the hospitality industry, including all of the related fields: Restaurant; Lodging; Convention and Expositions and Tourism. Application of management, general marketing, human resources and leadership will be covered. *Prerequisite:* ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

**1145 FOOD AND BEVERAGE SERVICE MANAGEMENT** This dining room service laboratory course introduces the principles and techniques of waiting tables and doing table set-ups, and the course includes an analysis of the service management responsibilities associated with the operation of restaurants. *Prerequisite:* ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

**1140 INTRODUCTION TO FOOD PREPARATION** The fundamental concepts, skills and techniques involved in basic cookery are covered in this course. Special emphasis is given to the study of ingredients, cooking theories, and the preparation of stocks, broth, glazes, and soups, thickening agents, the grand sauces and emulsion sauces. Lectures and demonstrations teach organization skills in the kitchen, work coordination, and knife skills. The basics of vegetable cookery, starch cookery, meat and poultry are covered. Emphasis is given to basic cooking techniques such as sautéing, roasting, poaching, braising and frying. Students must successfully pass a practical cooking examination covering a variety of cooking techniques. *Prerequisite:* HRTM 1130 and ENGL 109N, or adequate score on Course Placement Evaluation. (3, 3T+0L)

**3333 CASINO OPERATIONS** Introduction to the multi-billion-dollar, including an historical overview, social and economic impacts of gaming and casino management. *Prerequisite:* HTRM 1130. (3, 3T+0S)

**3335 HOTEL OPERATIONS** Principles, practices, procedures of managerial functions; operating procedures and competencies in the lodging industry. Students gain knowledge on ownership, franchises, revenue management, front office and other major departments in hotel properties. *Prerequisite:* HTRM 1130. (3, 3T+0S)

**4450 INTERNSHIP /CAPSTONE** Work experience the directly relates to a student's field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated both by the employer and the instructor. Students must provide written and oral critiques of all activities performed. *Prerequisite:* prior approval of proposed assignment by instructor and completion of all other courses. (3, 0T+3S)

**HUMAN SERVICES (HMSV)**

**1110 GROUP DYNAMICS** This course 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+0L)

**HUMANITIES (HUMN)**

**1105 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:* ENGL 109N. (3, 3T+0L)

**1110 INTRODUCTION TO WORLD HUMANITIES I** This course is an interdisciplinary introduction to the cultural contributions and expressions in ancient world civilizations such as Mesopotamia, Greece, Rome, Asia, Africa, and the Americas, emphasizing artistic expression, philosophical thought, and religious practices in these civilizations, as well as historical, scientific, and technological developments. *Prerequisite:* ENGL 109N, or adequate score on Course Placement Evaluation. (3, 3T+0L)

**1120 THE SEARCH FOR MEANING** This topics course examines 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:* ENGL 109N (Fall, Spring) (3, 3T+0L)

**2110 INTRODUCTION TO WORLD HUMANITIES II** This course is an interdisciplinary introduction to the interrelationships of cultural contributions and values during the Renaissance, Baroque, Enlightenment, Romantic, and Modern eras in Europe as well as those during the same time periods in China, Japan, Africa, other parts of the Middle East, and Latin America. The course will emphasize artistic expression, philosophical thought, and religious practices in these regions, as well as historical and technological developments. *Prerequisite:* ENGL 109N, or adequate score on Course Placement Evaluation. (3, 3T+0L)

**2120 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:* ENGL 109N. (3, 3T+0L)

**2130 WORLD MYTHOLOGY** This course is an introduction to the nature and function of mythology. In this class we will study and compare mythologies of different cultures, keeping an eye on the ways in which myths expresses the inexpressible. Cross-listed with ENG 2720. *Prerequisite:* ENGL 1110. (Fall, Spring). (3, 3T+0L)

**2140 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+0L)

**2160 FOUNDATIONS OF INTEGRATED STUDIES** In the so-called real world, many problems are far too complex for any single discipline to tackle alone. Take global warming. Predicting changes in weather patterns involves meteorologists, geologists, oceanographers, and chemists. In order to solve the economic problems caused by global warming politicians are working with scientists, environmentalists, and business leaders. Even these efforts are far too limited. Similarly, understanding the psyche requires a complex approach,

involving many different points of view. The inner climate of a human being is at least as complicated as the weather. What we call "Integrated Studies" is a process of answering questions, solving problems, or addressing topics that are too complex to be dealt with adequately by a single discipline, tradition, or point of view. Integrated Studies teaches us how to reach beyond the artificial boundaries of the classroom. It also teaches us how to spot the blind spots of each viewpoint or discipline. *Prerequisite:* ENGL 1110 (3, 3T+0L)

**2246 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:* ENGL 1110. Cross-listed as PINS 2246. (3, 3T+0L)

**2281 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:* ENGL 1110. Cross-listed as PINS 2281. (3, 3T+0L)

**3301 FOUNDATIONS FOR SELF-DESIGN STUDENTS** This course introduces students to the BA in Integrated Studies for those in the Self-Design concentration. Students will study the nature of disciplines and interdisciplinary work, be introduced to the Integrated Studies degree, and begin the first step toward completing a self-design project that will serve as a Senior Thesis. Permission of the instructor or advisor is required to take the course. *Prerequisite:* ENGL 1120 (3, 3T+0L)

**3311 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:* ENGL 1120. (4, 4T+0L)

**3320 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:* ENGL 1120. (4, 4T+0L)

**3324 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+0L)

**3388 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:* HUMN 2160. (Fall). (3, 3T+0L)

**3389 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:* HUMN 2160 (3, 3T+0L)

**3390 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:* ENGL 1120. (Fall, Spring, Summer) (3, 3T)

**4414 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:* ENGL 1120. (4, 4T+0L)

**4421 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:* ENGL 1120. (4,4T+0L)

**4450 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, are, history, and philosophy of law from different eras and cultures. *Prerequisite:* ENGL 1120 (3, 3T+0L)

**4460 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:* ENGL 1120. (3, 3T+0L)

**4488 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:* HUMN 3388. (Spring). (3, 3T+0L)

**4489 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:* HUMN 3388 or 3389. (3, 3T+0L)

## INFORMATION TECHNOLOGY (IT)

**2250 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 1152L. (3, 3T+0L)

**3350 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 2250. (3, 2T+1S)

**4410 INFORMATION ASSURANCE AND SECURITY** This course 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 background 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 2230 and 3330. (3, 2T+1L)

**4450L ADVANCED DATABASE APPLICATIONS** The goal of this course is the development of applications using a relational database as the primary source and sink of data. Students will develop industry standard database applications using standalone PL/SQL programs (stored procedures, stored functions, and triggers), Java servlets and JDBC, JSP (Java Server Pages), and C#. JavaScript, XHTML, and CSS will be used on the client-side. *Prerequisites*: IT 3350 and EECE 3355. (1, 0T+1L)

**4490 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 4490 is a designated Writing Intensive Course (WIC). *Prerequisite*: senior standing, Information Engineering Technology major. (3, 2T+1S)

**4491 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 4490. (3, 2T+1S)

## LANGUAGE, LETTERS & LIBERAL ARTS

**1101 FOUNDATION IN THE LIBERAL ARTS** Liberal Arts Education is an approach to learning that empowers individuals and prepares them to deal with complexity, diversity, and change. It provides students with broad knowledge of the wider world (e.g. science, culture, and society) as well as in-depth study in specific areas of interest. A liberal arts education helps students develop a sense of social responsibility, as well as strong and transferable intellectual and practical skills such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings. In this course, we will explore the concepts that inform the liberal arts, read and analyze texts that exemplify liberal arts learning, and discuss potential careers in the liberal arts. *Prerequisite*: ENGL 111. (3, 3T+0L)

## MANAGEMENT (MGMT)

**2110 PRINCIPLES OF MANAGEMENT** An introduction to the basic theory of management including the functions of planning, organizing, staffing, leading, and controlling; while considering management's ethical and social responsibilities. *Prerequisite*: ENGL 109N. (3, 3T+0L)

**3353 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:* MGMT 2110 and MATH 1215 or higher. (3, 3T+0L)

**3360 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:* MGMT 2110. (3, 3T+0L)

**4432 STRATEGIC MANAGEMENT** Basic concepts, frameworks, and methodologies useful to managers in crafting and executing business strategy, including quality management. *Prerequisite:* MGMT 2110. (3, 3T+0L)

**4456 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. *Prerequisites:* MKTG 2110 and MGMT 2110. (3,3T+0L)

**4462 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:* MGMT 2110 and ECON 2110. (3, 3T+0L)

### MARKETING (MKTG)

**2110 PRINCIPLES OF MARKETING (MKTG)** Survey of modern marketing concepts and practices focusing on the marketing mix: product, pricing, promotion, and distribution strategies. Topics include; the marketing environment, consumer behavior, marketing research, target marketing, and the ethical and social responsibilities of marketers. (3, 3T+0L)

**2175 PROFESSIONAL DEVELOPMENT** Development of a marketable, employable office systems person, to include interview, voice, manners, and apparel. (3, 3T+0L)

### 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)



**1130 SURVEY OF MATHEMATICS** This course will develop students' ability to work with and interpret numerical data, to apply logical and symbolic analysis to a variety of problems, and/or to model phenomena with mathematical or logical reasoning. Topics include financial mathematics used in everyday life situations, statistics, and optional topics from a wide array of authentic contexts. *Prerequisite:* MATH 100N or MATH 100NL. (3, 3T+0L)

**1170 TECHNICAL MATH** This course is designed for students in technical trade programs. There is an expectation for minimal background in mathematics. We will begin with basic arithmetic operations on real numbers (whole numbers, fractions, decimals). We will delve into measurement in both the American Standard and International (metric) systems. We will do some algebra and work with geometric formulas. There are also sections on trigonometry and statistics. All of this will give you an overview of the types of mathematics you will likely use in technical fields. (3, 3T+0L)

