

Undergraduate Catalog

2005 ~ 2007

New Mexico Highlands University

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Manny M. Aragon

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Las Vegas, New Mexico 87701
(505) 425-7511
www.nmhu.edu

New Mexico Highlands University is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 30 North LaSalle St., Suite 2400, Chicago, IL 60602-2504, 312-263-0456; 800-621-7440, fax 312-263-7462; www.ncacihe.org. To review or receive a copy of the University NCA Affiliation Status Report, please contact the Office of the Registrar.

New Mexico Highlands University reserves the right to change its instructional programs at any time. The provisions of this catalog are not to be regarded as an irrevocable contract between the student and New Mexico Highlands University.

New Mexico Highlands University does not discriminate on the basis of disability, race, color, religion, national origin, age, sex, or sexual orientation in employment, admission, programs or services.

Any student who feels that he/she has been discriminated against is encouraged to file an incident report form with the Office of the Dean of Students. For more information please refer to the NMHU Student Handbook or the NMHU website at www.nmhu.edu.

All NMHU educational programs and activities will be made accessible to students with disabilities upon request.

Individuals with a disability who are in need of accommodations in order to participate in our programs may contact the university at 505 454-3188, TTY at 505 454-3003 or in writing to the Office of Disability Services, New Mexico Highlands University, Las Vegas, New Mexico 87701.

For the full-time degree seeking freshman who entered the university during the 1998-1999 academic year the persistence and graduation rate may be obtained from the Office of the Registrar.

Bulletin
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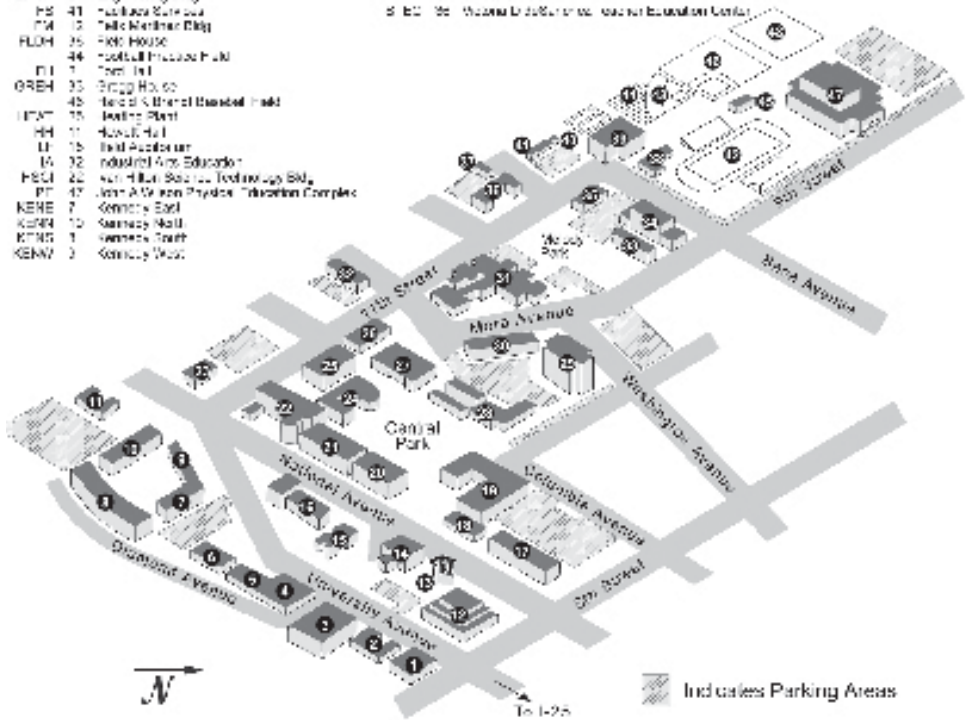
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Academic Calendar is on inside back cover

Campus Map

10	Alumni Convivial Tower
ABSH	Archives Hall
ABSI	Archives Annex
BBB	Bookstore Student Center
BH	Boathouse
CDL	Campus Fellow Bldg
SL	Charles Tyson Miller Bldg
CJAD	Child Development Center/Casualties Ia
40	Compassion Center
CH	Chapel Hall
US	Community Library
ITR	Technical Library/Student Health Ctr
UH	University Hall
CLC1	21 Computer Center Bldg
FLNR	Engineering Bldg
PS	Psychology Building
PA	Public Administration Bldg
FLDH	Public House
44	Public House Annex
PI	Public Int'l
GRH	Range House
45	Recreation Center/Boat Launch
ITAT	Reading Plant
HH	Housing Hall
LI	Health Services
IS	Industrial Arts Education
PSCL	John Hillerich Science Technology Bldg
PT	John A. Wilson Physics Instruction Complex
KERE	Kennedy East
KERN	Kennedy North
KENS	Kennedy South
KENV	Kennedy West

SC	11	Lower Middle Science Bldg
WB	4	Medical Library
KAD	5	Medical Library
NE14	31	Monday Hall
NH	17	Nathan Hall
47		Parade Stadium
PR	6	Physical Ed Bldg
RAE	14	Regional Administration Bldg
SM	1	State of Nevada
SWA	20	Student Center
SH	24	Student Hall
43		Student Field
SIU	34	Student Union
SWN	35	Swimming Pool
43		Thompson Center
S-10	36	Western Education Center/Western Education Center



Produced by Office of University Publications

The Undergraduate Catalog 2005-2007 is a description of New Mexico Highlands University's academic programs and courses of instruction. Although much effort has been made to ensure accuracy, errors or omissions may be present. All official corrections to this catalog are on file with the Office of the Registrar.

The administration and faculty of New Mexico Highlands University believe that the educational programs of the university are effective and valuable. However, the ultimate results of the programs offered, in terms of such matters as achievement, employment, and professional licensing, are also dependent on factors beyond the control of the university, such as individual student initiative, governmental or institutional regulations, and market conditions.

Therefore, New Mexico Highlands University makes no representation or guarantee that following a particular course or curriculum will result in specific achievement, employment, admission to other programs, or professional licensing.

MISSION STATEMENT

New Mexico Highlands University is a diverse comprehensive quality university serving the global community by integrating education, research, public service, and economic development, while celebrating our distinctive Northern New Mexico cultures and traditions. We achieve this through a university-wide commitment to quality student-centered education, recognition of the growing importance of the Spanish language to our nation's interests, and an acknowledgement to our many responsibilities to residents of Northern New Mexico as the principal educational institution in the region.

As a student-centered, publicly supported, regionally based, comprehensive university offering programs in liberal arts, sciences and professional disciplines the University brings together students from distinctive cultural, socioeconomic, linguistic, geographic, religious, and educational backgrounds.

New Mexico Highland University is committed to programs that focus on its multiethnic student body with special emphasis on the rich heritage of Hispanic and Native American cultures that are distinctive to the State of New Mexico and particularly to Northern New Mexico. The University clearly perceives that its success depends upon an appreciation of the region's cultural and linguistic identities. By reinforcing cultural identity and encouraging the use of these assets, the University seeks to empower students and the region's ethnic populations to achieve full involvement in the activities of society.

The University emphasizes graduate and professional programs, and a balanced curriculum promotes undergraduate study that is firmly grounded in the liberal arts and sciences, emphasizes excellence in teaching and individual attention to students, and prepares students for lifelong learning, for graduate and professional schools, and for present and future occupations. The University remains true to its legacy of emphasis on teacher preparation, interdisciplinary programs involving the Hispanic world, and programs that contribute to meeting social needs. In essence, there is an emphasis on developing broadly literate citizens and leaders, educated in analytical and critical thought and in the appreciation of the arts and sciences. In addition, through collaborative arrangements with other campuses, research agencies, government

agencies, and the corporate world, the University aspires to develop and deliver new models for baccalaureate and graduate programs in additional programs such as engineering, forestry management, watershed management, bilingual programs in the professional schools, and programs that clearly acknowledge that a university that fully takes advantage of, and prepares its students for, creative application of technology to improve the quality of life, is a university that will prosper, grow, and be relevant. In support of its mission the university has adopted the following strategic goals:

STRATEGIC GOAL A: Develop a learner-centered environment that promotes the improvement of learning and personal development of students from first-year courses through degree completion.

STRATEGIC GOAL B: Enhance the long term strategy for university engagements in community and regional partnerships.

STRATEGIC GOAL C: Become the premier Hispanic Serving Institution (HSI) in the country.

STRATEGIC GOAL D: Align New Mexico Highlands University technology with institutional priorities, be on the leading edge of technology developments in higher education, provide faculty, students, staff and administration, and the communities the University serves convenient access to information needed for learning, research, teaching, administration, and communication.

STRATEGIC GOAL E: Achieve a competitive position with peer institutions in research and scholarship in targeted areas that promote the achievement of the university mission.

STRATEGIC GOAL F: Maintain the adequacy and quality of the physical campus environment.

STRATEGIC GOAL G: Develop effective and efficient academic and administrative processes, systems and structures that support continuous improvement

STRATEGIC GOAL H: Communicate the image and reputation of the University to the general public and to students with a focus on its high quality.

OVERVIEW OF UNDERGRADUATE PROGRAMS OF STUDY*

COLLEGE OF ARTS AND SCIENCES

Department of Behavioral Sciences

Anthropology/Sociology (BA, BS)

With concentrations in:

American Indian Studies

Anthropology

Criminology

Sociology

Criminal Justice Studies (BA)

(NMHU in partnership with SJC only)

Sociology (MINOR)

Anthropology (MINOR)

Psychology (BA, BS)

Department of Communication and Fine

Arts

Art (BA)

With concentrations in:

Liberal Arts

K-12 Education

Art, Pre-Professional (BFA)

Art History (MINOR)

Media Arts (BA, BFA or Minor)

Music (BA)

With concentrations in:

Music Performance

Music Education

Department of Computer & Mathematical

Sciences

Computer Science (BA, BS or Minor)

With concentrations in:

Software/Hardware

Systems (BS)

Information Systems (BA)

Individualized Program

(BA, BS)

Engineering (BSE)

Mathematics (BS or BA)

Cognitive Science (MINOR)

Combined Science (MINOR)

Math and Computer Science for Secondary

School Teachers (BA)

Math and Computer Science for Elementary

School Teachers (BA)

Computer and Mathematical Modeling (BS)

Physics (MINOR)

Department of Humanities

English (BA)

Philosophy (MINOR)

Religion Studies (MINOR)

History (BA or MINOR)

With concentration in:

Social Studies

Political Science (BA)

With concentration in:

Law Emphasis

Political Science (MINOR)

Spanish (BA or MINOR)

Department of Natural Sciences

Biology (BS)

With concentrations in:

Pre-Med Zoology

Cell/Molecular Biology

Ecology

Teaching

Medical Technology

Biology (MINOR)

Biology for Teachers (MINOR)

Chemistry (BA, BS or MINOR)

Environmental Geology (BS)

With concentrations in:

Geology

Watershed Mgmt

Geology (MINOR)

Forestry (BS)

With concentrations in:

Forestry

Wildland Fire

Interdepartmental

Cognitive Science (MINOR)

Combined Science (MINOR)

General Science (MINOR)

General Science for Secondary School

Teachers (BA)

With concentrations in:

Biology, Geology,

Chemistry, and Physics

COLLEGE OF PROFESSIONAL

STUDIES

SCHOOL OF BUSINESS ACBSP accredited

Business Administration (BBA)

With concentrations in:

Accounting (OR MINOR)

Finance (OR MINOR)

International Business

Management (OR MINOR)

Management Information
Systems (OR MINOR)
Marketing (OR MINOR)

SCHOOL OF EDUCATION NCATE accredited

Bilingual Education (MINOR)
Early Childhood Multicultural Educ (BA)
Elementary Education (AA, BA)
English as a Second Language (MINOR)
Secondary Educ (MINOR, LICENSURE)
Special Education (BA)
Department of Exercise and Sport Science
Coaching (MINOR)
Health (BA)

With concentrations in:

Health Education
Health Promotion and
Wellness
Pre-Professional

Human Performance and Sport (BA)

With concentrations in:

Athletic Training
Exercise Science
Leisure Services
Teaching

SCHOOL OF SOCIAL WORK

CSWE accredited

Social Work (BSW)

STUDY ABROAD

The International Education Center assists students in applying for study-abroad programs sponsored by NMHU, the New Mexico Public Universities Consortium, and other cooperating institutions.

*NMHU reserves the right to change its instructional and other programs at any time

HIGHLANDS AT A GLANCE

First established as New Mexico Normal School, the institution became New Mexico Highlands University in 1941, as it expanded its role beyond teacher education.

Today, NMHU in Las Vegas offers graduate and undergraduate programs in arts and sciences, business, education, and social work. Located in the heart of Las Vegas, a small, friendly town with a population of about 18,000, Highlands' main campus is close to recreational and wilderness areas, and within a few hours of major metropolitan centers.

Through distance education, Internet courses, and on-site faculty, NMHU also offers some degree-completion and graduate programs in Farmington, Rio Rancho, Española, Santa Fe, and Roswell.

Although students from all over the world attend NMHU, the majority of its approximately 3,500 students are from New Mexico and are Hispanic. Highlands' programs focus on its multi-ethnic student body, especially the Hispanic and Native American cultures distinctive of New Mexico.

The university continues the traditional role of an institution of higher learning in the liberal arts and sciences; it also offers comprehensive programs in business, teacher education, engineering, and social work. The university is committed to excellence in the transmission, discovery, preservation, and application of knowledge itself to maintain a progressive, forward-looking posture responsive to the changing social environment, as to shape the direction the institution will take with respect to anticipated demands and approaching opportunities.

As part of its mission to serve the individual student through personal attention, Highlands maintains an open enrollment, small classes, and low tuition. It is known nationwide for its research activities, student and faculty achievement, and opportunities for students to combine study with real-world experience. In addition, the required

freshman seminar addresses retention by orienting new students to college life and university resources to ensure their success through graduation.

NMHU students and faculty alike consistently receive national and international recognition for many of their achievements, and have opportunities to network with other researchers and professionals in their areas of interest.

Accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. NMHU also has specialty accreditations. The School of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE). The School of Business is accredited by the Association of Collegiate Business Schools and Programs (ACBSP). The School of Social Work is accredited by the Council on Social Work Education (CSWE).

NMHU is a member of the Rocky Mountain Athletic Conference, NCAA Division II and fields eleven teams – five men's and six women's. They include baseball, basketball, cross country, football, soccer, softball, women's track, volleyball and wrestling.

Student Services and Code of Conduct

The NMHU Student Handbook, which is published each year, describes student services, the Code of Student Conduct and related policies and procedures. Administered by the Dean of Students, the code sets the standards for expected behavior of students. Procedures for hearings, appeals, grievances and complaints of discrimination/harassment are outlined in the handbook. The handbook is provided to new students; it may be downloaded at www.nmhu.edu; or a copy may be obtained from the NMHU Office of Student Affairs, Box 9000, Las Vegas, N.M. 87701.

Students with Disabilities

New Mexico Highlands University does not discriminate on the basis of disability in admission or

access to its programs and activities. Section 504 of the Rehabilitation Act of 1973, as amended and the Americans with Disabilities Act of 1990 prohibit such discrimination. Provost Janice Chavez is the designated Section 504/ADA Coordinator.