**1215 INTERMEDIATE ALGEBRA** A study of linear and quadratic functions, and an introduction to polynomial, absolute value, rational, radical, exponential, and logarithmic functions. A development of strategies for solving single-variable equations and contextual problems. *Prerequisite:* Adequate score on Accuplacer or MATH 100N or MATH 100NL. (4, 4T+0L)

**1220 COLLEGE ALGEBRA** The study of equations, functions and graphs, reviewing linear and quadratic functions, and concentrating on polynomial, rational, exponential and logarithmic functions. Emphasizes algebraic problem-solving skills and graphical representation of functions. *Prerequisite:* MATH 1215. (3, 3T+0L)

**1250 TRIGONOMETRY and PRE-CALCULUS** Trigonometry & Pre-Calculus includes the study of functions in general with emphasis on the elementary functions: algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions. Topics include rates of change, limits, systems of equations, conic sections, sequences and series, trigonometric equations and identities, complex numbers, vectors, and applications. *Prerequisite:* MATH 1220. (4, 4T+0L)

**1350 INTRODUCTION TO STATISTICS** This course discusses the fundamentals of descriptive and inferential statistics. Students will gain introductions to topics such as descriptive statistics, probability and basic probability models used in statistics, sampling and statistical inference, and techniques for the visual presentation of numerical data. These concepts will be illustrated by examples from a variety of fields. *Prerequisite:* MATH 1215. (3, 3T+0L)

**1510 CALCULUS I** Introduces the intuitive, numerical and theoretical concepts of limits, continuity, differentiation and integration. Includes the study of extrema, curve sketching, and applications involving algebraic, exponential, logarithmic and trigonometric functions. Designed for mathematics, science and engineering majors. *Prerequisite:* MATH 1250. (4, 4T+0L)

**1520 CALCULUS II** Continues course of study begun in Calculus I. Covers integration techniques, numerical integration, improper integrals, some differential equations, sequences, series and applications. *Prerequisite:* MATH 1510. (4,4T+0L)

**1991 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 1510. (May be repeated for credit) (3, 3T+0L)

**2140 INTRODUCTION TO NUMERICAL COMPUTING** This course will introduce solutions of nonlinear 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 1520 and a computer language. (3, 3T+0L)

**2410 APPLIED ORDINARY DIFFERENTIAL EQUATIONS** An introduction to differential equations. Students will be able to classify, construct, and solve different types of equations. Systems of equations, Laplace transforms, series solutions, and numerical methods are introduced. *Prerequisite:* MATH 1520. (3, 3T+0L)

**2420 APPLIED LINEAR ALGEBRA** An introductory study of the analysis and application of systems of linear equations, vector spaces, matrices, and linear transformations, including computer-based linear algebra. *Prerequisite:* MATH 1510. (3, 3T+0L)

**2530 CALCULUS III** Continuation of Calculus II including multivariate and vector calculus, level curves and surfaces, partial derivatives, gradient, directional derivatives, tangent planes, optimization, multiple integrals in Cartesian, cylindrical and spherical coordinate systems. *Prerequisite:* MATH 1510. (4, 4T+0L)

**2300 MATHEMATICS FOR DATA SCIENCE** This course provides the mathematical background needed for data science. Topics include applications of systems of linear equations, logarithmic and exponential functions, statistical tests, Bayesian statistics, probability, combinatorics, logic, elementary principles of calculus and optimization, and data visualization. Mathematical principles will be applied to information science, bioinformatics, and/or the Geographic Information System. *Prerequisite:* MATH 1220. (3, 3T+0L)

**2310 MACHINE LEARNING** This course covers aspects of machine learning including supervised and unsupervised learning, clustering, classification, dimensionality reduction, logistic regression, neural networks, and time series. *Prerequisite:* MATH 1220. (3, 3T+0L)

**2320 DATA ANALYSIS USING R** This course covers how to use R to perform statistical tests (t-test, ANOVA, Mann-Whitney U, Chi-squared), how to create graphs and visual representations of data, and how to program in R. *Prerequisite:* MATH 1350. (2, 2T+0L)

**2330 CAPSTONE PROJECT FOR DATA SCIENCE** This course will be a project based course that will focus on either data science, bioinformatics, computational environmental science, or the Geographic Information System (GIS). Students will write a scientific report or develop a poster. *Prerequisite:* MATH 2310 or MATH 2320. (2, 2T+0L)

**3311 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 2530. (3, 3T+0L)

**3312 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 2530 and 3316. (3, 3T+0L)

**3313 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 2530. (3, 3T+0L)

**3314 LINEAR ALGEBRA WITH APPLICATIONS** The course will cover systems of linear equations, Gaussian elimination, LU decomposition, matrix algebra and determinants,

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least squares regression, vector spaces, inner products, orthogonality, eigenvalues, and eigenvectors, and computational methods. *Prerequisite:* MATH 1510. (3, 3T+0L)

**3316 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 1520 (Fall). (3, 3T+0L)

**3327 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 1520. (3, 3T+0L)

**3345 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 1510. (3, 3T+0L)

**3375 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 1520 and a computer language. (3, 3T+0L)

**3395 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 2410 or MATH 3316 or permission from the instructor. (3, 3T+0L)

**4401 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 2530. (4, 4T+0L)

**4441 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 2530. (3, 3T+0L)

**4464 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 3314. (3, 3T+0L)

**4466 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 3312, 3316. (3, 3T+0L)

**MECHANICAL ENGINEERING TECHNOLOGY (MET)**

**2201 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 2215 (3, 3T+0L)

**3301 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 2201 (3, 3T+0L)

**3302 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:* MET2201. (3, 3T+0L)

**3303 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:* ENGR 2216L. (3, 3T+0L)

**3310 MANUFACTURING PROCESS AND AUTOMATION** Essentials of automated manufacturing. Overview to Computer Integrated Manufacturing (CIM). Introduction to Computer Numerical Control (CNC); Manufacturing economics and optimization of manufacturing processing systems. *Prerequisite:* CAD 1100. (3, 3T+0L)

**3317 FLUID MECHANICS** Introduction to the fundamental mechanics of stationary and flowing fluids from engineering perspective. Students will study and apply fundamental conservation principles (mass, energy and momentum) to fluid flow problems of engineering applications. Students will study laminar and turbulent flows. The concepts of dimensional analysis and modeling will be introduced. Internal and external flows of practical importance will be introduced. *Prerequisite:* MET 3301 (3, 3T+0L)

**4421 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 3317 (3, 3T+0L)

**NURSING (NURS)**

A grade of "C" or greater is considered passing for all 1100, 2200, 3300, and 4400 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.

**1100 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:* ENGL 108N and PD 108N; *Co-requisites:* NURS 1100L and HLED 1115. (Fall, Spring, Summer) (4,4T+0L)

**1100L 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-requisites:* NURS 1100 and HLED 1115. (Fall, Spring, Summer) (1.5, 0T+1.5L)

**1106 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)

**1113 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 1113L (Fall) (4, 4T + 0L)

**1113L NURSING FUNDAMENTALS CLINICAL** The student is given an opportunity to demonstrate the skills acquired in NURS 1113 in a skills laboratory setting. *Prerequisite:* Admission to the Nursing Program. *Co-requisite:* NURS 1113. (Fall) (2, 0T +2L)

**1114L 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)

**1119 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 1106, NURS 1113/L, NURS 1114L, NURS 1125/L, NURS 2214/L. *Co-requisites:* NURS 2217/L, NURS 2218/L, NURS 2225/L. (Fall) (2, 2T + 0L)

**1125 MEDICAL SURGICAL NURSING I** This course introduces nursing care and management of the adult client with common medical-surgical conditions. *Prerequisite:* NURS 1106, NURS 1114L, NURS 1113, NURS 1113L. *Co-requisite:* NURS 1125L (Spring) (3, 3T, 0L)

**1125L 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 1106, NURS 1113/L, NURS 1114L. *Co-requisite:* NURS 1125. (Spring) (3, 0T, 3L)

**2214 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 1106, NURS 1113/L, NURS 1114L. *Co-requisite:* NURS 2214L. (Spring) (2, 2T, +0L)

**2214L 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 1106, NURS 1113/L, NURS 1114L. *Co-requisite:* NURS 2214 (Spring) (1, 0T, +1L)

**Note: NRS 2 = Completion of all first year nursing courses**

**2217 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:* NRS 2. *Co-requisite:* NURS 2217L. (Fall) (2, 2T, +0L)

**2217L 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 2217. (Fall) (1, 0T, +1L)

**2218 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 2218L. (Fall) (2, 2T, +0L)

**2218L 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 2218. (Fall) (1, 0T +1L)

**2225 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 2225L. (Fall) (3, 3T, + 0L)

**2225L 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 2225. (Fall) (3, 0T, +3L)

**2235 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 2225/L, NURS 2217/L, NURS 2218/L. *Co-requisite:* NURS 2235L. (Spring) (3, 3T, + 0L)

**2235L 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 2217/L, NURS 2218/L, NURS 2225/L. *Co-requisite:* NURS 2235. (Spring) (3, 0T, +3L)

**2240 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 2217/L, NURS 2218/L, NURS 2225/L. (Spring) (2, 2T+ 0L)

**2245 PATHOPHYSIOLOGY** This course focuses on 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 2225/L. (Spring) (4, 4T, 0L)

**4400 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)

**4401 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 4400. (3, 3T+0L)

**4410 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 evidenced-based practice and examine how worldviews and theories influence research. *Prerequisites:* MATH 1350; *Pre or Co-requisites:* NURS 4400 and NURS 4401. (3, 3T+0L)