Disability Services has been designated to coordinate the efforts of Highlands to comply with these laws and their implementing regulations. All initial inquiries or concerns regarding compliance, accommodation, access, or services should be first addressed to Disability Services at (505) 454-3252 or via e-mail at disabilities@nmhu.edu. Official accommodations can not be provided to students with disabilities without prior approval from Disability Services.

Disability related records, including medical records, are confidential material and will be protected in accordance with FERPA regulations and in light of their purpose to assist in providing appropriate academic accommodations to the student.

Service animals are welcome on campus provided they meet all legal requirements. Service animals that present a health or safety threat to the campus community (including cleanliness issues) will be banned from campus unless significant preventive actions are taken by the owner to ensure future compliance. Students with service animals must be registered with Disability Services.

Further information about the policy and procedures relating to services to students with disabilities is found in the Disability Services Handbook, incorporated herein by reference. This handbook may be requested from Disability Services or may be downloaded from the NMHU web site.

Admission to the University

Director of Admissions
Rodgers Administration Building
505 454-3434

E-mail: admissions@nmhu.edu

Applying for Admission

An application packet may be obtained from the NMHU Office of Admissions, or from New Mexico high school counselors. Applications also are available at: www.nmhu.edu/admissions.htm, where a student may also apply on-line.

With the completed application form, applicants must pay a \$15, non-refundable, one-time application fee, and have official transcripts sent to the university.

Submission of American College Test (ACT) or Scholastic Aptitude Test (SAT) scores also is recommended at the time of application.

Applications for undergraduate admission will be considered at any time, however, to ensure timely action on the application, students are advised to submit the completed application materials during the following suggested filing periods:

For Fall Semester Previous November-August

For Spring Semester Previous July-December

For Summer Session Previous January-June

Send the completed application to the Director of Admissions at the address at the top of this page, accompanied by a \$15 check or money order made out to New Mexico Highlands University (or NMHU). Do not send cash. Official transcripts and test scores should be sent to the same address.

Timely application for admission is essential in order to process applications for financial assistance or scholarships. Students are advised to consult the appropriate sections of this catalog for information about application

procedures and deadlines concerning financial assistance at NMHU.

Only students who have been admitted to NMHU are allowed to register for classes.

Admission Criteria (subject to change)

New Freshmen

New Mexico Highlands University considers admission for beginning freshmen who do the following:

- Submit a completed NMHU undergraduate application for admission.
- Pay a \$15, one-time, non-refundable application fee.
- Submit official transcripts showing graduation from an accredited secondary school or successful completion of the national G.E.D. examination. (Admission may be given to qualified high school seniors who have not yet graduated, subject to their submitting a transcript verifying their graduation before beginning studies at the university.)
- All new freshman who have taken the American College Test (ACT) or the Scholastic Aptitude Test (SAT) should submit their scores before entering the university. Students who have not taken the ACT or SAT will need to take the Compass Placement examination. Students will be placed in the reading, math and English classes based on their placement test scores. If a student feels that they have been wrongly assigned, they may take a free on-campus placement test prior to registering for their first semester. If their scores meet the competency criterion, the student will be reassigned to the appropriate class.

Admissions Status

Students are admitted into regular, probationary, or non-degree status as follows:

Regular Admission

- An earned high school diploma and a high

school grade point average (GPA) of at least 2.0 (on a 4.0 scale).

- In lieu of a high school diploma, students will qualify for regular admission with a G.E.D. average score of 450 or higher. The G.E.D. transcript should be sent from the appropriate State Department of Education.

Probationary Admission

Probationary admission is considered for students who do not meet the criteria for regular admission. Students whose grade point average was below 2.0 may be admitted on probationary status, and may be subject to special requirements for academic performance in their freshman year. Freshman students admitted on academic probation are expected to earn a satisfactory GPA in either their first or second semester at NMHU, or be subject to dismissal. The satisfactory semester GPA for all freshmen is 1.75.

The review process: The application from any student whose high school grade point average is below a 2.0 (on a 4.0 scale) is reviewed.

The purpose of this review is to evaluate the applicant's motivation for college work and likelihood of success. Additional information from an applicant is welcome, such as a personal statement of educational goals, recommendations from secondary school personnel, and ACT (or SAT) scores. Students applying for probationary admission may be required to submit such information or to attend an advisory session with university personnel before being admitted in this status.

Non-Degree Undergraduate Admission

Non-degree admission enables students to pursue credit courses without meeting many of the requirements for admission to a degree program. Non-degree status is available for those who wish to pursue university courses for personal interest or professional development, for visiting students enrolled in a degree

program at another college or university but seeking to complete some courses at NMHU for transfer, or for other similar types of applicants.

It may also be used by students who lack a high school diploma or GED and are at least 18 years old. These students may apply for regular admission status upon completion of high school or GED. Non-degree admission may also be given in certain circumstances to enable a student to enroll while a regular admission application is pending.

Students admitted in non-degree status are not eligible for financial assistance.

Transfer Students

New Mexico Highlands University considers for admission undergraduate students as transfers from other accredited colleges and universities who:

- Pay a \$15, one-time, non-refundable application fee.
- Submit a completed application for undergraduate admission.
- Send a complete, official transcript from each previously attended college or university to the NMHU Admissions Office. Students under suspension from another college or university may not be admitted until they have served the required suspension at that institution
- Applications will not be processed until all the required items are in file with the Office of Admissions.

Admission Status

Transfer students are admitted into regular, probationary, or non-degree status as follows:

- Transfer students who have completed fewer than 16 semester credit hours of post-secondary schooling will be treated the same as new freshmen in the admissions process (see above). These students

must submit their high school transcripts (or G.E.D. records), ACT (or SAT) scores if taken, and college/university transcripts.

- Transfer students who have completed 16 or more semester credit hours of post-secondary schooling will be admitted in regular status provided they have at least a "C" or 2.0 cumulative grade point average in all college or university course work.
- Degree-seeking probationary admission will be considered for transfer students with a cumulative grade point average below "C" through the individual review process as defined for probationary admission.
- Transfer students are also eligible for non-degree admission status.

Home School or Non-Accredited Schools

For those students (16 years or older) who have been home schooled or who have attended a non-accredited high school, official score reports from the ACT or SAT are required. School transcripts are also helpful. All applicants will be reviewed on an individual basis for admissions.

Transfer of Credits

New Mexico Highlands University accepts academic credits for transfer from institutions of higher education that are regionally accredited or are candidates for regional accreditation. Transfer students will receive full credit for coursework completed with an appropriate grade, provided that the classes are appropriate to a degree at the university. Transfer course grades will not be calculated as part of Highlands University grade point average, and are listed on the academic transcripts with a grade of "CR." (However, for graduation, all transfer credits graded are included in the final computations for honors). Highlands University does not accept vocational, technical, or remedial courses and credits awarded for work or life experience.

Students transferring from an accredited institution of higher education may transfer under one of the following plans:

Course by Course

The course-by-course plan is for students that do not plan to complete an associate degree. The Course Articulation Matrix compiled by the Commission on Higher Education and transfer guides in place with New Mexico two-year colleges serve as a guide for this purpose.

Degree Completion

Students transferring from a regionally accredited institution of higher education, with an earned associate degree will have New Mexico Highlands University proficiency, extended core, and minor requirements waived. However, all other university requirements, including the university's state mandated 35-hour common core, program, residency, and the 51 upper-division credit requirements must be met before the granting of the bachelor degree.

An individual transfer analysis will be given to the student by the Office of the Registrar to determine courses required to complete the university's general education requirements. Major and minor program requirements will be reviewed by officials in the appropriate school. The transfer student must complete all courses required by NMHU and meet the university's requirements for academic performance in order to receive the indicated degree.

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 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 and wishing to prepare for possible transfer into a degree program at another institution are advised to take these courses during their freshman and sophomore years.

Student Responsibility

New Mexico's colleges and universities have collaborated to produce guides to assist students who plan to transfer before completing a program of study. Course modules are designed to help students select courses carefully so that they may transfer with little or no loss of credit. However, planning for effective transfer with maximum efficiency is ultimately the student's responsibility. Responsible transfer planning includes early and regular consultation with the intended degree-granting 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 to take courses during their freshman year outlined in the Lower Division General Education Common Core. For students enrolled at any public institution in New Mexico, the following courses are guaranteed to transfer to any other New Mexico public college or university, and apply toward associate and baccalaureate degree program requirements. Students should consult advisors at their current institutions regarding which specific courses fit these categories. Students preparing for career in engineering, health sciences, or other profession-related fields are

advised that some of this course work may not transfer toward general education requirements but in most cases will apply toward elective requirements.

The following courses are guaranteed to transfer among New Mexico institutions:

Area I: Communications

Select nine (9) semester hours

- (a) College-Level English Composition 3-4 hours
- (b) College-Level Writing (a second course building on the above) 3 hours
- (c) Oral Communications 3 hours

Area II: Mathematics

Select three (3) semester hours

- (a) College Algebra 3 hours
- (b) Calculus 3 hours
- (c) Other College-Level Mathematics 3 hours

Area III: Laboratory Science

Select eight (8) semester hours

- (a) General Biology, with laboratory 4-8 hours
- (b) General Chemistry, with laboratory 4-8 hours
- (c) General Physics, with laboratory 4-8 hours
- (d) Geology/Earth Sciences, with laboratory 4-8 hours
- (e) Astronomy, with laboratory 4-8 hours

Area IV: Social/Behavioral Sciences

Select six to nine (6 to 9) semester hours

- (a) Economics (macroeconomics or microeconomics) 3 hours
- (b) Introductory Political Science 3 hours
- (c) Introductory Psychology 3 hours
- (d) Introductory Sociology 3 hours
- (e) Introductory Anthropology 3 hours

Area V: Humanities and Fine Arts

Select 6-9 semester hours

- (a) Introductory History Survey 3 hours
- (b) Introductory Philosophy 3 hours

(c) Introductory Course in History, Theory, or Aesthetics 3 hours

of the Arts or Literature

Total semester hours to be selected 35 hours

Lower-Division 64-hour Transfer Modules

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

Business

Physical Sciences

Engineering

Social and Behavioral Sciences

Biological Sciences

Teacher Education

Early Childhood Education

Modules for additional areas of study are being developed. Copies of these Transfer Modules may be obtained from New Mexico Highlands University's Office of Admissions.

Inter-Institutional Transfer Guides and Catalogs

Students who have selected a field of study and/or the institution where they wish to graduate are advised to consult the transfer guide or catalog for that institution for more current and detailed advice to guide their course selection. [Formal published transfer guides between NMHU and Albuquerque TVI, Northern New Mexico Community College, San Juan College, Santa Fe Community College, Luna Community College, Mesalands

College, New Mexico Junior College, and Clovis Community College and are available from the Admissions Office.]

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 other complainants regarding the transfer of coursework from other public institutions in the state. A copy of New Mexico Highlands University's complaint policy may be obtained from the Admission Office or from the New Mexico Commission on Higher Education at 1068 Cerrillos Road, Santa Fe, NM 87501-4295, (505) 827-7383 or (www.nmche.org).

Military Credit

The university grants credit for military education or service schools on recommendation of the American Council on Education's Publication Guide to Evaluation of Educational Experience in the Armed Services. Air Force veterans should provide an academic transcript from the Community College of the Air Force. Training Credit

Credit for non-collegiate training programs is granted based on recommendation of the American Council of Education's "National Guide to Educational Credit for Training Programs" and institutional policies. Official records must be provided to the university.

Early Admission Program

Students who are still in high school may be admitted under one of the following plans: Regular Admission – High school students who have demonstrated maturity and academic success may enroll at NMHU after their high school junior year rather than completing high school. To qualify for this special program, students must have:

- A strong motivation to enter the university, as well as social, emotional, and intellectual maturity.

- A high school grade point average of at least "B".
- An ACT score in at least the 70th percentile (nationwide norms), or a comparable SAT score.
- Recommendation letters from at least two high school officials and the permission of the high school administration.
- A letter of permission from a parent or legal guardian.

Concurrent Enrollment – High school students may begin college work at NMHU by taking some college courses while completing their final high school credits for graduation. To qualify for this special program, students must meet the following requirements:

- Have a high school cumulative grade point average of at least "B" or "3.0" and high school junior or senior status; or
- Be seniors in their final semester and have a grade point average of at least 2.0.
- Have letters of recommendation from at least two high school officials and the permission of their high school administration.
- Have a letter of permission from parent or legal guardian.
- Special approval is needed to take more than two courses.

Students who are interested in exploring these early admission programs should contact the Office of Admissions for assistance.

International Students

A statement of the detailed procedures for admission of international students is available from the Office of Admissions. International students must be formally admitted to the university before the verifications required for the F-1 student visa can be issued. International students who seek admission to NMHU:

- Applicants will be expected to give evidence of an adequate command of the English language by earning a satisfactory score on the Test of English as a For-

eign Language (TOEFL) or the International English Language Testing System (IELTS) before they can be admitted.

- A minimum composite score of 500 (TOEFL paper based), 173 (TOEFL computer based), with at least a score of 50 on the written test is required or Band 5 (IELTS).
- Prospective students in business must score at least a 520 (TOEFL paper based), 190 (TOEFL computer based) with a score of 50 on the written test, and a score of 54 listening comprehension, or a score Band 6 (IELTS).
- Applicants with scores between 500/520 (TOEFL paper based), 173/190 (TOEFL computer based) and Bands 5-6 (IELTS) are required to take an ESL course for one semester.
- Applicants with a score of 540 (TOEFL paper based), 207 (TOEFL computer based) and a Band score of 6.5 (IELTS) are exempt from the ESL requirement.
- Applicants from other countries in which English is an official language, but not the language of the majority or of instruction will be subject to these requirements.

Exceptions for providing evidence of adequate command of the English language are:

- Persons holding citizenship in English-speaking countries.
- Applicants holding citizenship in a country where the English language is an official language, and the means of instruction.

Test results must be sent to New Mexico Highlands University International Education Center before an application is processed. Information regarding testing may be obtained from TOEFL, Educational Testing Service, CN 6155, Princeton, N.J. 08541-6155, USA or <http://www.toefl.org>. IELTS, information may be obtained at Cambridge Examinations and IELTS International, 1024 West Orange Grove

Avenue, Arcadia, CA 91006-1923 USA or <http://ielts.org>.

- Must possess the equivalent of a United States high school diploma (for admission as new freshmen) or be transfer students from approved universities or colleges outside the United States. Transcripts and other valid records of previous schools attended should come from national examination councils (where applicable), approved colleges or universities, or other official state or federal agencies for education. These records will be evaluated for compliance with the admissions criteria of the university.
- Must pay a \$15 (U.S.), one-time, non-refundable application fee.
- Must submit the completed financial certificate for international admission to issue the I-20 form.

New freshmen students are required to submit score on the American College Test (ACT) before entering the university, if possible, and in all cases before the student's first semester at the university. Scholastic Aptitude Test (SAT) may be submitted in lieu of ACT scores. Proficiency courses may be assigned if the ACT scores indicate the need for developmental work.