**4420 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 4400 and NURS 4401. (3, 2T+1L)

**4430 COMPLEMENTARY AND INTEGRATIVE THERAPIES IN NURSING** This course provides an introduction to evidence-based complementary and integrative approaches to health care. Students acquire knowledge related to integrative 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 complementary and integrative modalities as they interact with practitioners in selected clinical settings. *Pre or Co-requisites:* NURS 4400 and NURS 4401. (3, 2T+1L)

**4440 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 4400 and NURS 4401. (3, 3T+0L)

**4450 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 4400 and NURS 4401, and strongly suggest NURS 4410. (3, 3T+0L)

**4451 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 4450. (4, 3T+1L)

**4460 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 4401. (2, 2T+0L)

**4470 TRANSFORMATIONAL LEADERSHIP IN NURSING** This courses 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 4401. (3, 3T+0L)

**4480 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)

## NUTRITION (NUTR)

**2110 HUMAN NUTRITION** This course provides an overview of nutrients, including requirements, digestion, absorption, transport, function in the body and food sources. Dietary guidelines intended to promote long-term health are stressed. Prerequisite: BIOL 1100/L or CHEM 1120/L. (3, 3T+0L)

## OFFICE ADMINISTRATION (OA)

**1103 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)



**1151 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+0L)

**2236 ADMINISTRATIVE PROCEDURES** You will study office procedures, technology, records management, human relations, ethics, and telecommunications. *Prerequisites:* BUSA 1210, ENGL 1110, and BCIS 2110. (Spring) (3, 3T+0L)

**2240 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. (3, 3T+0L)

**2261 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+0L)

**2266 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 2210, or BCIS 2215, or BCIS 2220 or BCIS 2230. (Spring) (1, 1T+0L)

## PHILOSOPHY (PHIL)

**Note:** All 100 and 200 level courses have a *Prerequisite* of ENG 109N or an adequate score on the Course Placement Evaluation.

**1120 LOGIC, REASONING & CRITICAL THINKING** The purpose of this course is to teach students how to analyze, critique, and construct arguments. The course includes an introductory survey of important logical concepts and tools needed for argument analysis. These concepts and tools will be used to examine select philosophical and scholarly texts. *Prerequisite:* ENGL 1110. (3, 3T+0L)

**1160 HISTORY OF PHILOSOPHY** Surveys the history of philosophical thought from the ancient Greeks to the present. (3, 3T+0L)

**2110 INTRODUCTION TO ETHICS** This course introduces students to the philosophical study of morality and will explore questions concerning our human obligations to others and related issues. Students may be asked to relate various approaches to ethics to present-day ethical debates and their own lives. (3, 3T+0L)

**3300 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 1120. (Fall) (3, 3T+0L)

**3364 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 1120. (Fall) (3, 3T+0L)

**3366 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 1120. (Spring) (3, 3T+0L)

**4452 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 1120. (Spring) (3, 3T+0L)

### PHLEBOTOMY (PHLB)

**1101 INTRODUCTION TO PHLEBOTOMY** This course introduces the student to the role of the phlebotomist and venipuncture procedures. Additional content areas include basic anatomy and physiology, medical terminology, medical legal and ethical issues, patient care, communication, review of the health care delivery system, professionalism, and safety. *Prerequisites:* HLED 1510. *Co-requisite:* PHLB 1101L. (3, 3T + 0L)

**1101L PHLEBOTOMY SKILLS PRACTICUM** This phlebotomy laboratory course is designed to provide students with the opportunity to experience the hands-on application of clinical phlebotomy procedures. Emphasis is on venipuncture blood collection, handling of blood specimens, safety, laboratory quality assurance, and communication with patients and members of the healthcare team. *Prerequisites:* HLED 1510. *Co-requisite:* PHLB 1101. (1, 0T + 1L)

**1102 SPECIAL PRACTICES IN PHLEBOTOMY** This phlebotomy course focuses on the theory of capillary blood collection, specialized blood and non-blood specimen collection, handling, and processing including point-of-care testing (POCT). Review of material to prepare the student for the national certification exam is included. *Prerequisites:* HLED 1510. *Co-requisite:* PHLB 1102L. (3, 3T + 0L)

**1102L SPECIAL PRACTICES IN PHLEBOTOMY SKILLS PRACTICUM** This phlebotomy course provides students with the opportunity to practice phlebotomy procedures in a laboratory/simulation setting. An emphasis is placed on capillary blood collection and handling; specialized blood and non-blood specimen collection, processing, and handling; and point-of-care testing (POCT). *Prerequisites:* HLED 1510. *Co-requisite:* PHLB 1102. (1, 0T + 1L)

**1104L PHLEBOTOMY CLINICAL INTERNSHIP** This course is a community-based clinical experience in phlebotomy. Students work in health care settings collecting blood and non-blood specimens. Direct supervision is provided by a clinical laboratory professional. Safety, correct venipuncture techniques, quality control, patient's privacy rights, documentation, and interpersonal communication is stressed. *Prerequisites:* PHLB 1101, PHLB 1101L, PHLB 1102, PHLB 1102L. (2.5, 0T + 2.5L)

### PHYSICAL EDUCATION (PHED)

All PHED courses are graded on a Credit/No Credit (CR/NC) basis.

**1110 DANCE: AEROBIC DANCE** Exercise and movements for general physical fitness. (1, 0T+1L)

**1210 BASKETBALL** Instruction and participation in the game of basketball, including rules, skills, shots, and strategies. (1, 0T+1L)

**1230 GOLF** Focuses on the development of knowledge and skill competencies necessary to play golf; emphasis is placed on skill progressions, practice opportunities, and error diagnosis and correction. (1, 0T+1L)

**1280 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+1L)

**1320 AQUA FIT: SWIMMING** 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. (1, 0T+1L)

**1320 AQUA FIT: WATER AEROBICS** Exercises and movements in waist-high water, and usually performed to music, to promote general fitness and health. This course is self-paced and non-competitive, and the ability to swim is not required but preferred. (1, 0T+1L)

**1410 YOGA: KUNDALINI YOGA** Introduces you to Kundalini Yoga techniques and postures, emphasizing meditation and breathing. (1, 0T+1L)

**1410 YOGA: 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+1L)

**1410 YOGA: 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+1L)

**1430 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+1L)

**1460 CONDITIONING: CONDITIONING** Various exercises designed to promote endurance, strength, flexibility, and general physical fitness. (1, 0T+1L)

**1460 CONDITIONING: POWER CONDITIONING I** A conditioning course emphasizing aerobics, weight training and cardiovascular conditioning. (1, 0T+1L)

**1510 TRAINING: RESISTANCE 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+1L)

**1830 RUNNING: WALKING & JOGGING** Designed for all levels, including walkers, joggers, race walkers, and competitive marathon runners. (1, 0T+1L)

**2310 SWIMMING II: 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+1L)

**2460 CONDITIONING II: POWER CONDITIONING II** This is an advanced cardiovascular conditioning course, utilizing weight training, aerobics, and exercise equipment. *Prerequisite:* PHED 1460. (1, 0T+1L)

## PHYSICS (PHYS)

**1230 ALGEBRA-BASED PHYSICS I** An algebra-based treatment of Newtonian mechanics. Topics include kinematics and dynamics in one and two dimensions, conservation of energy and momentum, rotational motion, equilibrium, and fluids. *Prerequisite:* MATH 1215; *Co-requisite:* PHYS 1230L. (3, 3T+0L)

**1230L ALGEBRA-BASED PHYSICS I LAB** A series of laboratory experiments associated with the material presented in PHYS 1230. *Co-requisite:* PHYS 1230. (1, 0T+1L)

**1240 ALGEBRA-BASED PHYSICS II** The second half of a two semester algebra-based introduction to Physics. This course covers electricity, magnetism and optics. *Prerequisite:* PHYS 1230/L; *Co-requisite:* PHYS 1240L. (3, 3T+0L)

**1240L ALGEBRA-BASED PHYSICS II LAB** A series of laboratory experiments associated with the material presented in PHYS 1240. *Co-requisite:* PHYS 1240. (1, 0T+1L)

### PLUMBING TECHNOLOGY (PLBT)

**1000 OSHA 10 FOR THE CONSTRUCTION INDUSTRY** This course provides basic safety, health, and education training for construction workers. Training is provided in the recognition, avoidance, abatement and prevention of safety and health hazards in workplaces in the construction industry. It also provides information on the employer's responsibilities, workers' rights and how to file a complaint. It also trains apprentices in the proper use and care of hand and power tools. (1, 1T+0L)

**1001 USE AND CARE OF TOOLS** Areas to be covered include, but are not limited to, Proper tool use; Tool care and maintenance; Safety; Ladders and scaffolds; Measurement and layout tools; Hand and power tools; Pipe Joining Tools; and Specialty tools. Students need to know the type and assembly methods of pipe, valves, and fittings, as well as obtain the skills to install various joint connections. (2, 0T+2L)

**1002 SOLDERING AND BRAZING** This course focuses on the joining methods of soldering & brazing which include, Safety and safe work practices; Theory of soldering and brazing; Types and uses of copper tube; Solders, brazing rod, and fluxes; Joint preparation and assembly; Heating equipment and tools; Soldered and brazed joints; and Performance tests for soldering and brazing. (2, 0T+2L)

**1200 RIGGING AND SIGNALING** This course delves deeper into heavy commercial and industrial rigging and culminate in an Industrial Rigging Certification. Areas to be covered are Inspections of various wire and synthetic slings; Safe working load limits; Sling lifting angles; Inspection of all rigging hardware; Eyebolts; Spreader beams; Man baskets; Mechanical advantage; Critical lift design; Lift calculation form; Rigging hook-up; Crane set-up; Site preparation; Boom truck operations; Ariel platforms; Tower cranes; and crane signaling. (2.5, 1T+1.5L)