For detailed information, contact the Office of International Education in the Felix Martinez Building, Room 213. Write or call:
Office of International Education
New Mexico Highlands University
Box 9000
Las Vegas, NM 87701 U.S.A.
Telephone: 505 454-3058
Fax: 505 454-3511
E-mail: inter_ed@nmhu.edu
www.nmhu.edu/academics/intled

Advanced Credit Programs

NMHU offers a number of advanced credit options to earn course credit prior to becoming a freshman at NMHU.

College Board Advanced Placement Examinations

NMHU recognizes student academic accomplishment on the advanced placement examination. NMHU follows the current guidelines of the American Council on Education regarding the granting of credit for Advanced Placement (AP). NMHU grants credit for AP scores of 3 or higher on any AP examination. Three semester hours will be granted for the following half-year AP courses: Computer Science; Economics – Macro and Micro; Environmental Science; Government and Politics – Comparative and U.S.; Physics – Mechanics; Psychology; and Statistics. Six semester hours will be granted for full-year courses other than mathematics, sciences, and foreign languages which earn eight semester hours.

CLEP Examinations

CLEP General Examination scores of 450 or higher will earn credit, with a maximum of four semester credits in each of the five examinations, for a maximum total of 20 credits. These credits may apply both to general education and elective credit, but their use in degree programs is subject to faculty approval. Credit will be granted in CLEP Subject Examinations to both newly admitted and regularly enrolled students who earn grades of 45 or higher, as approved by appropriate academic schools.

ACT Test Score Placement

Exceptional scores on the American College Assessment Test (ACT) will earn advanced credit according to the following table.

ACT topic	Score	Credits
English	31-36	6
	29-30	3
Mathematics	31-36	6
	29-30	3

These credits automatically apply toward elective credit for graduation. Whether they may be applied toward general education

requirements or in degree programs is subject to limitations established by the appropriate disciplines.

TUITION AND FEES

Tuition is a charge that helps to defray the costs of the education offered at the university. Fees are added to the basic tuition rate to enable the university to offer student-related services such as the student center, student government, and certain other student activities. Special fees are charged for certain one-time events in a student's career at the university, as required to help meet the special costs associated with those events. Graduate and undergraduate tuition rates are determined by academic classification. NMHU accepts MasterCard, Discover and Visa.

RESIDENCY

Summary of Regulations for New Mexico Residency for Tuition Purposes

A student who enters and remains in this state principally to obtain an education is presumed to continue to reside outside this state and such presumption continues in effect until rebutted by clear and convincing evidence of bona fide residence. A student determined to be financially dependent on a parent or guardian also assumes the residency of that parent or guardian. The burden of proof is on the student. The student must secure and file the petition with the appropriated documents of evidence in the manner described herein. All documents submitted for this purpose will be kept confidential.

To become a legal resident of New Mexico, four requirements must be met by the student. Each person must meet the requirements individually.

- The 12-month consecutive presence requirement.

- The financial independence requirement.
- The written declaration of intent requirement.
- The overt acts requirement.

The spouse and dependent children of a person who has moved to New Mexico and has obtained permanent full-time employment (sufficient documentation is required) shall not be required to complete the 12-month durational requirement.

A person, their spouse, and dependents who move to New Mexico for retirement purposes and who provide appropriate evidence of formal retirement shall not be required to complete the 12-month durational requirement.

Other relevant factors may be considered along with those listed above.

A reciprocity agreement between the states of Colorado and New Mexico allows NMHU to grant a waiver of the non-resident portion of tuition charges to a limited number of students from Colorado. Each student requesting such a waiver must complete the proper application and return it to the Office of the Registrar as early as possible. The application must be submitted no later than the first day of classes for the fall or spring semester.

All enrolled members of the Navajo Tribe who reside on the Navajo Reservation, as certified by the Navajo Department of Higher Education, will be assessed in-state tuition rates.

According to NMHU's tuition policy:

- Students enrolling for six hours or less during a regular semester will be charged resident tuition rates regardless of residency classification.
- Students enrolling for the summer session will be charged resident tuition only, regardless of residency classification.

A brochure explaining all requirements for establishing New Mexico residency and

residency petitions is available from the Office of the Registrar. Residency petitions will be accepted until the first day of each semester in the Office of the Registrar. For more information, call 505 454-3233.

Semester and Summer Sessions

Tuition and fees are subject to change, the specific amounts charged for tuition and fees are listed each semester or summer session in the published schedule of classes. Students are advised to check the most current schedule. The schedule of classes is also available at www.nmhu.edu. The following rates are the 2004-2005 tuition rates. Rates may increase upon approval. These figures are provided to help students plan.

All summer session students are charged at the resident tuition rate. Main campus students pay a tuition-plus-fees amount for between one and five credits, a lump sum amount for between six and nine credits (based on the six-credit total), and an additional tuition amount for above nine credits. Summer tuition rates may reflect approved tuition and fee increases from those of the school year before.

Tuition Rates – all rates are subject to change

Note: Per-credit-hour tuition rates are higher for distance education classes and classes held at NMHU's off-campus centers. This is true regardless of the number of hours for which a student is enrolled, or the fact that a student may also be enrolled at the Las Vegas campus.

Las Vegas Campus

(Rates are subject to change)

Resident: Undergraduate

1-11	\$ 95.00 per credit hour
12-18	\$ 1,140.00 total
18 +	\$ 68.00 each additional hour

Nonresident:	Undergraduate
1-6	\$ 95.00 per credit hour
7-11	\$ 401.00 per credit hour
12-18	\$4,812.00 total**
18+	\$ 374.00 each additional hour

Distance Education and Internet

\$110.00 per credit hour plus an \$10.00 per credit hour fee

Off-Campus Centers

(Rates are subject to change)

Resident:

1-11	\$ 120.00 per credit hour
12+	\$ 1,320.00
18+	\$68.00 each additional credit hour

Nonresident:

1-6	\$ 120.00 per credit hour
7-11	\$ 401.00 per credit hour
12+	\$ 4,812.00
18+	\$ 374.00 each additional hour

Audit rates are the same as credit hour rates.

*Part-time non-resident students taking 6 or fewer credits in a semester will be charged resident rates.

Senior citizen rate is \$5 per credit hour. To qualify as a senior citizen, the student must reach the age of sixty five years by the third Friday of classes, and formally apply through appropriate form at the Office of the Registrar.

Non-Refundable Special Fees (Rates are subject to change)

Application fee, (one-time)	\$ 15.00
Matriculation fee (one-time)	5.00
Course change fee (after close of late registration)	2.00
(No charge for course change if done through web or telephone.)	
Graduation application fee (each degree)	30.00
Dishonored check fee	25.00

Laboratory fees Variable

Special exam (test-out) fee, per credit 40.00

Career placement fee, per year (renewal only; first year free) 15.00

Housing application fee (total fee is \$100) 25.00

Teacher preparation fees/Student teaching 50.00

Internship fee 50.00

Golf 25.00

Downhill skiing 171.00

Techniques of Golf 25.00

Transcript fee 2.00

Transcript – Fax charge 10.00

Special Policies Regarding Tuition and Fees

Payments and Accounts

Account balances must be paid according to the plans listed in the schedule of classes. Students with financial assistance should verify their award prior to the payment deadline.

Account balances that are not paid within the semester will be sent to a collection agency. Holds will be placed on the student's account, restricting transcripts and registration for upcoming semesters.

The Business Office accepts cash, checks, money orders, credit cards (MasterCard, Visa and Discover), wire transfers, financial aid awards, and written authorizations to bill external agencies to cover balances.

Disenrollment Policy

NMHU students who fail to pay their full-required tuition and fee charges or make adequate financial arrangements with the Business Office on or before their first day of classes will have their registration cancelled and be disenrolled from all classes. Students with a cancelled registration who wish to be enrolled at NMHU must re-register. The student will be required to make full payment, or must com-

plete financial arrangements for all university charges incurred, and pay a non-refundable re-registration/late registration fee of \$25.

Payment Plan/Procedure

New Mexico Highlands University Business Office offers students the following payment options:

1. Students must pay their account in full or make adequate financial arrangements.

2. Adequate financial arrangement option:

Full Term semester courses:

- 1/3 payment prior to or on the first day of class attendance
- 1/3 payment 30 days thereafter
- 1/3 payment 30 days following 2nd payment
- Summer or 8-week courses:
- 1/2 payment prior to or on the first day of class attendance
- 1/2 payment 30 days thereafter

A \$25 billing fee will be assessed to the student's account if the account is not paid in full by the Monday before the first day of classes.

For more information on payment options, contact the Business Office at (505) 454-3222, (505) 454-3444 or (505) 454-3008. You can also e-mail almartinez@nmhu.edu or write to: Business Office

New Mexico Highlands University
Rodgers Administration Building
Box 9000
Las Vegas, NM 87701

Withdrawal Policies

Students who officially withdraw completely from the university may be entitled to a tuition refund according to specific dates announced in the schedule of classes for the term. Upon completion of the formal withdrawal process, a check will be mailed to the student within one month following the complete withdrawal from school, if a refund is appropriate.

Students who wish to petition for an exception to the refund policy must do so in writing to the Administrative Council Subcommittee.

Complete School Withdrawal Tuition Refund Schedule

First day of class	100% refund
10% point in semester	90% refund
25% point in semester	50% refund
50% point in semester	25% refund
Thereafter	No refund

For more information on withdrawal policies, contact the Business Office.

FINANCIAL AID AND SCHOLARSHIPS

Office of Financial Aid and Scholarships
 Office of Financial Aid and Scholarships,
 Felix Martinez Building, Room 201, 505
 454-3318

E-mail: financialaid@nmhu.edu

As part of its basic mission, New Mexico Highlands University is committed to ensuring that no student will be denied the opportunity for a post-secondary education because of limited resources. To meet this goal, the New Mexico Highlands University Office of Financial Aid and Scholarships offers a broad spectrum of academic merit scholarships, grants, jobs, and loans to supplement the resources of the students who attend NMHU.

Financial Aid at NMHU is divided into three categories:

- Grant aid
- Self-help aid
- Scholarships

The Financial Aid Package

The Office of Financial Aid and Scholarships awards financial aid according to individual need & eligibility criteria. If a student is a dependent, parents are expected to contribute toward educational costs according to their financial ability. In addition, students are

expected to contribute from their own assets and earnings, including borrowing against future income. Financial need is the difference between the cost of attendance at NMHU (including living expenses) and the expected family contribution (EFC). The aid package cannot exceed financial need.

To apply for need-based financial aid:

1. Complete all sections of the Free Application for Federal Student Aid (FAFSA).
2. File the application electronically through the Internet at www.fafsa.ed.gov or by mailing in the envelope provided in the FAFSA packet. For maximum financial aid consideration, applications should be received before March 1. The NMHU school code is 002653
3. If transferring into NMHU, the applicant also will need to send a copy of his/her Student Aid Report (SAR) from the U.S. Department of Education, if the student has already applied for Federal Financial Aid.

It is the applicant's responsibility to ensure that the financial aid file is complete. The Office of Financial Aid and Scholarships cannot make a financial aid award if a file is incomplete or you are not admitted into a degree seeking program.

The Office of Financial Aid and Scholarships will determine if and how much financial aid an applicant is eligible for, once the processed FAFSA is received. The aid awarded is based on the cost of attending NMHU, which includes tuition and fees, room and board, books and supplies, transportation, and personal expenses. Child care expenses may be considered, if the applicant provides the appropriate documentation.

To qualify for need-based financial aid at NMHU, an applicant must:

1. Demonstrate financial need as determined

through a processed FAFSA.

2. Be a U.S. citizen or an eligible non-citizen.
3. Maintain satisfactory academic progress (see below).
4. Be enrolled in a regular degree program at NMHU.
5. Be enrolled at least half-time for all aid programs except federal Pell Grant.
6. Not be in default on a federal student loan or owe a repayment on a federal grant.

Students may use their financial aid awards to defer tuition at NMHU Business Office/ Student Accounts, after classes are charged to their accounts and before the awards are received. A student's award is subject to change if the student becomes ineligible as a result of over-award or failure to maintain academic progress.

Satisfactory Academic Progress

Federal Title IV program regulations require participating institutions to develop procedures to monitor a student's progress toward completion of their program of study. The following is a summary of the criteria used by the Office of Financial Aid and Scholarships to monitor progress:

GPA Requirement

If a minimum GPA as stated below is not met, the result is financial aid ineligibility (suspension).

1 – 32 attempted hours = 1.75 Cumulative GPA

Above 32 attempted hours = 2.0 Cumulative GPA

Completion Rate

Hours completed divided by hours attempted equals completion rate. Less than the percentage indicated results in financial aid ineligibility (suspension).

1 – 32 attempted hours = 65%

33 – 63 attempted hours = 70%

64 – 95 attempted hours 75%

96 or more attempted hours = 80%

Maximum Time Frame

Once the maximum hours have been reached, the result is financial aid ineligibility (suspension). Students who have reached 125 percent of their degree requirement will be placed on a "warning" status. Students must appeal this status and provide the Office of Financial Aid and Scholarships with a current degree check.

5-year program = 160 hours x 150% = 240 hours

4-year program = 128 hours x 150% = 192 hours

Associate degree = 64 hours x 150% = 96 hours

Notification and Appeal Process

Those students whose GPA and/or credit hours fall below the minimum standard indicated above will be notified at the end of the semester. When notified of financial aid suspension, the student may file a written appeal with the Office of Financial Aid and Scholarships. Appeal forms are available upon request. The student may be given a probationary semester with financial aid to make-up deficiencies in GPA and/or credit hours and meet the minimum standards. If at the end of the probationary semester the student still does not meet the minimum requirements, the student will lose his or her financial aid and must make up the deficiencies to regain financial aid eligibility. We will provide NMHU students with the timely delivery of financial assistance while maintaining accountability and proper stewardship of the public, institutional, and private funds with which it is entrusted. We are committed to providing courteous service to support the academic mission and goals of the University and its students.

Verification Policy

A student may be required to verify the accuracy of application information. All students who are selected by the Department

of Education for verification must submit the appropriate documents requested by the Office of Financial Aid and Scholarships before the application for aid can be processed. (All required documentation must be received by April 15 for priority consideration or no later than three (3) weeks before the end of the semester for which financial aid is requested.)

Enrollment Requirements for Financial Aid
Undergraduate students must be enrolled for a minimum of 12 credits each semester to be eligible for full financial aid. Aid to less than full time status (6 to 11 credit hours). Summer course load requirements for full financial aid are six (6) to eleven (6) credits hours. To avoid loss of financial aid, contact the Office of Financial Aid and Scholarships at 505 454-3318 before dropping classes.

Return of Title IV Funds

Students who withdraw from the university, drop classes, or change classes from credit to audit may be required to repay some or all of their financial aid monies. Amounts are calculated based upon Title IV federal formulas to determine the amounts that must be returned to each assistance program is available on a pro-rated basis.