**1201 PLAN READING AND DRAWING** Emphasize on the skills needed to properly interpret building prints and the ability to draw isometric sketches in the field to be prefabricated in a shop environment. Areas covered include basic drawing tools, measuring tools and lettering; graphic symbols for pipes, fittings and valves; interpretations of technical diagrams; interpretation of isometric drawings; and drawing three view, plan view and elevation view representations. (1, 0T+1L)

**1202 PIPES, VALVES, FITTINGS** Students will explore various pipe materials and wall thicknesses as they apply to specific field applications, as well as the numerous valves and fitting used to joint these materials. Areas covered include pipe, pipe fittings, flanges, and gaskets; methods of joining pipe; understanding the functions of valves; internal components of valves; pipe hangers, supports, anchors, guides and fasteners. (2, 1T+1L)

**1203 PLASTIC PIPING INSTALLER** Students will learn about the many types of plastic piping, uses and limitations as well as the numerous glues and primers used to join them. Plastic piping advantages and disadvantages will be covered as well as the characteristics of them (2, 1T+1L)

**1204 PLUMBING FIXTURES AND APPLIANCES** Student will gain basic understanding of the theory and practices of fixture installation and the use of various types of fixtures. Fixtures in both residential and commercial applications will be explored. Topics covered

include plumbing fixtures; installation practices; institutional fixture and equipment; fixture controls; and appliances and accessories. (1.5, 1T+0.5L)

**1205 WATER SUPPLY** Explore the history of water supply systems and the importance of clean potable water sources for human civilization as it has developed into modern day systems. Topics covered include introduction to water supply systems; pipe materials; water supply sources and treatment; distribution systems; building supply systems; water heating; and water conservation (2, 1T+1L)

**1300 DRAINAGE** Coverage of historical perspectives and drainage system improvement; piping materials and fittings; traps and fixtures connections; sanitary drainage installation; vent systems; DWV sizing; storm drainage; sewers and sewage treatment; private sewage disposal systems; and alternate water source drainage systems. (1, 0.5T+0.5L)

**1301 GAS INSTALLATIONS** An emphasis on the importance of proper installations of gas. Properties of gas and the combustion process will be covered as well as gas piping systems; clocking and orifice sizing; air supply and venting; valves and regulators; and electrical systems and controls. (1.5, 0.5T+1L)

**1302 METALLURGY** Introduces students to the effect of welding on metallurgical structure and properties of weld joints. The study of the influence of crystal and grain structure of metals on the mechanical, physical, and chemical properties of metals. (2.5, 2.5 T+0L)

**1303 LAYOUT and DESIGN** Students examine the principles and practices of metal fabrication including layout, design, and support techniques. Students are exposed to basic weld pipe, weld fittings, weld symbols, offsets, supports, and screwed pipe. Related math calculations and cutting techniques are utilized to prepare students for entry into pipe fitting related fields. (2., 1.5 T+0.5L)

**1304 CUTTING and BEVELING** Students examine protocols and procedures for safety of cutting and beveling with various methods, including oxy fuel gas cutting, plasma cutting, chop saws, and portable band saws. The course will also address jobsite safety and hazardous substances. Methods of grinding, beveling, cutting, gouging will be explored. Weld joints, types & designs will be studied. *Prerequisite:* PLBT 1303 Layout and Design (2., 0.5 T+1.5L)

**1305 SHIELDED METAL ARC WELDING (SMAW)** This course explores fundamental theory and application of Shielded Metal Arc Welding (SMAW) process and proper welding equipment setup. Introductory skills for pipe and plate welding are covered leading to skillfulness in equipment setup, pre-weld fit up, filler metal alloys, and welding in various positions. *Prerequisite:* PLBT 1302 Metallurgy (2., 0 T+2.0L)

**2100 BASIC ELECTRICITY AND ELECTRIC CONTROLS** Information on electrical devices, circuits, and electric measuring instruments as they relate to the installation of mechanical equipment and piping systems is covered. The course will also include the topic of Electrical controls which are a critical part in the efficient operation of mechanical systems (2.5, 1T+1.5L)

**2102 HYDRONICS** A hydronic system uses water or a water-based heat transfer fluid to ensure the comfort of a building's occupants. Subjects to be covered discovered are Principles of heating and cooling; Pumps; Air management; Piping materials and components; System layout; and System Sizing (2.5, 1T+1.5L)

**2200 MECHANICAL CODE** In this course students will gain insight into the 2015 Uniform Mechanical Code and the 2015 New Mexico Mechanical Code. Regulations and guidelines for proper installation will be explored in preparation for the New Mexico State Gasfitters License for Journeyman Certification which is a requirement within this program (2.5, 1T+1.5L)

**2201 PLUMBING CODE** Students will gain insight into the 2015 Uniform Plumbing Code and the 2015 New Mexico Plumbing Code. Regulations and guidelines for proper installation will be explored in preparation for the New Mexico State Plumbing License for Journeyman Certification which is a requirement within this program. (2.5, 1T+1.5L)

**2202 PIPEFITTER INSTALLER CODE** The Pipefitting Installer course will coach the student on how to properly locate required rules and regulations in the Uniform Mechanical Code book in effect as it pertains to the State Pipefitting Installers License testing. *Prerequisite:* PLBT 2200 Mechanical Code (2., 1.5 T+0.5L)

**2300 PNEUMATIC CONTROLS** Although pneumatic controls are slowly being phased out, there are many legacy systems still in operation today that work fine. This course deals mainly with troubleshooting existing systems. Areas to be explored are Control loops and air supply; Control valves and dampers; Axillary devices; Receiver controllers and transmitters; Ventilation, heating, cooling, and humidity control; and Year-round control. (0.5, 0T+0.5L)

### PLUMBING TECHNOLOGY APPRENTICESHIP (PLAP)

**1117 PLUMBING APPRENTICESHIP I** This course provides basic safety, health and education training for construction workers. Training is provided in the recognition, avoidance, abatement and prevention of safety and health hazards in workplaces in the construction industry. It also provides information on the employer's responsibilities, workers' rights and how to file a complaint. It also trains Apprentices in the proper use and care of hand and power tools. Areas to be covered include, but are not limited to, Proper tool use; Tool care and maintenance; Safety; Ladders and scaffolds; Measurement and layout tools; Hand and power tools; Pipe Joining Tools; and Specialty tools. apprentices need to know the type and assembly methods of pipe, valves, and fittings, as well as obtain the skills to install various joint connections. Finally, the course also focuses on the joining methods of soldering & brazing which include, Safety and safe work practices; Theory of soldering and brazing; Types and uses of copper tube; Solders, brazing rod, and fluxes; Joint preparation and assembly; Heating equipment and tools; Soldered and brazed joints; and Performance tests for soldering and brazing. (5, 1T+4L)

**1127 PLUMBING APPRENTICESHIP II** This course delves deeper into heavy commercial and industrial rigging and culminate in an Industrial Rigging Certification. Areas to be covered are Inspections of various wire and synthetic slings; Safe working load limits; Sling lifting angles; Inspection of all rigging hardware; Eyebolts; Spreader beams; Man baskets; Mechanical advantage; Critical lift design; Lift calculation form; Rigging hook-up; Crane set-up; Site preparation; Boom truck operations; Ariel platforms; Tower cranes; and crane signaling. This course continues with related science theory and principles as they relate to the piping and plumbing industry including the science behind piping of different materials and in different applications with gases, hydronics and steam including the safety devices needed to contain these elements in a safe manner. (3, 2T+1L)

**1217 PLUMBING APPRENTICESHIP III** This course will emphasize the skills needed to properly interpret building prints and the ability to draw isometric sketches in the field to be prefabricated in a shop environment. Areas covered include basic drawing tools, measuring tools and lettering; graphic symbols for pipes, fittings, and valves; interpretations of technical diagrams; interpretation of isometric drawings; and drawing three view, plan view and elevation view representations. Students will also explore various pipe materials and wall thicknesses as they apply to specific field applications, as well as the numerous valves and fitting used to joint these materials. Areas covered include pipe, pipe fittings, flanges and gaskets; methods of joining pipe; understanding the functions of valves; internal components of valves; pipe hangers, supports, anchors, guides and fasteners. Finally,

students will also learn about the many types of plastic piping, uses and limitations as well as the numerous glues and primers used to join them. Plastic piping advantages and disadvantages will be covered as well as the characteristics of them. (5, 1T+4L)

**1227 PLUMBING APPRENTICESHIP IV** This course will provide the student with a basic understanding of the theory and practices of fixture installation and the use of various types of fixtures. Fixtures in both residential and commercial applications will be explored. Topics covered include plumbing fixtures; installation practices; institutional fixture and equipment; fixture controls; and appliances and accessories. This course will explore the history of water supply systems and the importance of clean potable water sources for human civilization as it has developed into modern day systems. Topics covered include introduction to water supply systems; pipe materials; water supply sources and treatment; distribution systems; building supply systems; water heating; and water conservation. (3, 2T+1L)

**1317 PLUMBING APPRENTICESHIP V** This course will cover historical perspectives and drainage system improvement; piping materials and fittings; traps and fixtures connections; sanitary drainage installation; vent systems; DWV sizing; storm drainage; sewers and sewage treatment; private sewage disposal systems; and alternate water source drainage systems. The course will also emphasize the importance of proper installations of gas. Properties of gas and the combustion process will be covered as well as gas piping systems; clocking and orifice sizing; air supply and venting; valves and regulators; and electrical systems and controls. (2.5, 1T+1.5L)