New Mexico Highlands University Undergraduate Scholarship Programs
The NMHU Scholarship Program was established to recognize and reward outstanding achievements by entering freshmen, transfer and continuing undergraduate and graduate students. A grade point average of at least 3.0 on a 4.0 scale is required to compete for a number of our academic based scholarships. The value of our scholarship range from \$5,500 per year to \$100 per semester. The scholarships are renewable from one to four years, depending upon the academic level at which the student enters NMHU. To apply, contact the Office of Financial Aid and Scholarships, 505 454-3318 or log on to

www.nmhu.edu.

If the applicant is transferring from another college to attend NMHU, a New Mexico Scholarship Transfer Transcript form from all former college(s) should be sent to the NMHU Office of Financial Aid and Scholarships, Box 9000, Las Vegas, N.M. 87701.

The university also awards performing arts scholarships through the Department of Communication and Fine Arts. To apply, contact the Department of Communication and Fine Arts.

To receive consideration for NMHU scholarships, the student must be admitted by the following priority deadline dates:

Freshman Scholarships with the March 1st priority deadline are as follows:

- Legislative Gold
- Legislative Silver
- Ken and Sue Crimmin
- Leveo Sanchez
- Victoria D. De Sanchez
- NM Scholars
- NMHU Zia
- Road to Success

Continuing and Transfer Scholarships

Transfer and continuing students must submit a scholarship application found on the NMHU web site by the May 1 priority deadline date. Transfer students must be admitted in degree status by the priority deadline.

Summer Sessions

Scholarship awards are for the regular academic year fall/spring only and may not be used for the summer session.

Scholarship Cancellation and Reinstatement

The time period for which a scholarship is in effect is fixed. If the scholarship is cancelled due to academic ineligibility, the originally

specified time period is not extended. Students who are placed on suspension may appeal for consideration for renewal of the scholarship. A written request must be submitted to the Office of Financial Aid and Scholarships within 15 days after receiving the suspension letter.

New Mexico Highlands University Scholarship restriction: If a student inadvertently receives the offer of a second tuition scholarship, the student may only accept one. The student should submit a written statement to the Office of Financial Aid and Scholarships indicating which scholarship he/she wishes to receive. Scholarship recipients who receive a dependent tuition waiver are ineligible for the tuition portion of any scholarship award.

Other Assistance Programs and Benefits

Bureau of Indian Affairs (BIA)

Each year, the BIA provides grants to assist eligible Native American students in meeting their education costs. The amounts of the grants vary according to the student's financial need. The funds are available through the student's BIA area office or tribal scholarship office. Check with the tribal agency to ascertain program requirements and deadlines.

Enrollment Certifications for Loan Deferments

Students are usually required to process an enrollment certification to defer payments on an outstanding student loan. The Office of the Registrar certifies enrollment verification forms after classes begin. For more information, contact the Office of the Registrar, 505 454-3233.

Competitive Out-of-State Scholarships

Available to qualifying freshmen and transfer students that meet scholarship requirements. For specific information, contact the NMHU Scholarship Office at 505 454-3318 or visit our website @ www.nmhu.edu.

International Students

The competitive out-of-state scholarship is available also to international students that meet the requirements. For specific information, contact the International Education Center at 505-454-3058.

Navajo Residency

Registered members of the Navajo tribe who reside on a Navajo reservation are considered New Mexico residents and eligible for lower in-state tuition.

Nonresident Tuition Waiver for Colorado Students

A reciprocity agreement between the states of Colorado and New Mexico allows NMHU to grant a waiver of the nonresident portion of tuition charges to a limited number of students from Colorado. Each student requesting such a waiver must complete an application each semester. The application must be submitted no later than the first day of the semester and can be obtained from the Office of the Registrar.

Nonresident Tuition Waiver for Student Athletes

Senate Bill 81 authorizes resident tuition status for athletic scholarship recipients. To be eligible the student must be a recruited athlete and must receive an athletic scholarship through the Department of Athletics. For more information, contact the NMHU Department of Athletics, 505 454-3368.

Veterans Administration Educational Benefits

Several programs are available for veterans pursuing a post-secondary education. Contact the Office of the Registrar for details, 505 454-3424.

Vocational Rehabilitation

Through the New Mexico Division of Vocational Rehabilitation, the state and federal gov-

ernments offer tuition assistance to students with disabilities. Other assistance also may be given to those students with disabilities who are financially unable to provide services themselves. Students wishing to apply for this assistance should contact the New Mexico Vocational Rehabilitation Office.

Western Undergraduate Exchange Program (WUE)

NMHU participates in the Western Undergraduate Exchange (WUE) program, which allows students from participating states to attend Highlands at 150 percent of in-state tuition. The application for the WUE program must be submitted no later than the first day of the semester to the University Registrar. For additional information, contact the Office of the Registrar, 505 454-3233.

Workforce Investment Act (WIA, formerly JTPA)

Through the New Mexico Department of Labor, the state and federal governments offer assistance with tuition, books, supplies, transportation, and child care for those who qualify. For more information and application process, contact the New Mexico Department of Labor.

ACADEMIC POLICIES AND PROCEDURES

Grades and Grading Policies

This section states policies regarding grades given at the university, computation of grade averages, academic warnings, and honors for academic excellence.

Students may appeal a final grade by completing and processing Grade Appeal Forms which are available through the Office of Academic Affairs.

The following grades are given at the university. As appropriate, they appear on mid-term reports, semester or summer term grade

reports, and transcripts.

A – Excellent

B – Above Average

C – Average

D – Passing

F – Failure

W – Withdrawal from the Class. Regulations for the “W” grade are stated in this catalog.

AU – Audit. No credit is given for the course, but attendance is required in at least 70 percent of the scheduled class sessions.

S – Satisfactory. Used for proficiency courses and some developmental courses, some practicum courses, institutes, workshops, field project, and the completed thesis. Indicates satisfactory completion of course requirements.

R – Repeat. Used exclusively for developmental and proficiency courses. Indicates that course requirements have not been satisfied and that the course must be repeated to satisfy the proficiency requirement.

PR – Progress. Used only for thesis, field project, senior readings, and some practicum courses (and as a mid-term grade for graduate seminar courses). Indicates that acceptable progress has been made. To receive a permanent grade of “S”, the student re-registers for the course until the course requirements are completed.

NP – No Progress. Used for thesis, field project, senior readings, some practicum courses, and as a mid-term grade for graduate seminar courses to indicate that acceptable progress has not been made.

I – Incomplete. Given at the discretion of the course instructor only when circumstances beyond the student’s control prevent completion of course requirements within the established time. The student requests an “I” in lieu of a final course grade from the instructor, whose approval is required. The instructor reports the “I” and files a form with the Office of the Registrar documenting the work requiring completion and other conditions. An “In-

complete" not completed within one calendar year automatically becomes an "F" for both undergraduate and graduate students. (The instructor has the option of setting a terminal date of less than one year.) Students should not re-register for a course in which they have an "I"; if they do so, the "I" will become an "F" at the time when a grade is awarded in the re-registered course.

CR – Credit. Used in acceptance of transfer courses.

Grade Point Average

Following are the allowable grades and associated grade points:

A = 4.00 B = 3.00 C = 2.00 D = 1.00 F = 0.0

The sum of the earned honor points is divided by the number of credits to calculate the grade point average (GPA). The following is a sample calculation:

A student earns the following grades in five classes during a certain semester:

4 hrs. A = 16.0 pts.

6 hrs. B = 18.0 pts.

3 hrs. C = 6.0 pts.

2 hrs. D = 2.0 pts.

15 hrs. = 42.0 pts.

$42.0 \div 15 = 2.80$ grade point average.

GPA requirements are stated in subsequent sections.

Repetition of a Course

A student may repeat any course, but will receive credit only once, unless otherwise noted in this catalog. The most recent grade received will be used in the calculation of the cumulative grade point average.

Course Repeat Forms are available in the Office of the Registrar and must be completed by students who are repeating a course. The student's transcript will be coded to reflect that the course was repeated, and their cumulative

grade point average will be adjusted.

Mid-Term Grades

The faculty submits mid-term grades for each student in each class to the Office of the Registrar in the fall and spring semesters, according to the schedule announced in the schedule of classes. (No mid-term grades are submitted for short term courses.) These grades are displayed for viewing by the student on the NMHU secured website, www.nmhu.edu.

These reports serve to inform students and advisors of a student's progress, so that any problems in class performance may be addressed. If discrepancies occur at this time in the student's schedule of classes, the student should proceed immediately to the Office of the Registrar to correct the schedule. Mid-term grades do not appear on transcripts and are not kept as a permanent record.

Honors List

Undergraduate students who, in a semester, earn a grade point average of at least 3.5, with no incomplete grades, and 12 graded hours, are recognized by the chief academic officer, are on a published list, and receive a certificate of recognition.

Honors are awarded in summer terms for the same levels of performance, except students must complete at least six credits.

Satisfactory Academic Progress

Students who maintain the minimum academic standards shown in the scale below will be considered in good academic standing and will be considered to have demonstrated satisfactory academic progress. Students must show evidence of satisfactory progress toward a college degree to avoid academic probation and dismissal, and to continue to be eligible for financial aid through most financial aid programs.

Cumulative Credit Hours Graded

Required GPA

1 to 32 Undergraduate Credits Graded

1.75 Cumulative GPA

33 or More Undergraduate Credits Graded

2.0 Cumulative GPA

Academic Probation

Academic probation constitutes a warning that continuation of present academic progress may lead to an academic dismissal. Academic probation will be issued the first semester that an undergraduate student has attempted:

- 1 to 32 credit hours receives a cumulative GPA below 1.75.
- 33 or more credit hours receives a cumulative GPA below 2.0.

The Office of Academic Affairs will notify by mail any student who is placed on academic probation immediately after semester grades are posted. A student on academic probation at another university may be admitted to NMHU but retains probationary status.

Academic Dismissal

Academic dismissal is issued to students who do not meet the required GPA after being on academic probation for two consecutive semesters. Dismissals will be for one calendar year from the posting of semester grades. The Office of Academic Affairs will notify students of their academic dismissal immediately after semester grades are posted. To appeal one or more grades, the student must complete a grade appeal form available in the Office of Academic Affairs.

Students also may appeal the dismissal itself to the Academic Affairs Committee within 30 days of the beginning of the semester when the dismissal begins. If the appeal is approved, the dismissal may be waived or shortened to one semester. The shortened dismissal period is contingent upon the student's agreement to enroll in two pre-approved courses at NMHU

or at a community college. Both courses must be taken during the same semester. Immediately upon completion of the two courses and being readmitted to the university, the student will provide the chief academic officer (or designee) with an official transcript showing evidence of a passing grade (2.0 or better) in both classes.

During the period of dismissal, students may not register for classes, live in student housing, or participate in student activities at NMHU. No credit will be granted for courses taken at other institutions while under dismissal at NMHU. After a dismissal, a student must petition for readmission in the Office of Admissions.

Students suspended or dismissed from another institution are not eligible to enroll at NMHU until they have served the suspension or dismissal period of that institution.

Academic Dishonesty

A student guilty of academic dishonesty is subject to one or more of the following consequences: an automatic failing grade in the course where such dishonesty occurred; indefinite suspension; permanent suspension (expulsion). An elaboration of what constitutes academic dishonesty is found in the Policy on Academic Integrity, available in the Academic Affairs Office.

Class Attendance

Instructors may not permit students to attend classes without being registered for them. Students whose names do not appear on class rosters are to be sent to the Office of the Registrar to resolve the matter. Students are expected to attend all class meetings. Those who are absent because of circumstances beyond their control may be required to make up work that was missed during the period of absence. Excessive absences may be

expected to affect a student's grade adversely or even result in an "F." Instructors should make the policies on attendance in each class available in writing to students.

If a student's conduct in class interferes with others, is disruptive of teaching, or is contrary to the established class practices, the instructor may ask the student to leave the class.

Scheduled Class Meetings

No change in the scheduled class days and hours may be made without the approval of the chief academic officer and the Registrar, even though all students in the class concur in the change. Any temporary departure from the schedule is to be prearranged through the chief academic officer.

Room changes may be made by instructors only through the registrar and school/college dean. Instructors are not to change rooms without this approval. Classes are not to be transferred to private facilities.

Students are not to register for classes that are scheduled to meet in overlapping times or days.

Final Examinations

The schedule of final examinations is given in the schedule of classes for each term. The exam schedule is also noted at our web site: www.nmhu.edu. The final examination period for each class is a part of the semester's instructional time and is to be so used by the instructor of the course.

Any departures from the scheduled time or day for a final examination must be approved in advance by the chief academic officer.

Faculty members are not to adjust the schedule on their own initiative, even though all of the students in the class concur in the change.

If a student would experience a great personal hardship through attendance at a regularly

scheduled final examination, the instructor of the course may agree to give an "Incomplete" or to give an individual early examination.

If a student fails to take a final examination, the instructor will decide whether the grade for the course will be an "F" or an "Incomplete." Each case should be decided on its merit. Circumstances beyond the student's control should result in the "Incomplete" grade.

Independent Study Classes

Independent Study and Independent Research courses are for individual work by a student under supervision of a faculty member on a topic agreed upon between them. The faculty member's permission is required at the time of registration for the course. A form describing each independent study course is approved by the Dean of the College in which the course is offered and filed with the Registrar at the time of registration. The university offers undergraduate independent study and research courses under the numbers 390, 392, 399, 490, 492, and 499, and in some cases 290 and 299. These are "variable-credit" courses that offer students and faculty supervisors a choice in the extent of the project and the corresponding amount of time to be spent and academic credit to be earned.

The following regulations apply to undergraduate independent study and research courses:

- To be eligible to take an independent study class in a given subject, a student must have a sufficient grade point average in courses in the field and have completed basic work in the field (as determined by the College/School) to demonstrate the ability to conduct an independent investigation. Permission of the instructor is required to register for an independent study course.
- For each semester credit in the independent study course, the student should

expect to spend at least four hours of work per week. Faculty supervisors must schedule at least a weekly appointment with each student doing independent study under their supervision.

- A written report of the work completed in independent study must be one requirement of the course.
- No more than four credits of undergraduate independent study may be taken in one discipline in one term, and no more than six credits may be applied toward any major or minor program.
- Independent study courses may not be used to avoid an instructor of a regular course or to substitute for a regular course because of inconvenience or careless scheduling, to extend the number of credits in a regular course, to replace payments for a work assignment, or to permit a student to add credits solely to gain financial assistance or other scholarship eligibility.
- Independent study courses may not be credited toward any core curriculum or proficiency requirement.

Practicum, Internship, and Field Project Courses

These titles are used for courses that students undertake with the joint supervision of a work-supervisor and a university faculty member, either at an on or off campus site. Often they are offered with a "variable-credit" option that allows students a choice in the extent of the work and thus in the amount of academic credit to be earned.

Registration in these courses requires permission of the faculty member who will serve as faculty course supervisor.

Testing-Out of Classes by Special Examination

The following regulations apply to the testing-out procedure at the university. Permission to

undertake the special examination is requested on a form that is available in the Office of the Registrar. The request must be approved before the special examination can be given. Applicants for special examination must meet the conditions stated in "A" and "B" below:

A. A student is eligible to apply for special examination to test out of a class offered at the university if the student meets one of the following conditions:

1. A course has been taken with similar content, but credit has not been received for reasons other than failure.
2. There has been private tutoring, as in private instruction in music.
3. The student has had successful work experience involving extensive preparation in the field.
4. The student has produced a work of recognized merit or presents other evidence of mastery in the field.

B. A student eligible under "A" above must also:

1. Have been a resident student at this university for at least one semester.
2. Have at least a 3.0 grade point average in the field and at least a 2.0 grade point average in all previous university work.
3. Limit the total number of requests for special examination to 12 credits. (Exceptions to this limit must be approved by the chief academic officer.)
4. Obtain approval of the course instructor, the dean of the college/school in which the course is offered, and the chief academic officer.
5. Pay a fee of \$40 per credit hour for each special examination.

Examination questions and the completed examination paper are to be filed in the Office of the Registrar.

Student Records

(Access to and Confidentiality)

Under the Family Rights and Privacy Act of 1974 (FERPA) New Mexico Highlands Uni-

versity Students have the following rights in regards to their educational records:

1. The right to inspect and review their education records within a reasonable time, not to exceed 45 days, upon making an official request and obtaining an appointment to do so.
2. The student may challenge inaccuracies or misleading statements contained in their educational records. Challenges must be made in writing and forwarded to the registrar.
3. The right to consent to disclosure of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes exceptions without consent. Exceptions are school official with a legitimate educational interest, compliance with judicial order or lawfully issued subpoena, officials for audit or evaluation purposes, in an emergency involving the health or safety of a student or other person and directory information.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. Complaints may be forwarded to:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Ave, SW
Washington, DC 20202-4605

Directory information at New Mexico Highlands is student's name, address information, e-mail address, telephone listing, field of study, class standing, dates of attendance, honors and degrees awarded, full-time or part-time status, date and place of birth, home town, previous school attended, participation in officially recognized activities and sports, and height and weight of athletic team members. Directory information may be published or released unless the student has requested in writing that directory information be withheld. Written requests from student to

have directory information withheld must be forwarded to the registrar's office by the last day of registration and will be maintained for the remainder of the academic year.

For specific information, please contact the Office of the Registrar.

Change of Name

Students who need to process a change of name for their academic records must bring appropriate documentation (at least two types of identification showing the new name) to the Office of the Registrar. Examples of such documentation include: marriage certificate, birth certificate, and court order for legal name change. Name changes will be processed only for currently enrolled students. For more information contact the Office of the Registrar at 505 454-3233.

Transcripts

The Office of the Registrar issues both official and unofficial copies of NMHU student academic records. A student may request a transcript of his/ her academic record, and it will be issued in accordance with the student's wishes subject to transcript policies. A fee is charged for all transcripts; however, an enrolled student is entitled to one free unofficial transcript per semester. The cost to fax a transcript is \$10 to be paid in advance.

To request a transcript, send a letter to Student Records, NMHU Office of the Registrar, Box 9000, Las Vegas, NM 87701, or fax a signed request to 505 454-3552. Include name (and other names that may appear on records), Social Security number/student ID number, date of birth, approximate semester last attended, complete address where to send transcript, and current address. The student's signature is required to authorize the transcript's release. Students may also request an official transcript on-line through our secure website, www.nmhu.edu. (Contact Student Records in the Office

of the Registrar at 505 454-3455 for more information.)

Transcripts from other institutions sent to NMHU for purposes of university admission are not copied or returned to the student.

Transcript Holds

Transcripts will not be released to the student or to any other person or institution until all the student's outstanding obligations to the university have been paid or until satisfactory arrangements have been made. These obligations include, but are not limited to, loans, such as the New Mexico Student Loan Program, tuition and fees, and other charges. All financial arrangements are handled in the Business Office, not the Student Records Office.

Right to Petition for Hardship

Students are entitled to petition for relief of an unfair academic hardship brought about by any regulation of the university, when warranted by special circumstances. Academic Petitions Procedures are as follows:

1. Student must submit academic petition to the Office of Academic Affairs. All petitions must be typed.
2. The Office of Academic Affairs is responsible for obtaining all needed signatures, such as the Department Chair and Dean/Director signatures.
3. Petitions are sent via university mail by the Office of Academic Affairs to the members of the appropriate sub-committee of the Academic Affairs Committee:
 - a. All undergraduate petitions are sent to the members of the Undergraduate Sub-Committee.
 - b. All graduate petitions are sent to the members of the Graduate Sub-Committee.
4. Members of the sub-committee should respond in one week to the petition. The ballot and all materials must be sent back to the

Office of Academic Affairs. The Chief Academic Officer is responsible for tallying the votes and informing the student of the decision of the committee.

5. If a student's appeal is denied, the student should be informed that they may make a personal appeal to the sub-committee. The student may bring witnesses to the hearing. No witnesses may speak, unless a member of the sub-committee asks them questions. At the hearing, the student will be asked to present evidence to support the petition.

- a. It is the responsibility of the chair of the sub-committee to invite witnesses which may be needed to refute the academic petition. In the case of a grade appeal, the instructor, department chair, and dean may be invited to the hearing by the sub-committee.

- b. During the hearing, witnesses are heard by the sub-committee, one at a time. All witnesses should remain outside of the hearing until called.

6. After the presentations, the members of the subcommittee vote on accepting or denying the petition. This information must be sent to the Office of Academic Affairs. This office is responsible for informing the student of the decision by the committee. This is the last step of the petition process, as long as proper procedures have been followed.

7. The Full Committee of the Academic Affairs Committee will not hear academic petitions, unless a violation of procedures has occurred. In the case of procedural violations, the petitions should be brought to the Full Committee for consideration.

GENERAL DEGREE POLICIES

Associate's Degree Requirements

- Fulfillment of the general requirements for graduation
- Total credits required: at least 64 degree

credit hours

- Minimum cumulative grade point average: 2.0
- Fulfillment of the discipline requirements for graduation
- Specific requirements for admission, proficiencies, and courses are stated in subsequent sections of this catalog, listed under the school and discipline that offers the specific associate's degree sought.
- "C" or better grades are required in all courses listed as major/minor requirements for the degree.
- "C" or better grades may be required for support courses in some majors and minors.

Bachelor's Degree Requirements

Fulfillment of common degree requirements (both curricula)

- Completion of the university's general education requirement (includes proficiency-course requirements, if any, and core-curriculum course requirements). See the core curriculum.
- A total of at least 51 credits in courses numbered 300 or higher.
- A cumulative grade point average of at least 2.0. No credits below "C" may be counted toward a major or minor.
- At least 128 total degree credit hours required for graduation.

Requirements for the specific listing

Degree requirements for the bachelor of arts curriculum:

- One major of at least 30 credits.
- One minor of at least 20 credits, or a second major, or a two-year degree.

Degree requirements for the bachelor of science curriculum:

- One major of at least 30 credits selected from the list of approved B.S. degree major programs.
- One minor of at least 20 credits in one of the fields of science other than the field of

the major, or a combined science minor, or a second major in a B.S.-degree field other than the field of the first major, or a two-year degree in a science field.

- At least eight credits in mathematics, including Math 155, Applied Calculus I or Math 211, Calculus I.

Requirements for a Second Bachelor's Degree

A student who has completed an undergraduate degree and seeks a second bachelor's degree must meet all requirements for that degree. Some of the work completed for the first degree will meet requirements for the second degree, with the following exceptions:

- The student must complete a minimum of 32 additional semester hours of credit in residence at NMHU following the completion of the first degree.
- The student must meet all requirements of the major for the second degree.
- Students who earned their first degree at NMHU may be required to meet any general education requirements different from those in effect at the time of their earlier enrollment.
- Students who earned their first degree at another institution will be required to complete any additional requirements to meet NMHU's general education requirements.

Pre-Professional Programs

Students can attend NMHU to prepare for further studies at medical, dental, law, and other professional schools. The university offers pre-professional training in accordance with standards and requirements established by national professional associations for entrance into each profession.

The competition for entrance into professional schools is intense. Students are accepted who show promise of success in the profession (as

indicated by aptitude and standard admission tests), who have demonstrated high achievement in academic performance, and who have completed the appropriate pre-professional work in colleges or universities.

Many pre-professional opportunities are offered at New Mexico Highlands University. Programs, such as the pre-law program, entail the satisfactory completion of an undergraduate degree, because the professional schools in these fields require a four-year degree as one condition for admission. For other programs such as pharmacy, students often begin professional studies after only one or two years of undergraduate pre-professional studies. Professional schools, including medical and dental, will admit students with exceptional qualifications before completion of a bachelor's degree. They are likely to consider an applicant who has already earned a four-year degree.

In developing the appropriate pre-professional course of study, it is advisable for students to become familiar with the specific entrance requirements of the professional school or schools in which they are interested in applying.

Pre-professional advisors at NMHU are available to assist students in developing their professional plans. Interested students may contact the appropriate pre-professional advisor as soon as possible.

Students interested in pre-professional opportunities may consult the information available in other sections of this catalog. The pre-law option is described in the political science discipline in the humanities department.

Pre-professional options in health and science professions are described among the program descriptions of the Department of Biology in

the College of Arts and Sciences.

All of the degree programs offered at NMHU prepare students to enter their chosen fields or to pursue studies toward an advanced degree and are designed to meet professional standards for their fields.

In addition, a number of degree programs are aimed specifically at preparing students for entrance into professions that require candidates to obtain a license or certificate after completing their required university studies, such as in education. The program descriptions in other sections of the catalog give more detailed information about these options.

New Mexico Highlands University reserves the right to change its instructional programs at any time. The provisions of this catalog are not to be regarded as an irrevocable contract between the student and New Mexico Highlands University.

GENERAL GRADUATION POLICIES

Baccalaureate Graduation Honors

Graduation honors for undergraduate students are based on the quality of a student's work during the entire period of studies for the degree. All course work from any accredited university previously attended will be computed for graduation honors.

To be eligible for graduation honors, a student must have been enrolled at this university for at least 32 semester hours. The grade point average determines the honors award for: "summa cum laude" a GPA of 3.86 or above, "magna cum laude" a GPA of 3.70 through 3.85, and "cum laude" a GPA of 3.50 through 3.69.

Appropriate recognition is given at the commencement exercises and on the transcript and diploma.

Catalog of Record

Students may graduate under the catalog requirements for the year in which they were enrolled for the first time in a degree-seeking program, provided they complete the graduation requirements within a six-year period. The student is responsible for knowing the rules and regulations concerning graduation requirements and for registering in the courses necessary to meet them. For specific requirements, see appropriate discipline programs.

Graduation

Students need to apply for graduation on a form available in the Office of the Registrar. A one-time, non-refundable graduation fee is charged for each degree. Graduation is subject to completion of all requirements, and students are reminded of the importance of the final degree check. For more information, contact the Office of the Registrar, 505 454-3233.

Commencement

Commencement is held once a year at the end of the spring semester. To attend commencement, a student must complete all degree requirements by the end of the spring semester or summer session.

Posting of the Degree

The degree earned will be recorded on the student's transcript at the end of the semester during which all requirements are completed and after the grades have been received by the registrar.

Graduation Residency Requirement

To be eligible for graduation under any curriculum or with any degree, students must be in residence on campus for one full academic year (at least 32 semester credits), including the final semester (at least 16 credits).

REGISTRATION

Rodgers Administration Building,
Room 201
Las Vegas, NM 87701
505 454-3233 FAX: 505 454-3552
E-mail: registrar@nmhu.edu
www.nmhu.edu

Registration Periods

Registration periods are announced for the fall and spring semesters and the summer session each year. The specific dates, locations, and procedures are stated in the schedule of classes for each semester or session. The schedule of classes may be obtained from the Office of the Registrar or the web site: www.nmhu.edu. Students should receive academic advising before signing up for classes.

Continuous registration process begins on the date noted in schedule of classes and continues through the Friday before late registration. On-line registration is available through a secure area on the web at www.nmhu.edu. For additional information or assistance, call (505) 454-3438.

Late registration extends from the first day of classes through the Friday of the second week of classes in the fall or spring semester and the first week of classes in summer sessions. During late registration, the selection of classes may be limited, because many classes will already be closed. For specific semester dates, refer to the appropriate schedule of classes.

Approved Schedules

Each student's selection of courses is subject to approval by the assigned academic advisor. (See Undergraduate Degree Requirements regarding academic advising at NMHU.) Requests for any exceptions to university academic regulations are then reviewed by the academic affairs office for compliance with general university requirements. Students'

course selections are subject to review, and a student may be withdrawn from a class if enrollment in it violates an academic regulation of the university (such as those regulating course levels and maximum loads).

Auditing a Class or Classes

Auditing students attend a class but do not receive credit for it. Audited classes do not count toward any graduation requirements of the university and are recorded with an "AU" on the student's transcript, subject to attendance at a minimum of 70 percent of the scheduled class sessions.

Students who wish to audit must request this status at the time of registering for the class or through an official change to the approved schedule of classes. Changes from audit to credit or credit to audit may only be made during the first eight weeks of a semester or the first four weeks of a summer session, with instructor approval. Any changes after the deadline will require approval from the chief academic officer. The exact deadline for changing the credit/audit status of courses is stated in the schedule of classes for each term.

Changes to the Approved Schedule of Classes

Changes to a student's approved schedule of classes may be made through the Office of the Registrar between 8 a.m. and 5 p.m. on weekdays. (Note: There is no \$2 charge for adding and withdrawing from classes through web procedures.) See the schedule of classes for additional information.

Adding and Dropping Classes

The first two weeks of a semester and the first week of a summer session constitute the late registration period. During this period, students may add courses to their schedule, either in substitution for a class or classes being dropped or as an increase in the number

of classes. The total number of credits allowed is subject to limits stated elsewhere in this section.

During the same late registration period, students may drop classes. Tuition charges will be adjusted, and the course will not appear on the student's transcript.

After the late registration period, students may withdraw from classes but may no longer add new classes or substitute different classes. Withdrawal from classes is allowed through the tenth week of the semester. For the last day to withdraw from summer term, refer to the schedule of classes. The course(s) will remain on the student's transcript, recorded with a grade of "W." In addition, students will be required to pay tuition charges and fees on any classes in which they are enrolled after the end of the late registration period, even though they subsequently withdraw from them. (The late registration period is defined above.)

Any courses added to original schedule of classes throughout the semester, may result in overload tuition charges.

Instructors do not drop or withdraw students from classes. It is the student's responsibility to do so. Students who wish to drop or withdraw from all their classes must complete the procedure for "withdrawing from school." Students who remain enrolled in a class after the deadline to withdraw will receive a grade (other than a "W") in the class.

Withdrawing from School

If a student wishes to withdraw from school, the student must do so officially through the registrar's office. Students who find themselves unable to appear personally must contact the Registrar by phone, letter, e-mail, or FAX to request assistance in completing the process of withdrawing. The last day to withdraw from classes is subject to change and is

reflected in yearly academic calendars as well as published in the schedule of classes.

A schedule of deadlines for full or partial refund of tuition is published in each semester or summer term schedule of classes. The refund policy is stated under Special Policies Regarding Tuition and Fees.