**1318 PLUMBING APPRENTICESHIP IXI** This course begins examining the principles and practices of metal fabrication including layout, design, and support techniques. Students are exposed to basic weld pipe, weld fittings, weld symbols, offsets, supports, and screwed pipe. Related math calculations and cutting techniques are utilized to prepare students for entry into pipe fitting related fields. Students will then be introduced to Cutting, Beveling & Safety Protocols by exploring protocols and procedures for safety of cutting with various methods, including oxy fuel gas cutting, plasma cutting, chop saws, and portable band saws. The course will also address jobsite safety and hazardous substances. Methods of grinding, beveling, cutting, gouging will be explored. Weld joints, types & designs will be studied. (4.0, 1.5T+2.5L)

**1327 PLUMBING APPRENTICESHIP VI** The Service Plumbing course will stress safety on the service call for the installer, occupant and property. The class will concentrate on important soft skills needed for the service technician dealing directly with the customer. Comprehensive service tickets protect all parties involved and will be stressed in this course. The apprentice will become familiar with service tools, safeguards and their proper use that are not normally used in new construction projects. (2.5, 2T+0.5L)

**1328 PLUMBING APPRENTICESHIP XI** This course first Introduces Metallurgy, a study of the effect of welding on metallurgical structure and properties of weld joints. The study of the influence of crystal and grain structure of metals on the mechanical, physical, and chemical properties of metals. (2.5, 2.5T)

**1417 PLUMBING APPRENTICESHIP VII** The Gas Appliances course delves into gas appliances in more depth with the student testing recall from previous courses. Areas to be covered are conventional, high efficiency, direct vent and tankless water heater troubleshooting, repair and replacement. Sizing gas lines will be revisited, fusion joints and expansion tank sizing & installation will be covered. Troubleshooting furnace issues and repair, along with orifice sizing and sediment trap requirements by code will be examined. Natural gas safety will be discussed at length. Students will also be introduced to scientific principles and the relationship to the piping industry. Fundamentals principles of water,



steam and gasses and how they apply to plumbing and piping are covered. *Prerequisite:* Plumbing Apprenticeship V. (3.0, 2T+1L)

**1418 PLUMBING APPRENTICESHIP XII** This course explores fundamental theory and application of Shielded Metal Arc Welding (SMAW) process and proper welding equipment setup. Introductory skills for pipe and plate welding are covered leading to skillfulness in equipment setup, pre-weld fit up, filler metal alloys, and welding in various positions. *Prerequisite:* PLAP 1328 Plumbing Apprenticeship X. (2.0, 2L)

**1427 PLUMBING APPRENTICESHIP VIII** Students will gain insight into the 2015 Uniform Mechanical Code and the 2015 New Mexico Mechanical Code. Regulations and guidelines for proper installation will be explored in preparation for the New Mexico State Gasfitters License for Journeyman Certification which is a requirement within this program. Topics covered include Administration; Definitions; General Regulations; Combustion air; Chimneys and vents; Installation of Specific appliances; Boilers and pressure vessels; Hydronics; and Fuel gas piping. Students will also gain insight into the 2015 Uniform Plumbing Code and the 2015 New Mexico Plumbing Code. Regulations and guidelines for proper installation will be explored in preparation for the New Mexico State Plumbing License for Journeyman Certification which is a requirement within this program. Topics covered include Administration; Definitions; General Regulations; Plumbing Fixtures; Water heaters; Water Supply, Sanitary Drainage; Indirect Wastes; Vents; Traps and interceptors; Storm Drainage; and Fuel gas piping. Finally, this course will introduce students to pneumatic controls. Although they are slowly being phased out, there are many legacy systems still in operation today that work fine. This course deals mainly with troubleshooting existing systems. Areas to be explored are Control loops and air supply; Control valves and dampers; Axillary devices; Receiver controllers and transmitters; Ventilation, heating, cooling, and humidity control; and Year-round control. (5, 3T+2L)

**1428 PLUMBING APPRENTICESHIP XIII** In this course students will study the gas installer code as identified in the Uniform Mechanical Code that is being enforced by the State as it pertains to Natural Gas Installers License testing. The class will build on previous instruction and delve into administrative rules, definitions, general regulations and the rules of installing various systems, safety devices required including water-heaters, boilers, pressure vessels, piping and introduction to thermal energy systems. The Uniform Mechanical Code book will be use as well for Pipefitting installation as it pertains to Pipefitting Installer License testing. Topics covered are administrative rules, definitions, general regulations and the rules of installing piping for combustion air, vents, boilers/steam vessels, hydronics and process piping. Proper piping/tubing data, valves, fittings and joints as well as their limitations in various systems will be covered. Pipe offsets and welding take off calculations will also be covered. (4.5, 2.5T+2L)

## POLITICAL SCIENCE (POLS)

**Note:** All courses have a *Prerequisite* of ENG 109N or an adequate score on the Course Placement Evaluation.

**1110 INTRODUCTION TO POLITICAL SCIENCE** This course covers fundamental concepts in political science, such as political theories, ideologies, and government systems. (3, 3T+0L)

**1120 AMERICAN NATIONAL GOVERNMENT** This course explains the role of American national government, its formation and principles of the Constitution; relation of state to the national government; political parties and their relationship to interest groups. This course also explains the structure of the legislative, executive, and judicial branches. (3, 3T+0L)



**1130 ISSUES IN AMERICAN POLITICS** This course is designed to introduce the students to the contemporary study of American political issues. The course analysis of government policies, examining various approaches to the economy, democracy and the structure and the function of American political institutions. (3, 3T+0L)

**2160 STATE AND LOCAL GOVERNMENT** This class is an introductory course designed to familiarize students with the institutions, politics, and policies of state and local governments in the United States. An underlying assumption of this course is that states and localities are the center of a stable and viable democracy. As such, a major objective of the course is the empowerment of each student through knowledge; that is, to provide students with the understanding, analytical and political skills, and motivation to become an active and knowledgeable part of state and local government and politics. The problems addressed at the state and local levels are usually highly contentious and controversial because they hit people close to their homes. Through this class, students will learn how to become effective solvers of those problems. (3, 3T+0L)

**2310 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+0L)

### PSYCHOLOGY (PSYC)

**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.

**1110 INTRODUCTION TO PSYCHOLOGY** This course will introduce students to the concepts, theories, significant findings, methodologies, and terminology that apply to the field of psychology. (3, 3T+0L)

**1130 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:* ENGL 1110 (3,3T+0L)

**1140 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:* ENGL 1110 (3, 3T+0L)

**2110 SOCIAL PSYCHOLOGY** This course is an introduction to the scientific study of human social influence and interaction, and explores how an individual's actions, emotions, attitudes and thought processes are influenced by society and other individuals. *Prerequisites:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

**2120 DEVELOPMENTAL PSYCHOLOGY** Study of human physical and psychological change and stability from a lifespan development perspective. (3, 3T+0L)

**2130 ADOLESCENT PSYCHOLOGY** Study of human physical and psychological change and stability from adolescence through the emerging adulthood years. (3, 3T+0L)

**2140 CHILD PSYCHOLOGY** Study of human physical and psychological change and stability from conception through the late childhood years. (3, 3T+0L)

**2160 BASIC COUNSELING TECHNIQUES** In this course, 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. (3, 3T+0L)

**2210 ABNORMAL PSYCHOLOGY** This course provides students with an introduction to the field of abnormal psychology. Subject areas include history, methods, theories, etiologies, classification and treatment of disorders. (3, 3T+0L)

**2230 PSYCHOLOGY OF ADJUSTMENT** This course focuses on the individual's adjustment to society, and the application of psychological principles to the understanding of adjustment. (3, 3T+0L)

**2240 PSYCHOLOGY OF PERSONALITY** Theories of personality introduces students to the major theories in the development of personality. Students will analyze in detail the major theories of personality including psychoanalytic, behavioral, social learning, humanistic and trait theory. Students will have the opportunity to apply these theories in practical examples and applications whenever possible and appropriate. (3, 3T+0L)

**2315 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:* PSYC 1130, ENGL 1110. (3,3T+0L)

**2330 PSYCHOLOGY OF HUMAN SEXUALITY** Exploration of the psychological, physiological, cultural, social and individual factors that influence sexual behavior, sex roles, and sex identity.

**2340 PSYCHOLOGY OF PERSONAL GROWTH & INTERPERSONAL RELATIONS** Students will apply psychological insights and principles to better understand themselves and their relationships with others and the world in order to live more effectively. Such topics as self-identity, role of emotions in behavior, love, relationships, health and stress, sexuality, death, meaning and values, forgiveness, and non-violent communication will be explored. This course is experiential in nature with an emphasis on dialogue and group activities. *No Prerequisites.* (3, 3T+0L)

**2440 FAMILY SYSTEMS THEORY** This course examines different theoretical approaches including major systems theories, strategies, and techniques of family therapy. It emphasizes the application of counseling interventions with struggling or dysfunctional family structures. (3, 3T+0L)

**3301 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:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

**3302 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:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

**3305 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:* ENGL 1120 and PSYC 1110 (Fall, Spring, Summer). (3, 3T+0L)

**3321 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:* ENGL 1110 and PSYC 1110. Cross listed with CJUS 3321. (3, 3T+0L)

**3375 HUMANISTIC PSYCHOLOGY** This course is an in-depth exploration of the field of humanistic psychology. The course is primarily intended to provide learners with an overview of the guiding ideas, theories, philosophies, and applications of humanistic psychology. *Prerequisites:* ENGL 1110 and PSYC 1110. (3, 3T+0S)

**4400 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:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

**4405 PSYCHOLOGY AND FILM** The history of Psychoanalytic Film Theory (PFT) is primarily based on the works of Sigmund Freud and Jacques Lacan, and can be broken down to at least two distinctive waves: Screen Theory (1970s/1980s) and Lacanian Film Theory (1990s/2000s). This course touches upon Screen Theory (ST), but is really committed to unpacking Lacanian Film Theory (LFT), since it is the more genuine PFT of the two with its emphasis on the Real. *Prerequisites:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

**4410 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:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

**4411 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:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

**4420 MEDIA PSYCHOLOGY** This course introduces students to a critical psychological perspective on the media, which includes films, music, TV, news, the Internet, etc.-in other words, anything that is mass mediated to the public. The central question is: what are the effects of the mass media on our psyches? *Prerequisite:* ENGL 1120 or ENGL 1210 and PSYC 1110 (3, 3T+0L)

**4421 INDEPENDENT RESEARCH PROJECT** You will implement, interpret, and report on individually designed research projects. *Prerequisite:* PSYC 3321. (3, 3T+0L) Cross listed with CJUS 4421.