If withdrawal from school occurs within the late registration period, no courses will appear on the transcript for that term. If withdrawal occurs after the late registration period, grades of "W" are entered for the classes. Students who leave school without completing an official withdrawal from school will receive grades of "F" for that term. The last day to withdraw from school may coincide with the last day to withdraw from class. For specific information, contact the Office of the Registrar at 505 454-3233.

Undergraduate Student Loads During a Semester

An average of 16 semester credits must be completed each semester if a student is to graduate in four years. Some students take more than the minimum credits required for graduation, either for personal interest or because the major or minor programs of choice are lengthy. Students should plan their load carefully, considering desired speed of progress and minimum loads required for continuation of financial assistance and scholarships.

The regular maximum load for undergraduate students is 18 semester credits. The Dean may approve a student's schedule for an overload of more than 18 credits, provided the advisor recommends the overload, the student has a grade point average above 2.5 for the preceding semester, the student is neither engaged in formal extracurricular activities nor employed more than 20 hours per week, and the student is not on probation. No undergraduate student

may take more than 22 semester credits hours.

Undergraduate Student Loads During a Summer Session

The regular maximum load for undergraduate students in a summer session is nine credits. The Dean's approve a schedule for more than nine credits subject to the conditions stated above for overloads in a regular semester. No undergraduate student may take more than 12 credits in a summer session.

Full-Time Loads (Undergraduate)

For financial assistance purposes, a full-time undergraduate student is defined as one who is taking at least 12 semester credits in a regular semester and six semester credits in a summer session. Requirements for full-time status vary for scholarship recipients, but frequently exceed the 12-credit minimum.

Classification of Undergraduate Students

Classification of students is based on completion of semester credits and other criteria, as follows:

Lower Division

Freshman	Fewer than 32 credits
Sophomore	32 through 63 credits

Upper Division

Junior	64 through 95 credits
Senior	96 credits and above

Reclassification of students occurs automatically upon completion of the prescribed number of credits. However, the chief academic officer may invoke the following additional regulations in assessing a student's preparation to take 300- or 400-level classes:

Sophomore students must have completed English 111.

Junior and senior students must have completed English 111 and 112, satisfied the mathematics proficiency requirements, and filed approved major and minor blanks.

Course Numbers and Levels

Proficiency: Courses numbered below 100 are proficiency courses. These credits do not count toward graduation, but do count in a student's course load. Also Math 100 and Engl 100 do not count toward 128 credits required for degree.

Lower Division: Courses numbered from 100 through 199 are freshman courses. Courses numbered from 200 through 299 are sophomore courses.

Upper Division: Courses numbered from 300 through 399 are junior courses. Courses numbered from 400 through 499 are senior courses.

Graduate Division: Courses numbered from 500 through 599 are for graduate students; undergraduate students may be enrolled in the same course under a 400 number. In this case, the graduate students in 500-level courses will be required to demonstrate graduate level proficiency in the work. Courses numbered 600 or above are only for graduate students.

The following regulations apply to allowable course levels:

- Freshman students may not enroll in 300- or 400-level courses.
- Sophomore students may enroll in 300-level courses but not in 400-level courses.
- Junior and senior students may take 400-level courses.
- Only graduate students and undergraduates with advanced standing may enroll in 500- or 600-level courses. No exceptions may be made to this rule.

UNDERGRADUATE DEGREE REQUIREMENTS

Overview of Academic Decisions to be Made

All students who are seeking to earn a degree must decide upon a degree objective

and one or more academic specializations. At NMHU, the academic specializations are called academic majors and minors.

Major/Minor: All degree-seeking students declare their specific academic field(s) through an official form, the major or minor form, which is to be filed at the Office of the Registrar after all required signatures are obtained. For the bachelor's degree, this procedure should be completed by the time students enter upper division status. For the associate's degree, this procedure should be completed before students register for their second term of studies. Students should know that timely filing of the required major and minor forms may be made a condition of registering for classes or receiving scholarships or financial assistance.

Degree Check: Required at one or two points during each student's time at NMHU. Bachelor's degree candidates are required to have a degree check at the beginning of their third year of studies. In addition, all degree candidates should have a final degree check prior to the start of the semester in which they plan to graduate. The degree check is an official procedure that is carried out by appointment in the registrar's office. Degree checks are used to identify remaining requirements for graduation, and are an essential step in responsible academic planning. Students who neglect the degree-check process too often learn of unexpected requirements near the end of their studies, resulting in a delay in completing their degrees.

Overview of Course and Program Requirements

This section conveys specific requirements for completing an academic program and qualifying for graduation. Students are responsible for knowing and following the correct procedures and for meeting the conditions established for their academic programs

and progress at the university. The following summary is intended to supply a convenient overview.

For the associate's degree, all course and program requirements are stated in the Academic Programs and Courses section of this catalog.

Bachelor's degree students must look in a number of different places to know the requirements for graduation. The requirements include the following:

Required Courses for Freshmen: First-time freshmen will be required to take the Freshmen Seminar course, which is designed to ensure success, and the Reading Enhancement course if their English ACT score is below 18.

Proficiency Requirements: Many students will discover that they have one or more proficiency course requirements. Students and their advisors will plan how they may best meet these needs, which should be taken care of as soon as possible. Proficiency requirements are stated along with the core curriculum requirements.

Core Curriculum Requirements: During the first two years, bachelor's degree candidates typically concentrate on completing many of the courses for the university's core curriculum. The core consists of courses that give a breadth of exposure to the many important academic subjects essential to a university's education. These requirements are listed later in this section.

Academic Major and Minor Requirements: Bachelor's degree candidates typically concentrate on their major and minor fields between the sophomore and senior years at the university. Each bachelor's degree candidate selects an academic major and a minor or, in place of a minor a second major. Some professional

programs do not require a minor. Courses used in satisfaction of core curriculum requirements may be used also toward an academic major or minor if so approved. In contrast, any course used toward a certain major or minor may not be used toward another major or minor. When the same course is required for different programs, a substitution will be made for one of them.

General Graduation Requirements: Bachelor's degree candidates must complete, in all, at least 128 credits with a GPA of at least 2.00 or better, in order to earn their degrees. In addition, the university requires that at least 51 of these credits must be at the 300- or 400-level (upper-division courses). Students and their advisors should carefully monitor these requirements to avoid unintended delays in graduating.

Progress and Performance Requirements: Students must carefully monitor their grades and overall academic planning. Standards for academic performance and progress that must be met for continuation of financial assistance and athletic or academic scholarships. (These requirements are given to each student along with the financial assistance or scholarship award and are summarized elsewhere in this catalog.) The student also must be aware of academic requirements for minimum grade averages and the declaring of major and minor fields.

Academic Advising at NMHU

Every student seeking to complete a degree at the university is assigned to an appropriate advisor. Specifically, the advisor helps with the selection of courses that each student proposes each semester and also works on the student's plans for an academic specialization.

When students decide upon or change their academic fields of study, they may be reas-

signed to a new advisor. Once students have declared their major, their advisors will be faculty members in the field of the major. The dean's office of the college/school supervises the assignment of advisors. Students needing help in identifying an appropriate advisor should go to the office of the appropriate college/school dean.

Required Courses for First-time Freshmen

Academic Reading proficiency is demonstrated by:

A minimum English ACT score of 18 OR
Acceptable score on the Compass Placement Exam OR

INDP 070 Academic Rdg
Enhancement lab (3)

AND

INDP 101 Freshmen Seminar (3)

The Core Curriculum and Proficiency Course Requirements

English proficiency is demonstrated by:

A minimum English ACT score of 18 OR
Successful completion of the Compass Placement Exam OR

Engl 100 Reading & Writing for
College (3)

Language proficiency is demonstrated by:

Proficiency assessment or two semesters of a language other than English.

Computer proficiency is demonstrated by:

Proficiency Assessment OR

CS 101 Living with Computers (3)

OR

CS 144 Intro to Computer Sci (3)
(CS, Math and Sci majors)

CS 145 Object-Oriented Prog (3)
(CS, Math and Sci majors)

Mathematics proficiency is demonstrated by:

Math 100 Introduction to Algebra
(3) OR minimum ACT
score of 18.

Math 120 Intermediate Algebra (3)
OR minimum ACT score
of 23.

A student with an ACT score of 29 in English or Mathematics will be awarded three credits respectively.

Area I: Communications (9 hours):

Engl 111 Freshman Comp 1 (3)
OR ACT of 29

Engl 112 Freshman Comp 2 (3)

Comm 124 Beginning Speech (3)

Area II: Mathematics (3 hours):

Math 130 Math for ElemTchrs 2 (3)
(Education majors)

Math 140 College Algebra (3)
OR ACT of 29

Math 155 Applied Calculus 1 (3)

Math 160 Precalculus (5)

Math 211 Calculus 1 (4)

Area III: Lab Science (8 hours):

Choose two (2) 100-level Lab Science courses selecting not more than one from each discipline.

Biol 110 Biol Perspectives (4)

Biol 211 General Biol 1 (4)

Chem 100 Chem for the Non-Sci (4)

Chem 211/215 General Chem 1/Lab (5)

Chem 212/216 General Chem 1/Lab (5)

For 105 Ecosystems & Humans (4)

Geol 101 Survey of Earth Sci (4)

Geol 105 The Planets (4)

Phys 105 Elementary Physics (4)

Phys 151 Algebra Physics 1 (4)

Phys 152 Algebra Physics 2 (4)

Phys 291 Calculus Physics 1 (5)

Phys 292 Calculus Physics 2 (5)

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

Choose two to three (2 to 3) courses selecting not more than one from each discipline.

Anth	103	Dev of Cult and Civil (3)
Anth	221	Cult of the World (3)
Econ	216	Prin of Macro (3)
Econ	217	Prin of Micro (3)
PolS	151	American Natl Govt (3)
Psy	101	Psychology & Society (3)
Soc	152	Intro to Sociology (4)

Area V: Humanities and Fine Arts (6 –9 hours):*

Select three to six (3 to 6) hours from humanities.

Hist	100	The Western World (3)
Hist	201	U.S. History to 1877 (3)
Hist	202	U.S. Hist Since 1877 (3)
Phil	100	Intro to Philosophy (3)

Select three to six hours from fine arts.

Art	100	Intro to Art (3)
Comm	261	Hist of Motion Pict (3)
Mus	100	Intro to Music (3)
Mus	101	Rudiments of Music (3)
Thea	100	Intro to Theatre (3)

* Areas IV and V: The total number of credits must be a minimum of 15 credits.

Other University Requirements (5 hours):

PE	100	Fit for Life (2)
		OR Physical Education (2)

Literature - Choose three (3) credits in Literature offered by English or Languages.

ACADEMIC PROGRAMS AND COURSES

Academic Programs and Courses

The academic program at NMHU is administered through the one college and three schools. Students and any others who need assistance or information about academic programs should contact the office of the dean of the appropriate academic unit. In this section of the catalog, the academic program is presented by discipline within each college/school. Program descriptions and instructional requirements are given for each discipline and courses are listed alphabetically by discipline unit.

Symbols and Abbreviations in Course Listings

Courses are listed by course number followed by course title. Courses offered concurrently at more than one level are listed with a split number (e.g., 234-334).

The number in parentheses following the title indicates the number of credits for that course. When a range of credits is offered, the specific number of credits within that range is determined either when the course is scheduled or, for variable-credit courses (identified as "VC"), when each student selects an individually approved number of credits.

When there are numerals following the number of credits, it indicates a number of contact hours per week different from the number of credit hours. For example, 484. Hematology (4); 2, 4

The first number indicates lecture contact hours, and the second number indicates lab or studio contact hours; their sum equals the total contact time. When no numerals follow the number of credits, the course's contact hours per week match the number of course credit hours (with one hour comprising 50 minutes of meeting time).

Course listings with "Sp" or "Fa" following the title indicate the spring or fall semester in which the course is offered. "Alt" signifies that the course is offered every other academic year.

Any specific prerequisites or co-requisites are stated at the end of the course description. These are enforced by academic program advisors and by the faculty member teaching the course in question. In cases where specific course prerequisites are not stated, assumption of ability to perform at the appropriate level in that discipline is still made.

College of Arts and Sciences

Dr. C. G. "Tino" Mendez, Dean

Douglas Hall, Room 137

505 454-3399

FAX: 505 454-3389

Mission of the College of Arts and Sciences

The mission of the College of Arts and Sciences at New Mexico Highlands University is to provide the highest quality undergraduate and graduate programs in the humanities and fine arts, life sciences, physical sciences, computersciencesandmathematics,engineering, and social sciences. In addition to serving the needs of its majors and minors in these disciplines, the college undertakes to instruct courses in the core curriculum as part of the university's mission to provide a well-rounded education for all of its students.

Recognizing the integral relationship between teaching, research, and public service, the mission of the college is to excel in all three areas. Embracing the vision of the stratigic plan, New Mexico Highlands University will stand out as the flagship school for education, serving students from all walks of life.

The goals of teaching in the college encompass not only imparting to its students the knowledge, verbal and cognitive skills, and values and attitudes that comprise the basis of a liberal education, but also instilling in them the ability and desire to think and work independently and creatively; to appreciate learning for its own sake; and to recognize the lifelong benefits of a commitment to truth and excellence.

The purpose of research in the college is to amend and extend the bases of knowledge and create activity; to renew and enrich our teaching resources; exemplify in our own work superlative scholarly habits to give our

students a model to which to aspire; and to hare our knowledge and the fruits of our labors with the scholarly community, our students, and the general public.

The college's public service commitment signifies that in all of our scholastic endeavors, we will remember the purpose of our activities is to benefit the individual members of the region, state and world communities. Furthermore, recognizing that its involvement extends beyond the confines of the university, to confront perforce the urgent problems presented by geographical, political, racial, and gender boundaries, the college undertakes to work with an eye to resolution of problems in today's complex and changing world by serving disinterestedly the global community.

Department of Behavioral Sciences

Dr. Tom Ward, Department Chair
Hewett Hall, Room 210
505 454-3196
FAX: 505 454-3331
E-MAIL: tsward@nmhu.edu

The department offers undergraduate programs in psychology, sociology, anthropology, and criminal justice at Farmington Center only.

Mission of the Department of Behavioral Sciences

The mission of the Department of Behavioral Sciences is to: contribute to meeting the educational and research needs in psychology, sociology, anthropology, and the related fields; contribute to meeting the career needs in psychological and social services and social sciences, as well as contribute to training for careers in education, engineering, physical and biological sciences, medicine, and other science fields; contribute to meeting the need for secondary school teacher certification in sociology and/or anthropology; and to provide psychological and socio-cultural service and expertise for the region, as well as the greater global community.

Faculty

Erika Derkas (Sociology)
Mario Gonzales (Anthropology)
Jean Hill (Psychology)
Linda LaGrange (Psychology)
Robert Mishler (Anthropology)
Orit Tamir (Anthropology)
Thomas Ward (Sociology)
Ian Williamson (Psychology)

Resources and Facilities

The human riches of northern New Mexico provide an outstanding context for psychological, social, and cultural studies at New Mexico Highlands University. Students engage in field archaeological digs, ethnographic, psycho-

biological research, and clinical practicum. Each student has the opportunity to conduct research in three well-equipped discipline facilities: psychobiology lab, Gabino Rendon Socio-cultural Research Center, and anthropology lab. Studies of human behavior emphasize field data and computer applications for analysis and interpretation.