**4477 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:* ENGL 1110 and PSYC 1110. (3, 3T+0L)

## PUEBLO INDIAN STUDIES (PINS)

**Note:** All 200 level courses have a *Prerequisite* of ENG 109N or adequate score on Course Placement Evaluation.

**1110 INTRODUCTION TO PUEBLO INDIAN STUDIES** Bepowaveh - Welcome! This course will provide an introduction to the Pueblo experiences of New Mexico by drawing upon historical contacts, relations, literature and stories. Our class material will include

lectures, films, guest speakers and site visits to important historical places and collections. *Prerequisite:* ENGL 109N. (Fall, Spring) (3, 3T+0L)

## RADIATION PROTECTION (RDPR)

**2210 INTRODUCTION TO RADIATION PROTECTION** Introduction to radiation and radiation protection – overview of the field of radiation protection; uses and sources of radiation both man made and natural; review of core mathematical and physical principles; origins and basic properties of radiation; detection and measurement of radiation. *Prerequisite:* None. (3, 3T + 0L)

**2215 RADIATION SCIENCE** Properties, interactions, and measurement of radiation from radioisotopes, radiation producing equipment, and nuclear reactors; phenomenon of radioactive materials from the viewpoint of nuclear stability, decay processes, interactions with matter, and shielding. *Prerequisites:* RDPR 2210 and MATH 1220. (3, 3T + 0L).

**2220 RADIATION INSTRUMENTS I** Theory and application of radiation detection instruments, including gas-based, scintillation, and solid-state detectors; calibration maintenance of instrumentation; proper instrument handling and technique when conduction radiation surveys; radiation dosimetry. *Prerequisite:* RDPR 2210. (2, 1T + 1L)

**2225 RADIATION INSTRUMENTS II** Continuation of RDPR 2220 - Theory and application of radiation detection instruments, including gas-based, scintillation, and solid-state detectors; calibration maintenance of instrumentation; proper instrument handling and technique when conduction radiation surveys; radiation dosimetry is expanded upon. *Prerequisite:* RDPR 2220. (2, 1T + 1L)

**2233 RADIATION BIOLOGY** Survey of radiobiology: effects of differing types of radiation on tissue; 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 DNA; potential problems from indiscriminate exposures to radiation; medical applications of radiation, and treatment of radiation injury. *Prerequisite:* RDPR 2210. (2, 2T + 0L).

**2235 PRACTICAL RADIATION PROGRAMS I** Survey of regulations and methods for managing radiation protection programs, including workplace and environmental monitoring, waste management, transportation, emergency response, decontamination, and contamination control. RDPR 2235 focuses on the regulatory environment. *Prerequisite:* Completion or concurrent enrollment in RDPR 2210. (2, 1T + 1L)

**2240 PRACTICAL RADIATION PROGRAMS II** Continuation of RDPR 2235 - Survey of regulations and methods for managing radiation protection programs, including workplace and environmental monitoring, waste management, transportation, emergency response, decontamination, and contamination control. RDPR 2240 focuses on implementation and calculations. *Prerequisites:* RDPR 2235. (2, 1T + 1L).

**2242 PROBLEMS IN RADIATION PROTECTION** Capstone course for problem-solving techniques and scenario-based examples. Topics include theoretical and practical areas of radiation protection such as exposure assessment, shielding, work planning, environmental cleanup, and accident analysis. *Prerequisite:* RDPR 2215, RDPR 2225, RDPR 2233, RDPR 2240. (3, 3T+0L)

**2250 SUPERVISED FIELD EXPERIENCE** Capstone course of practical job shadow in radiation protection. Internship or other relevant work experience can be substituted. *Prerequisites:* RDPR 2210. (3, 3T+0L)

**READING IMPROVEMENT (RDG)**

**108N READING IMPROVEMENT** Introduces students to reading required for college, vocational programs and the workplace. Comprehension and critical thinking are stressed. (3, 3T+0L)

**109N READING AND CRITICAL THINKING** Introduces students to reading required for college success. You will work on comprehension, problem solving, not taking summarizing and computer assisted research. *Prerequisite:* RDG 108N, or adequate score on Course Placement Evaluation. (3, 3T+0L)

**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+0L)

**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+0L)

**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+2L)

**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+2L)

**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+2L)

**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+2L)

**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+2L)

**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 gained 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+0L)

**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+2L)

**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 maintenance of systems and safety concerns. Classes will take place on- and off-campus. *Prerequisites:* ENG 108N, MATH 100N, RE 103. Recommended *Co-requisite:* ELEC 190. (4, 2T+2L)

**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 Practitioners (NABCEP) Photovoltaic Installer Advanced Certification exam. (Fall, Spring, Summer)(3, 1T+2L)

## SOCIOLOGY (SOCI)

**Note: All courses have a *Prerequisite* of ENG 109N, or adequate score on the Course Placement Evaluation.**

**1110 INTRODUCTION TO SOCIOLOGY** This course will introduce students to the basic concepts and theories of sociology, as well as to the methods utilized in sociological research. The course will address how sociological concepts and theories can be utilized to analyze and interpret our social world, and how profoundly our society and the groups to which students belong influence them. Students will be given the opportunity to challenge their “taken for granted” or “common sense” understandings about society, social institutions, and social issues. Special attention will also be paid to the intimate connections between their personal lives and the larger structural features of social life. In addition, the implications of social inequalities, such as race/ethnicity, gender, and social class will be central to the course’s examination of social life in the United States. (3, 3T+0L)

**1310 SOCIOLOGY OF SUBSTANCE ABUSE** This course explores the phenomenon of drug use and abuse in our culture. It will include, but it is not limited to, the history of drug use, the drugs used, legislation concerning drug possession and use, dependence/addiction to and withdrawal from drugs, and the business of drugs—both legal and illegal. We will con-

concentrate on the sociological aspects of drugs, and we will examine the psychological features as well. Moreover, we will examine the history of drugs, the current state of education as it applies to drugs, prevention efforts, and the role of treatment programs, the latter of which will include both theory and its practical applications in the field. Lastly, we will explore the following list of drugs: stimulants, sedatives/hypnotics, alcohol, nicotine, caffeine, over-the-counter drugs, prescription drugs, narcotics, hallucinogens, cannabis, and inhalants. (3, 3T+0L)

**2210 SOCIOLOGY OF DEVIANCE** This course is designed to provide an overview of the study of deviance and social control from multiple sociological perspectives. The instructor will present how sociologists research deviance and social control and the ethical issues involved in studying human subjects involved in these activities. The course also examines central sociological theories for understanding the causes of deviant behavior. (3, 3T+0L)

**2240 SOCIOLOGY OF INTIMATE RELATIONSHIPS AND FAMILY** This course provides an overview of contemporary intimate relationships and families from sociological perspectives. We will examine intimate relationships and families as social constructions whose meanings have changed over time and from place to place. This course will aid students in developing a greater understanding of intimate relationships and families as institutions in contemporary U.S. society. Intersections of race, class, gender, sexual orientation, nationality, and other factors within these institutions will be addressed. (3, 3T+0L)

**2250 SOCIOLOGY OF RACE AND ETHNICITY** This class will examine race and ethnicity as social constructs, including the history of race and ethnic relations in the United States and how and why these constructs continue to play such important roles in the lives of U.S. peoples today. This course will also explore how other types of social stratification, such as class, gender, nationality, and sexual orientation, intersect with race and ethnicity. (3, 3T+0L)

**2255 RACE, CLASS AND GENDER** This course focuses on the intersectionality between race, class and gender in shaping everyday experiences of people. The aim is to develop a holistic approach to the study of inequality in the US by recognizing the complex connections between the history of oppression and the contemporary patterns of social stratification. The students will be introduced to various theoretical perspectives to explore the ways in which race, ethnicity, gender, sexual orientation and status interact with social, political and economic relations in a given society or community. (3+3T+0L)

**2260 SOCIOLOGY OF AGING** This is an introductory gerontology course for students interested in behavioral, social, or family studies. The course is designed to understand the separate processes of biological, psychological, and social aging and how these aging processes interact with each other and with our environment. (3, 3T+0L)

**2310 CONTEMPORARY SOCIAL PROBLEMS** This course studies the nature, scope, and effects of social problems and their solutions. The course will concentrate on sociological perspectives, theories, and key concepts when investigating problems, such as inequality, poverty, racism, alienation, family life, sexuality, gender, urbanization, work, aging, crime, war and terrorism, environmental degradation, and mass media. This course is designed to build students' sociological understanding of how sociological approaches attempt to clarify various issues confronting contemporary life, as well as how sociologists view solutions to these problems. (3, 3T+0L)

## SPANISH (SPAN)

**1110 SPANISH I** Designed for students with little exposure to Spanish, this course develops basic listening, speaking, reading, and writing skills and basic intercultural competence in interpretive, interpersonal and presentational modes of communication at the Novice Level of proficiency based on ACTFL guidelines. During this course, students per-



form better and stronger in the Novice-Mid level while some abilities emerge in the Novice High range. This is an introductory course aimed at helping the student to communicate in Spanish in everyday familiar situations via recognition and production of practiced or memorized words, phrases, and simple sentences. (3, 3T+0L)