The department provides computer laboratories for student use. Students have access to word processing, spreadsheets, and statistical packages, as well as the Internet.

Student professional societies and organizations, such as Psi Chi, Sociology and Anthropology Club, provide opportunities for student participation and program enrichment beyond the classroom.

Sociology and Anthropology

The disciplines of sociology and anthropology combine to offer a holistic approach to the study of humankind. The program offers both bachelor of arts and bachelor of science degree options with four possible emphases: sociology, anthropology, criminology, and American Indian studies. The region's long and varied human traditions, dating from the prehistoric past of 10,000 years ago with Clovis and Folsom to the 21st century mixed culture traditions, provide an excellent natural laboratory for socio-cultural studies. The program emphasizes student participation in field and campus laboratory experiences, practicum, and computer competence in analysis of data. Small classes provide an enriched educational environment for both students and faculty. Career opportunities include preparation for graduate studies, teaching, cultural resource management, and practice in federal, state, and local agencies, as well as in private businesses and non-profit sectors.

Major in Sociology and Anthropology (B.A.)

Required core: 23

Soc 152 Intro to Sociology (4)

Anth 221 Cult of the World (3)

OR

Anth 241 Biological Anth (3)

Soc/Anth 300 Socio-Cult Theory (3)

Soc/Anth 330 Res Meth Soc Rel (4)

Soc/Anth 4xx 400 Level Elective (3)

Choose one course from the following:

Anth 274 Indian Cult N.A. (3)

Anth 371 Peoples & Cultures
of Africa (3)

Anth 374 Indian Cult of Cent/SA (3)

Anth 424 Socio/Cult Dyn in the
SW(3)

Anth 474 Contemp Indian Issues (3)

Anth 476 Indians of the SW (3)

Anth 477 The Hispanic SW (3)

Choose one course from the following:

Soc 323 Deviant Beh (3)

Soc 4/5XX Gender & Society (3)

Soc 412 Social Strat (3)

Soc 427 Criminology (3)

Soc 431 Political Sociology (3)

Soc 493 Race & Ethnic Rel (3)

Core Total: 23

Sociology Emphasis

Required courses: 12

Soc 283 Social Problems (3)

Soc 301 Soc Theory (3)

Soc 412 Social Strat (3)

Soc 430 Applied Soc Res &
Data Analysis (3)

Electives: 9

Select in consultation with your advisor.

Emphasis Total: 21

Major Total: 44

Criminology Emphasis

Required courses: 24

Soc 231 Crim Justice Sys (3)

Soc 427 Criminology (3)

Soc 428 Comp Legal Sys (3)

Soc 430 Applied Soc Res &
Data Analysis (3)

Soc 498 Field Experience (1-6)

Select two courses in consultation with your
advisor:

Soc 283 Social Problems (3)

Soc 323 Deviant Behavior (3)

Soc 327 Juv Del & Justice (3)

Soc 329 Inst Corrections (3)

PoLS XXX Law Elective (3)

Select one course in consultation with your
advisor:

Anth 442 Forensic Anth (3)

Anth 461 Comm & Culture (3)

Emphasis Total: 24

Major Total: 47

Anthropology Emphasis

Required courses: 12

Select one course from each of the following
categories:

Physical Anthropology/Archaeology

Anth 241 Biological Anth (3)

Anth 410 Archaeology (3)

Social Cultural Anthropology

Anth 415 Dev & Socio-Cult
Change (3)

Anth 421 Ethnology (3)

Anth 422 Rel & Culture (3)

Applied Anthropology

Anth 442 Forensic Anth (3)

Anth 480 Issues App Anth (3)

Anth 481 Cult Res Mgmt (3)

Culture and Communication

Anth 461 Comm & Culture (3)

Electives: 9

Select in consultation with your advisor.

Emphasis Total: 21

Major Total: 44

American Indian Emphasis

Required courses: 12

Anth 274 Indian Cult N.A. (3)

Anth 374 Indian Cult of
Cent/SA (3)

Anth	474	Contemp Indian Issues (3)
Anth	476	Indians of the SW (3)
Electives: 9		
Select in consultation with your advisor.		
Emphasis Total: 21		
<hr/>		
Major Total: 44		

Major in Sociology and Anthropology (B.S.)

For a bachelor of science degree, complete requirements for bachelor of arts major in sociology and anthropology plus: complete a minor of at least 20 credits in one of the science fields other than sociology and anthropology, or complete a combined science minor, or complete a second major in a bachelor of science degree program, or complete a two-year degree in a science field; and complete eight credits in mathematics, including Math 211.

Minor in Anthropology

Required courses: 10

Soc	152	Intro to Sociology (4)
Anth	221	Cult of the World (3)
Soc/Anth 300		Socio-Cult Theory (3)

Electives: 12

Select in consultation with your advisor.

Minor Total: 22

Minor in Sociology

Required courses: 10

Soc	152	Intro to Sociology (4)
Anth	221	Cult of the World (3)
Soc/Anth 300		Socio-Cult Theory (3)

Electives: 12

Select in consultation with your advisor.

Minor Total: 22

Minor in Sociology and Anthropology (Secondary Education Certificate)

Complete at least 24 credits in sociology and anthropology or a combination of 12 credits in each, in consultation with your minor advisor.

Minor Total: 24

Criminal Justice Studies

A Bachelors Degree in Criminal Justice Studies provides an excellent foundation for students interested in working within the Criminal and Juvenile Justice Systems. In addition, it offers a strong foundation for those interested in pursuing a law degree or a masters degree in Public Administration or a closely related field. The Criminal Justice Systems are quite broad, and professionals, regardless of their specializations, must integrate information from a variety of academic disciplines. Consequently, students are required to take specific courses in Political Science, Psychology, Sociology and Social Work.

In addition to courses dealing with the main components of the Criminal Justice System: Law Enforcement, the Courts, Corrections, and Juvenile Justice, students take specialized courses including Psychology and the Law, Legal Issues for Children and Adolescents, and Domestic and Sexual Violence. Instructors strive to provide a balance of theoretical and practical information. In fact, many instructors are current or former professionals who are able to help students evaluate current practices in light of constitutional mandates.

This program appeals to students of traditional college age as well as professionals already working in the field. Indeed, many students in front-line positions are completing degrees in order to set the stage for future promotions. Other students have finished a two-year degree from a community college and have enrolled to complete a bachelors degree.

Major in Criminal Justice Studies (Offered at NMHU San Juan Center center in partnership with San Juan College)

Prerequisite Courses: 16

Anth	221	Cult of the World (3)
PolS	151	American Natl Gov (3)
Psy	101	Psych & Society (3)
Soc	152	Intro to Sociology (4)

Soc	231	The Criminal Justice System (3)
Required courses: 52-54		
CJS	301	Law Enforcement (3)
CJS	310	Process & Proceed of Criminal Law (3)
CJS	315	Issues in the CJS (3)
CJS	401	Legal Issues for Child & Adolescents (3)
CJS	405	Law of Evidence (3)
CJS	458	Mediat & Conflict (3)
CJS	460	Appr to Dispute Resolution(3)
PolS	314	Intro to the Law (3)
Psy/CJS	409	Domestic & Sexual Violence (3)
Psy/CJS	415	Psychology & Law (3)
Psy	301	Research Methods & Analysis I(4)
OR		
SW	330	Resrch Methods 1 (3)
OR		
Soc/Ant	330	Research Methods in Social Relations(4)
Psy	302	Research Methods & Analysis II(4)
OR		
SW	430	Resrch Methods II (3)
OR		
Soc/Anth	430	Appld Social Research & Data Analysis(4)
Psy	408	Drugs & Behavior (3)
Soc	327	Juv Delinq & Just (3)
Soc	329	Institut Corrections (3)
Soc	427	Criminology (3)
Soc	428	Compar Legal Sys (3)
Soc	493	Race & Ethnic Rel (3)
SW	432	Field Practicum (4)

Major Total: 58-60

Psychology

Psychology, the study of human behavior and mental processes, includes such topics as learning, memory, cognition, motivation, emotion, sensation, perception, personality,

attitudes, social interactions, and psychopathology.

The special focus in this field is the individual rather than human societies or cultures. Although the study of psychology contributes to the understanding of abnormal human behavior, knowledge of psychology also enhances the understanding of normal human behavior.

Psychological research is conducted exclusively with the scientific method in applications that range from multifactorial laboratory experiments to single case studies. At NMHU, students experience the diversity within the field through a broad selection of courses. Behavioral and psychodynamic emphases are offered in the study of mental disorders, while research psychology is represented by cognitive, biological, social, and personality approaches.

Career goals of psychologists include teaching, research, and service. Psychologists, counselors, and psychometricians work at such sites as mental health centers and hospitals, geriatric facilities, and correctional institutions. The psychological profession also includes school psychologists and human relations or organizational behavior psychologists for industry or government.

Major in Psychology (B.A.)

All transfer students majoring in Psychology must complete a minor approved by their major advisor.

Required courses: 11

Psy	101	Psych & Society (3)
Psy	301	Rsrch Methods & Analysis 1 (4)
Psy	302	Rsrch Methods & Analysis 2 (4)

Other Requirements: 14

Choose courses as indicated below in consultation with your major advisor:

Choose at least one course from each of the following four groups of courses, including at least two laboratory or techniques/methods courses:

A) Social

Psy	321	Soc Psych: Theories & Rsrch (3)
Psy	322	Tech in Soc Psych Rsrch (1) (Co-requisite: Psy 321)
Psy	430	Gender Roles (3)

B) Personality

Psy	324	Abnormal Psy (3)
Psy	328	Theories of Person (3)
Psy	329	Tech in Per Rsrch (1) (Co-requisite: Psy 328)

C) Learning and Cognitive Processes

Psy	317	Lrng: Basic Proc (3)
Psy	318	Exp Tech in Lrng (1) (Co-requisite: Psy 317)
Psy	319	Memory & Cog Proc (3)

D) Psychobiological

Psy	408	Drugs & Behavior (3)
Psy	410	Physiological Psych (3)
Psy	411	Tech in Phys Psych (1) (Co-requisite: Psy 410)

Also, choose at least two of the following courses:

Psy	340	Develop Psych (3)
Psy	416	Motivation & Emotion (3)
Psy	433	History of Psych (3)
Psy	471	Psych Testing (3)

Electives: 5

In addition, the student may select two other elective psychology courses to complete the 36 credits for a psychology major.

Additional requirements for this major (not counted toward the 36-credit minimum):

In the core curriculum, select the courses Soc 152 (or 210 or 215) and Anth 103 (or 221 or 241), or substitutes approved by the major advisor. For computer proficiency, select CS 101 or an equivalent approved by the discipline.

Completion of Math 120, 140, 150, and 211 is also recommended.

Major Total: 36

Major in Psychology (B.S.)

For the bachelor of science in psychology, complete the bachelor of arts program described above, with the following changes:

1. Complete 3 credits of Psy 499.
2. Select within the science options of the core curriculum either one year of biology or chemistry.
3. Complete Math 140, 150, and 211, and select an academic minor in one of the science fields.

Major Total: 36

Minor in Psychology

Required courses: 11

Psy	101	Psych & Society (3)
Psy	301	Rsrch Methods & Analysis 1 (4)
Psy	302	Rsrch Methods & Analysis II (4)

Electives: 13

Choose courses as indicated below in consultation with your minor advisor.

Choose at least one course from three of the four groups of courses listed above for the major in psychology (B.A.), including at least one laboratory or techniques/methods course. In addition, the student may select one other elective psychology course to complete the 24 credits for a psychology minor.

Minor Total: 24

Courses in Anthropology (Anth)

103. Development of Culture and Civilization (3); Fa, Sp

Bio-cultural factors underlying the origins and distribution of early humans and consecutive cultural and biological adaptations, up to the rise of civilization in the Old and New World.

221. Cultures of the World (3); All

A study of the concepts of culture and its application in the analysis of human group behavior.

235 - 435. Selected Topic in Anthropology (1 - 4 VC); All

Course in a topic or topics in anthropology. May be repeated with change of content.

241. Biological Anthropology (3); 2,2; Fa

Introductory study of humankind as a biological organism developing according to the principles of organic evolution, ecology, and socioculture behavior.

274. Indian Cultures of North America (3); Sp

Introduction of peoples and cultures of Native North America, including Mexico, at time of first European contact, employing "Culture Area Concept." Prerequisite: Permission of instructor.

300. Socio-Cultural Theory (3); Fa

Survey of the principal developments of sociocultural theory that have contributed to the emergence, development, and consolidation of the disciplines of anthropology and sociology. Prerequisite: One introductory course in anthropology or sociology.

303. Anthropological Theory (3)

A survey of the major directions in contemporary American and Western European anthropology. Prerequisite: One introductory course in sociology or anthropology.

330. Research Methods in Social Relations (4); Fa

The social context, structure of inquiry, and modes of observation in research of social and cultural phenomena. Prerequisite: One introductory course in sociology or anthropology. Cross-listed as: Soc 330.

352. Laboratory Research (1-3 VC); All

Research experience in the anthropology laboratory. may be repeated.

371. Peoples and Cultures of Africa (3); Fa
A survey of the major cultural groupings of Africa with emphasis on Africa south of the Sahara. Prerequisite: One introductory course in sociology or anthropology.

374. Indian Cultures of Central and South America (3); Sp

A study of the native people, cultures, and culture areas of Central America, the Caribbean, and South America. Prerequisite: One introductory course in sociology or anthropology.

398. Anthropological Field Studies (2 - 4 VC)

Ethnological and/or archaeological field studies in selected sites. The destination and time in the field vary and are announced at the time of offering. A preparation session before departure is required.

410. Archaeology (3); 2,2; Fa

The purpose, techniques, methods and theory of archaeology in the study of the human past and in the context of modern science. Prerequisite: Anth 221 and 241 or permission of instructor.

413. Archaeology of the Southwest (3); 2,2; Sp

Study of prehistoric cultures, before 1500, of the Greater Southwest and northern New Mexico. Prerequisite: One introductory course in sociology or anthropology.

414. Field Methods In Archaeology (2 - 6 VC); Su

Instruction in archaeology field and laboratory techniques and methods. Prerequisite: Anth 410 or permission of instructor.

415. Development and Socio-Cultural Change (3); Sp

This course concerns the nature and consequences of development and culture change. The focus is on contemporary issues and the many ways in which anthropology is used outside its purely academic context: how

anthropology is applied to contemporary human issues, how it benefits society, and how it advances theoretical knowledge. Prerequisite: One introductory course in anthropology or sociology. Cross-listed as: S0c 415.

421. Ethnology (3); Fa

An advanced study of the development of the discipline and close examination of selected ethnological texts. Prerequisite: Anth 221 or permission of instructor.

422. Religion and Culture (3); Fa

The course addresses the origins, elements, forms, and symbolism of religion, provides a comparative survey of religious beliefs, myths, practices and symbolism, and focuses on religion in the context of culture, and teaches the appreciation of religious differences. Prerequisite: One introductory course in sociology or anthropology. Cross-listed as: Soc 422.