**1120 SPANISH II** Designed for students with some degree of exposure to Spanish in high school and/or at home, this course continues to develop basic listening, speaking, reading, and writing skills and basic intercultural competence in interpretive, interpersonal and presentational modes of communication based at the Novice High Level of proficiency based on ACTFL guidelines, although a few abilities may emerge in the Intermediate Low Level. Students in this course communicate in Spanish in familiar topics using a variety of words, phrases, simple sentences and questions that have been highly practiced and memorized. *Prerequisite:* SPAN 1110. (4, 4T+0L)

**1421 SPANISH FOR MEDICAL PERSONNEL I** An introductory course in Spanish medical vocabulary and terminology. The course focuses on situations commonly encountered by healthcare professionals, such as routine physical exams, basic laboratory tests, patient interviews, the delivery of a baby, and giving instructions regarding medication and follow-up procedures that patients should understand. Key vocabulary, grammatical structures and proper pronunciation are introduced in the context of a practical medical situation. (3, 3T+0L)

### SPECIAL COURSES / INDEPENDENT STUDY (IS)

**2248, 3398, 4498** 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.**

### SPECIAL COURSES / TOPICS (TP)

**1147, 2247 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)

**3399, 4499 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)



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# Administration, Faculty, and Staff

## BOARD OF REGENTS

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Erica Rita Velarde, PE . . . . . Vice-President  
Porter Swentzell, PhD . . . . . Secretary/Treasurer  
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Casandra Batista-Dauz . . . . . Member

## CHIEF EXECUTIVE OFFICER

Hector Balderas, JD, CFE. . . . . President, Northern New Mexico College

## ACADEMIC OFFICERS

Ivan López Hurtado, PhD. . . . . Provost & Vice President for Academic Affairs  
Donald Appiaris, EdD . . . . . Interim Dean of Students & Ombudsman

## ADMINISTRATIVE OFFICERS

Denise Montoya, PhD. . . . . Chief of Staff / Vice President for  
Finance & Administration  
Theresa Storey . . . . . Chief Financial/Compliance Officer  
Scott Stokes . . . . . Chief Information Officer  
Matt Baca, JD. . . . . Legal Counsel

## CHAIRPERSONS – NNMC

Ashis Nandy, PhD . . . . . Chair, Department of Engineering  
& Technology  
Lori Baca, DBA. . . . . Chair, Department of Business Administration  
Lori Franklin, MA. . . . . Chair, Language & Letters  
Sushmita Nandy, PhD . . . . . Chair, Biology, Chemistry, &  
Environmental Science  
Robert Beshara, PhD. . . . . Chair, Department Arts & Human Sciences  
Sandra Rodriguez, PhD . . . . . Chair, Department of Education  
Ellen Trabka, MSN . . . . . Chair, Department of Nursing & Health Sciences  
David Torres, PhD. . . . . Chair, Mathematics & Physical Science

## CHAIRPERSONS – NNMC BRANCH COMMUNITY COLLEGE

Frank Loera, DBA. . . . . Chair, Department of Technical Trades

## ACADEMIC PROGRAM DIRECTORS

Theresa Lopez, MSN, RN . . . . . Interim Director, ADN Nursing Program  
Johanna Case-Hofmeister, MFA . . . . Director, Bachelor of Integrated Studies

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## ADMINISTRATIVE DIRECTORS / COORDINATORS / MANAGERS

Jesus Aragon . . . . .	Director, Athletics/Head Men's Basketball Coach
Janice Baca, BBA . . . . .	Registrar
Karen Baker-Jepsen, MA . . . . .	Director, Human Resources
Julianna Barbee, MA. . . . .	Director, Small Business Development Center
Tobe Bott-Lyons, PhD . . . . .	Director, Upward Bound
Courtney Bruch, MLS . . . . .	Director, Assessment & Accreditation
Lynn Chamberlain, MA . . . . .	Project Director, Title III
Kristy Dyer, MA . . . . .	Project Director, Title V CASSA & F2F
Nick Eckhert, MPA/MPH . . . . .	Grants Manager & Special Projects
Emma Hashman, MA . . . . .	Director, Admissions & Recruitment
Donna Jaramillo, BS . . . . .	Director, Educational Opportunity Center
Ramkrishan Khalsa, AA . . . . .	Coordinator, Veterans Resource Center
Sandy Krolick, MA . . . . .	Creative Director, Communications & Marketing
Kathy Levine, MS . . . . .	Director, Financial Aid
Dan Lim, PhD. . . . .	Director, Center for Distance Learning
Shawn Madrid . . . . .	Director, Facilities, Safety & Security
Dulce Marti, MA. . . . .	Director, Advisement
Sara McCormick, MA . . . . .	Career Services Specialist
Jacob Pacheco, BA. . . . .	Director, High School Equivalency Program (HEP)
Cecilia Romero . . . . .	Director, Continuing Education/Adult Education
Edwina Romero, MEd . . . . .	Coordinator, Dual Credit
Carmella Sanchez, MS. . . . .	Director, Institutional Research
Martin Shupla, MLS . . . . .	Director, Ben Lujan Library
Stephanie Vigil-Roybal, MA. . . . .	Director, College Assistance Migrants Program
Tammy Winston, BA . . . . .	Student Life Coordinator

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## FULL-TIME FACULTY – NNMC

**Sadia Ahmed, Assistant Professor**  
University of South Florida: PhD, 2014

**Ken Armstrong, Associate Professor**  
Capella University: DNP, 2018

**George Ackerman, Lecturer**  
Capella University of Minnesota: PhD, 2012

**Lori Baca, Associate Professor**  
University of Phoenix: D.B.A., 2014

**Teresa Beaty, Associate Professor**  
University of Texas at Arlington: PhD, 2014

**Robert Beshara, Associate Professor**  
University of West Georgia: PhD, 2018

**G. Scott Braley, Assistant Professor**  
Colorado State University: PhD, 2019

**Lorraine Bowman, Visiting Professor**  
Observatoire de Paris, France: MSc, 2011

**Sean Bowman, Visiting Professor**  
The University of Texas, MA 2006

**Johanna Case-Hofmeister, Assistant Professor**  
Yale University: MFA, 2013

**Sneha Chakradhar, Assistant Professor**  
Jamia Millia Islamia (Central University): PhD, 2015

**Steven Cox, Associate Professor**  
Rensselaer Polytechnic Institute: PhD, 1988

**Wesley Colgan III, Assistant Professor**  
Oregon State University: PhD, 1997

**Melanie Colgan, Assistant Professor**  
University of New Mexico: MSN, 2004

**Betty Espinoza, Instructor**  
Northern New Mexico Community College: AAS, 1995

**Lori Franklin, Associate Professor**  
California State University: MA, 1989

**Kiersten Figurski, Lecturer**  
New Mexico Highlands University: MA, 2016

**Gloriadell Gonzales, Instructor**  
Northern New Mexico College: Certificate, 2008

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**Ana Malinalli X. Gutiérrez Sisneros, Associate Professor**

New Mexico State University: PhD, 2017

**Alberto Mares, Visiting Professor**

New Mexico State University: EdS, 2019

**Anne Gray, Assistant Professor**

Purdue University: PhD, 2020

**Rebecca Lynn Hancock, Instructor**

California State University-Sacramento: MSN, 2019

**Joan Hodge, Assistant Professor**

University of Texas-Austin: MSN, 1976

**David Lindblom, Associate Professor**

Institute of American Indian Arts: MFA, 2016

**Brenda Linnell, Associate Professor**

University of Texas–El Paso: PhD, 2011

**Theresa Lopez, Interim Program Director**

University of New Mexico: MSN, 2007

**Rachel Meijklejohn, Assistant Professor**

Western New Mexico University: ABD, 2005

**J.B. Moore, Instructor**

University of Oxford: MFA, 2000

**Alberto Mares, Assistant Professor**

New Mexico Highlands University: EdS, 2019

**Ashis Nandy, Associate Professor**

Pennsylvania State University: PhD, 2012

**Sushmita Nandy, Associate Professor**

All India Institute of Medical Sciences, New Delhi, India: PhD, 2012

**Sandra Rodriguez, Associate Professor**

University of New Mexico: PhD, 2001

**Robert Tierney, Assistant Professor**

University of Tuent (Netherlands): PhD, 2014

**David Torres, Associate Professor**

University of New Mexico: PhD, 1996

**Ellen Trabka, Associate Professor**

University of Massachusetts-Lowell: MSN, 1995

**Tammy Uzzetta, Simulation Coordinator**

Aspen University: MSN, 2019

**Ana Vasilic, Associate Professor**

University of Delaware: PhD, 2009

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**Simon Vaz, Assistant Professor**

Nova Southeastern University: EdS, 2006

**Rhiannon West, Associate Professor**

University of New Mexico: PhD, 2013

**Heather Winterer, Associate Professor**

University of Nevada–Las Vegas: PhD, 2007

**Margaret Zak, Assistant Professor**

Oregon Health and Science University: MN, 2010

**Stephanie Zawadzki, Lecturer**

Pennsylvania State University: MSc, 2015

**FULL-TIME FACULTY – NNMC BRANCH COMMUNITY COLLEGE**

**Frank Loera, Instructor**

Northcentral University: DBA, 2017

**Marvin Romero, Instructor**

Journeyman EE-98J

**Stephen Skelton, Instructor**

NNMC, AS Plumbing, 2023

**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

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# Academic Calendar | Fall 2023–Summer 2024

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## FALL 2023 / FULL TERM

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First day to use financial aid for bookstore charges . . . . .	Tues, Aug 1
Deadline for Degree & Certificate Students to Submit an Application for Fall 2023 . . . . .	Fri, Aug 4
Convocation . . . . .	Mon, Aug 7-10
<b>REGISTRATION FOR FALL . . . . .</b>	<b>April 10-Aug 18</b>
<b>CLASSES BEGIN . . . . .</b>	<b>Mon, Aug 14</b>
Late Registration (late fee required) . . . . .	Mon, Aug 14
<b>PAYMENT DEADLINE: pay in full, or 5% down + plan . . . . .</b>	<b>Fri, Aug 18</b>
Disenrollment -Students who have missed the payment deadline . . . . .	Fri, Aug 18
Last Day for Final Payment . . . . .	Fri, Aug 25
Last Day to Change Full-term Course Schedule (Drops/Adds only) . . . . .	Fri, Aug 25
Last Day to Change Grade Option from CR-AU/AU-CR. . . . .	Fri, Aug 25
Last Day to Drop a Full-Term Course with 100% Refund without Record . . . . .	Fri, Aug 25
Census Day . . . . .	Fri, Sept 1
Last day to use financial aid for bookstore charges (1st half) . . . . .	Thurs, Aug 31
<b>Holiday (Labor Day). . . . .</b>	<b>Mon, Sept. 4</b>
First day to use Financial Aid for bookstore charges (2nd Half) . . . . .	Mon, Oct 2
<b>Fall Break (no classes) . . . . .</b>	<b>Mon-Tues, Oct 9-10</b>
Mid-Term Grades Due . . . . .	Wed, Oct 11
Faculty and Staff Development Day (no classes) . . . . .	Wed, Oct 12
<b>REGISTRATION FOR SPRING 2024 BEGINS. . . . .</b>	<b>Mon, Oct 16</b>
Last Day for Instructors to Initiate a Withdrawal . . . . .	Fri, Oct 20
Last Day to use Financial Aid for bookstore charges (2nd Half) . . . . .	Tues, Oct 31
Last Day to Receive a Refund for Texts through the Bookstore . . . . .	Tues, Oct 31
Last Day to Withdraw from a Full-Term Course . . . . .	Fri, Nov 3
Deadline to apply to Graduate in Fall 2023. . . . .	Fri, Nov 3
<b>Holiday (Veterans Day) No Classes . . . . .</b>	<b>Fri, Nov. 10</b>
<b>Thanksgiving Break . . . . .</b>	<b>Wed-Sun , Nov 22-26</b>
Final Exams* . . . . .	Sat.-Fri, Dec 2-8
*Exam make-up days in case of bad weather . . . . .	Fri-Sat, Dec 8-9
Last Day of Term . . . . .	Fri, Dec 8
Final Grades Due. . . . .	Mon, Dec 11
<b>Winter Break (College Closed). . . . .</b>	<b>Sat-Sun, Dec 16-Jan 2, 2024</b>

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**FALL 2023 / 8-WEEK TERM**

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**FIRST 8-WEEK TERM**

<b>CLASSES BEGIN</b> .....	<b>Mon, Aug 14</b>
Last Day to Drop/Add a Course with 100% Refund without Record .....	Fri, Aug 18
Last Day to Drop a Course with 50% Refund without Record .....	Fri, Aug 25
Last Day for Instructors to Initiate a Withdrawal .....	Sun, Sep 17
Last Day to Withdraw from a Course .....	Sun, Sep 24
Last Day of Term .....	Fri, Oct 6
Final Grades Due .....	Wed, Oct 11

**SECOND 8-WEEK TERM**

<b>CLASSES BEGIN</b> .....	<b>Mon, Oct 16</b>
Last Day to Drop/Add a Course with 100% Refund without Record .....	Fri, Oct 20
Last Day to Drop a Course with 50% Refund without Record .....	Fri, Oct 27
Last Day for Instructors to Initiate a Withdrawal .....	Fri, Nov 14
Last Day to Withdraw from a Course .....	Fri, Nov 24
Last Day of Term .....	Fri, Dec 8
Final Grades Due .....	Mon, Dec 11

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**SPRING 2024 / FULL-TERM**

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First day to use financial aid for bookstore charges .....	Tues, Jan 2
Deadline for Degree & Certificate Students to Submit an Application for Spring 2024 .....	Fri, Jan 5
<b>CONVOCATION</b> .....	<b>Mon-Thurs, Jan 8-11</b>
<b>REGISTRATION FOR SPRING 2024</b> .....	<b>Mon, Oct 16-Fri, Jan 19</b>
<b>HOLIDAY (Martin Luther King Jr's . Birthday)</b> .....	<b>Mon, Jan 15</b>
<b>CLASSES BEGIN</b> .....	<b>Tues, Jan 16</b>
Late Registration (late fee required) .....	Tues, Jan 16-Fri, Jan 19
<b>PAYMENT DEADLINE: pay in full, or 5% down + plan</b> .....	<b>Fri, Jan 19</b>
Disenrollment–Students who have missed the payment deadline .....	Fri, Jan 19
Last Day to Change Full-term Course Schedule (Drops/Adds only) .....	Fri, Jan 26
Last Day to Change Grade Option from CR-AU/AU-CR. ....	Fri, Jan 26
Last Day to Drop a Full-Term Course with 100% Refund without Record .....	Fri, Jan 26
Last day to use financial aid for bookstore charges (1st half) .....	Wed, Jan 31
Census Day .....	Fri, Feb 2
Last Day to Receive a Refund for Texts through the Bookstore .....	Fri, Feb 16
Curriculum Assessment Day .....	Fri, Feb 16
Last day to use financial aid for bookstore charges (2nd half) .....	Mon, March 4
Mid-Term Week .....	Mon, March 4-Fri, March 8
Mid-Term Grades Due .....	Web, March 13

<b>SPRING BREAK</b> .....	<b>Mon, March 11–Sun, March 17</b>
Last Day for Instructors to Initiate a Withdrawal .....	Fri, March 8
Last Day to Receive a Refund for Texts through the Bookstore .....	Fri, March 29
Last day to use Financial Aid for bookstore charges (2nd Half) .....	Fri, March 29
<b>Holiday (Good Friday) No Classes</b> .....	<b>Fri, March 29</b>
<b>REGISTRATION FOR SUMMER AND FALL 2024 BEGINS</b> .....	<b>Mon, April 8</b>
Last Day to Withdraw from a Full-Term Course .....	Fri, April 12
Final Exams* .....	Sun, May 5–Fri, May 10
Commencement Rehearsal .....	Thurs, May 9
Last Day of Term .....	Fri, May 10
<b>Commencement</b> .....	<b>Sat, May 11</b>
Final Exams make-up day in case of bad weather .....	Sun, May 12
Final Grades Due .....	Mon, May 13

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## **SPRING 2024 / 8-WEEK TERMS**

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### **FIRST SPRING 2024 8-WEEK TERM**

<b>CLASSES BEGIN</b> .....	<b>Tues, Jan 16</b>
Last Day to Drop/Add a Course with 100% Refund without Record .....	Sun, Jan 21
Last Day to Drop a Course with 50% Refund without Record .....	Sun, Jan 28
Last Day for Instructors to Initiate a Withdrawal .....	Fri, Feb 16
Last Day to Withdraw from a Course .....	Fri, Feb 23
Last Day of Term .....	Fri, March 8
Final Grades Due .....	Wed, March 13

### **SECOND SPRING 2024 8-WEEK TERM**

<b>CLASSES BEGIN</b> .....	<b>Mon, March 18</b>
Last Day to Drop/Add a Course with 100% Refund without Record .....	Sun, March 24
Last Day to Drop a Course with 50% Refund without Record .....	Sun, March 31
Last Day for Instructors to Initiate a Withdrawal .....	Fri, April 19
Last Day to Withdraw from a Course .....	Fri, April 26
Last Day of Term .....	Fri, May 10
Final Grades Due .....	Mon, May 13

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## **SUMMER 2024**

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Deadline to Submit Degree/Certificate Application for Summer 2024 .....	Fri, May 24
First day to use financial aid for bookstore charges .....	Mon, May 20
<b>CLASSES BEGIN</b> .....	<b>Mon, June 3</b>
Deadline to Apply to Graduate in Summer 2024 .....	Fri, June 7
<b>PAYMENT DEADLINE: pay in full, or 5% + plan</b> .....	<b>Fri, June 7</b>
<b>Disenrollment—Students who have missed the payment deadline</b> .....	<b>Fri, June 7</b>
<b>REGISTRATION</b> .....	<b>Mon, April 8–Fri, June 7</b>

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Last Day to Change Full-term Course Schedule (Drops/Adds only) . . . . .	Fri, June 7
Last Day to Change Grade Option 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 use financial aid for bookstore charges . . . . .	Fri, June 16
Last Day for Final Payment . . . . .	Fri, June 14
Holiday (Independence Day) . . . . .	Thurs, 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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**SUMMER 2024 / 5-WEEK TERMS**

**FIRST 5-WEEK TERM**

<b>CLASSES BEGIN</b> . . . . .	<b>Mon, May 20</b>
Last Day to Drop/Add a Course with 100% Refund without Record . . . . .	Fri, May 24
<b>HOLIDAY (Memorial Day)</b> . . . . .	<b>Mon, May 27</b>
Last Day to Withdraw from a Course. . . . .	Fri, June 7
Last Day of Term . . . . .	Fri, June 21
Final Grades Due . . . . .	Wed, June 26

**SECOND 5-WEEK TERM**

<b>CLASSES BEGIN</b> . . . . .	<b>Mon, June 24</b>
Last Day to Drop/Add a Course with 100% Refund without Record . . . . .	Fri, June 28
Last Day to Withdraw from a Course. . . . .	Fri, July 12
Last Day of Term . . . . .	Fri, July 26
Final Grades Due . . . . .	Mon, July 29





**NORTHERN  
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**FALL 2023 –  
SUMMER 2024  
CATALOG**



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