424. Social/Cultural Dynamics in the Southwest (3); Fa

Investigation of the interrelationships among the major cultural groups living in the Greater Southwest and northern New Mexico today.

428. Comparative Legal Systems (3); Fa

A sociological and anthropological analysis of social control and law in a variety of social and cultural contexts.

442. Forensic Anthropology (3); 2,2; Sp

Presentation and application of biological anthropology techniques in the identification of humans from skeletal remains.

450. Seminar in Anthropology (1-4 VC)

Seminar course in a topic or topics in anthropology. May be repeated with change of content.

451. Senior Seminar (3); Sp

A capstone course designed to synthesize and integrate knowledge in anthropology and sociology. Cross-listed as: Soc 451.

461. Communication and Culture (3); Fa

Anthropological linguistics, focusing on inves-

tigations of the relationships between language and culture. Prerequisite: One introductory course in sociology or anthropology.

473. Women, Men, and Culture (3)

Study of the basic features of social organization and behavior in selected societies around the world in the determination of sexual scripts in pre-literate as well as industrial societies.

474. Contemporary Indian Issues (3); Sp

An examination of emerging social and cultural issues in American Indian society today.

476. Indians of the Greater Southwest (3);

Sp

A survey of the Native American cultures in the Greater Southwest since 1500, including both Pueblo and non-Pueblo cultures. Prerequisite: One introductory course in sociology or anthropology.

477. The Hispanic Southwest (3); Fa

An ethnohistorical and socioanthropological examination of Spanish speaking people in the Southwest from their establishment to contemporary times.

480. Issues in Applied Anthropology (3);

Sp

This course focuses on what applied anthropology is, how it is done, how it benefits society, and how it advances anthropology's theoretical knowledge of culture and society. It is also for student who are interested in learning about the various ways in which anthropology is used outside the academia.

481. Cultural Resource Management (3);

Fa

This course provides students with the foundation's for conducting Cultural Resource Management. It addresses laws, regulations, agencies, and techniques needed for conducting CRM work and practical experience. Prerequisite: One Culture Area course.

490. Independent Study (1 - 4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

496. Ethnographic Fieldwork (I - 4 VC)

Training and practice in the traditional ethnographic methods, i.e., mapping, census-taking, participant observation, informal interviewing, formation of projects, and data analysis. Prerequisite: One introductory course in sociology or anthropology.

499. Independent Research (I - 4 VC)

Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

Courses in Criminal Justice (CJS)**235 - 435. Selected Topic in Criminal Justice (3); Fa, Su**

Course in a topic or topics in Criminal Justice. May be repeated with a change of content.

301. Law Enforcement (3); Fa

This course examines society's evolving responses to crime from the perspective of law enforcement agencies and officers. This course will explore the evolution of American policing from its roots in England to its current form. Topics will include community-oriented policing, problem-oriented policing, victimology, and the culture of the police community.

310. Process and Procedures of Criminal Law (3); Fa

This course examines processes and procedures of the American legal system. The primary focus is on the American adversarial system of criminal law and alternatives to these systems of law and justice. The adversarial system will be compared with the inquisitorial criminal and civil codes of Continental Europe.

315. Issues in the Criminal Justice System (3); Sp

This course provides an advanced exploration of issues currently impacting law enforcement, models of adult and juvenile corrections, and the judicial system. The course is designed to provide students with in-depth knowledge of the interdependence of the components of the

criminal justice system continuum. The type and effectiveness of rehabilitative efforts and constitutional requirements for mental and medical health care will be examined.

401. Legal Issues for Children and Adolescents (3); Sp

This course provides instruction, research, and discussion of numerous topics relevant to children's and juveniles' legal status in the United States. The course also focuses on issues relevant to public policy designed to safeguard the health, safety, and welfare of children and juveniles in the U.S. Prerequisite: Soc/CJS 231 The Criminal Justice System; Soc/CJS 327 Juvenile Delinquency.

405. Law of Evidence (3); Sp

This course offers a thorough exploration of the concept of criminal evidence. It is designed to prepare students to deal with the complexities of evidentiary procedures and materials in all components of the criminal justice system. Prerequisite: Soc/CJS 231 The Criminal Justice System; Soc/CJS 301 Law Enforcement.

409. Domestic and Sexual Violence (3)

This course will focus on physical, sexual, and emotional abuse that occurs within families. A particular emphasis will be a focus on the psychological consequences of exposure to physical and sexual trauma and neglect. Victim and offender characteristics will be discussed in the context of family dynamics. Typical and potential criminal justice system responses will be explored.

415. Psychology and Law (3)

This course examines the way in which psychology interacts with the law. The primary context will be the way in which psychology interacts with the criminal justice system. The course explores a variety of topics including expert testimony, civil commitment and the rights of mental patients, competency, the insanity defense, forced medication and the transfer of mentally ill inmates to mental hos-

pitals, and a review of the mental illnesses and personality disorders commonly encountered in criminal justice settings.

458. Mediation and Conflict: Interest Based Transformative and Narrative Paradigms (3)

This is a practical, interactive course offering a process of communication to manage conflict in interpersonal, organizational, and other macro-level context such as international, inter-regional, inter-local, intergovernmental and major environmental disputes both manifest and latent. Prerequisite: Soc 460 or permission of instructor.

460. Approaches to Dispute Resolution (3)

This course provides a theoretical and practical understanding of dispute resolution processes in use in the private and public sectors. The course examines how and why dispute resolution processes function in particular environments, and critiques the strengths and weaknesses of each process. Prerequisite: Introductory course in psychology or introductory course in sociology.

Courses in Psychology (Psy)

101. Psychology and Society (3); Fa

A survey of the major concepts of modern psychology and their application to some of the issues in modern society. Two lecture hours per week are scheduled along with a weekly small group discussion, which supplements the lectures by means of discussion, films, and demonstrations.

201. Cognition and Life Processes (3)

A presentation of the fundamentals of human cognition, critical thinking skills, and the application of these skills to everyday life processes. Topics will include reasoning, judgment, problem-solving, and decision-making.

235 - 435. Selected Topic in Psychology (1 - 4 VC)

Course in a topic or topics in psychology. May

be repeated with a change of content.

240. Life-Span Human Development (3)

A systematic study of individual growth and development from conception through old age. The course is appropriate for students other than psychology majors, including such disciplines as education, social work, and nursing. Prerequisite: Psy 101.

301. Research Methods and Analysis 1 (4); 3,2; Fa

An introduction to the methods of investigation used in psychology to understand and explain behavior. Includes methods as applied to all major areas of psychology, such as clinical, developmental, social, and psychobiological.

302. Research Methods and Analysis 2 (4); 3,2; Sp

A continuation of Psy 301. Prerequisite: Psy 301.

303. Computer Use in Behavioral Sciences (3)

An introduction to computer applications for statistical analysis of data in the Behavioral Sciences. Use of mainframe computer software in relation to research will be covered. Emphasis and focus of the course will be on the Statistical Package for the Social Sciences (SPSS).

317. Learning: Basic Processes (3)

A review of the primary phenomena associated with instrumental and classical conditioning. Some attention is given to adaptations of conditioning principles to behavior modification. Prerequisite: Psy 101 or permission of instructor. Co-requisite: Psy 318.

318. Experimental Techniques in Learning (1)

Laboratory experimental work demonstrating basic phenomena in animal learning and memory. Co-requisite: Psy 317.

319. Memory and Cognitive Processes (3)

A review of human processes involved in encoding, storing, and retrieving information. Recommended: Psy 301 and Psy 302.

321. Social Psychology: Theories and Research (3)

A review of the major social-psychological theories and research. Topics include person perception, attributional processes, attitudes, stereotyping, group processes, aggression, interpersonal attraction, and altruism. Prerequisite: Psy 101 or permission of instructor. Co-requisite: Psy 322.

322. Techniques in Social Psychology Research (1)

Survey and examination of major research techniques and methods in the area of social psychology. Co-requisite: Psy 321.

324. Abnormal Psychology (3)

An analysis of each of the major syndromes of psychopathology in terms of basic psychological processes. Special attention is given to the clinical observation and experimental research underlying the delineation of each syndrome. Prerequisite: Psy 101 or permission of instructor.

327. Personal Adjustment (2)

An exploration of the psychologically healthy individual's coping with adjustment issues concerning such areas as identity, self-esteem, interpersonal relationships, work, and sexuality. Prerequisite: Psy 101 or permission of instructor.

328. Theories of Personality (3)

A review of the major theories of personality such as Freud, Jung, Horney, and Erickson. A sampling of non-western approaches to this topic is also addressed including the Hindu, Buddhist, and Islamic perspectives. Prerequisite: Psy 101 or permission of instructor. Co-requisite: Psy 329

329. Techniques in Personality Research (1)

Survey and examination of major research techniques and methods in the study of personality. Co-requisite: Psy 328.

340. Developmental Psychology (3); Fa

In-depth coverage of developmental theory

and research with emphasis alternating among child, adolescent and adult development. Prerequisite: Psy 101. Cross-listed as: EcEd 302.

377. Environmental Psychology (2)

An examination of environmental factors affecting behavior and socio-psychological functioning, including such topics as physical/architectural factors, crowding, and personal space.

378. Ethical issues in Psychology (2)

Review and examination of the ethics relevant to testing, therapy, professional relations, human and animal research, and publication. Prerequisite: Psy 101 or permission of instructor.

408. Drugs and Behavior (3); Fa, Su

Psychological and pharmacological study of alcoholism, drug abuse, and drug use, including tranquilizers and non-prescription drugs, throughout society.

409. Domestic and Sexual Violence (3), Su

This course will focus on physical, sexual, and emotional abuse that occurs within families. A particular emphasis will be a focus on the psychological consequences of exposure to physical and sexual trauma and neglect. Victim and offender characteristics will be discussed in the context of family dynamics. Typical and potential criminal justice system responses will be explored.

410. Physiological Psychology (3)

An overview of the neuroanatomical and neurophysiological processes underlying behavior. Topics include neurological disorders, brain organization, sensory systems, and applied human neuropsychology. Co-requisite: Psy 411

411. Techniques in Physiological Psychology (1)

Laboratory work designed to develop skills needed to collect data in physiological psychology. Exercises include brain dissection techniques and the use of the following instruments: centrifuge, balance, spectrophotometer,

and high performance liquid chromatography (HPLC). Co-requisite: Psy 410.

415. Psychology and Law (3)

This course examines the way in which psychology interacts with the law. The primary context will be the way in which psychology interacts with the criminal justice system. The course explores a variety of topics including expert testimony, civil commitment and the rights of mental patients, competency, the insanity defense, forced medication and the transfer of mentally ill inmates to mental hospitals, and a review of the mental illnesses and personality disorders commonly encountered in criminal justice settings.

416. Motivation and Emotion (3)

A review of the major phenomena and theories that relate to motivation and emotion. Prerequisite: Psy 301 and Psy 302, or permission of instructor.

418. Comparative Cognition (3)

An introduction to animal cognition, including attention, representation of stimuli, memory storage and retrieval processes, and forgetting.

419. Introduction to Behavior Therapy (3)

Introduction to and survey of behavior therapy procedures and their application to child and adult populations in a variety of settings including homes, schools, prisons, and hospitals.

422. Human Sexuality (3)

Review of contemporary, socio-psychological issues relating to human sexuality. Topics include sexual anatomy, sexually-transmitted diseases, sexual dysfunctions, sexual attitudes and mores.

425. Introduction to Group Psychotherapy (3)

An overview of group therapy, theory and techniques. Course includes an experiential component designed to provide experience with group process and group leadership. Prerequisite: Permission of instructor.

430. Gender Roles (3)

An examination of gender roles and role theory in understanding the behavior of women and men. Topics include development, stereotyping, sex differences in personality, abilities, achievement, and status. Attention is given to implications of changing female and male roles in society.

433. History of Psychology (3)

Review of the major figures associated with the development of psychology as a science from Plato's time to the present, with special emphasis on the nineteenth and twentieth centuries. Prerequisite: Psy 301 and Psy 302, or permission of instructor.

445. Behavior Disorders in Children (3)

Etiology and treatment of behavioral problems in children in a variety of settings, including home and school environments. An eclectic coverage of the major theories, approaches, and research is provided. Prerequisite: Psy 240 or 340, or permission of instructor.

450. Seminar in Psychology (1 - 4 VC)

Seminar course in a topic or topics in psychology. May be repeated with a change in content.

462. Experimental Design and Analysis (3); 2,2

A comprehensive introduction to the design and analysis of experiments emphasizing analysis of variance models and analytical comparison techniques. Prerequisite: Psy 301 and Psy 302 or equivalent.

464. Organizational Behavior (3)

Analysis of formal organizations and informal relationships among individuals and small groups. Study of business organizations as a system of authority and status, control and communication, decision-making centers, and leadership positions. Use is made of cases and research studies.

471. Psychological Testing (3); 2,2

Presentation of the principles underlying

psychological testing and measurement. Major areas of psychological testing are surveyed and special attention is given to social and ethical aspects of psychological testing. Prerequisite: Psy 301 and Psy 302, or permission of instructor.

472. Cognitive Science (3)

An interdisciplinary investigation of the foundations of human knowledge representation and understanding, the functioning of the human mind, and how these impact on recent computer technologies. Cross-listed as: Phil 472 and CS 472.

473. The Psychology of Suicide (2)

The history of suicide, popular myths on the topic, epidemiology, theories, evaluation of self-destructive potential, and therapy. Prerequisite: Psy 301 and Psy 302, or permission of instructor.

475. Abnormal Psychology and Literature (3)

Characters from many literary works analyzed in terms of psychopathology. Various theories of abnormality will be utilized. Prerequisite: Permission of instructor.

477. Culture and Mental Illness (3)

An examination of current descriptions and explanations of mental disorders in a sample of countries from all major regions of the world. Historical, technical, ethical, and pragmatic aspects of international research in the realm of psychology/psychiatry are also addressed. Prerequisite: Psy 101, Psy 324, or permission of instructor.

479. Psychology of Religion (3)

An examination of the relationship between the discipline of psychology and mysticism. Perspectives addressed include the historical, cultural, philosophic, psychoanalytic, and scientific. Prerequisite: Psy 101.

480. Community Psychology (3)

An introduction to community psychology with emphasis on theories and research regard-

ing prevention and consultation. Prerequisite: Psy 101 or permission of instructor.

490. Independent Study (1-4 VC)

Individual, directed readings and library research arranged with an instructor on a topic of mutual interest to the student and instructor. Prerequisite: Permission of instructor.

498. Field Experience (1 - 3 VC)

A field placement in a local service agency providing opportunity for observation and learning under staff supervision. May be taken twice for credit. Prerequisite: Senior status in psychology and permission of instructor.

499. Independent Research (1 - 4 VC)

An individual, directed research investigation arranged with an instructor on a topic of mutual interest to the student and the instructor. Projects require a final written report that includes a presentation of the problem, review of the literature, description of procedures, data analysis, and interpretation of results. Prerequisite: Permission of instructor.

Courses in Sociology (Soc)

152. Introduction to Sociology (4)

A broad survey of the basic concepts and principles that sociology uses to understand the development of the human social environment and its phenomena; three lecture hours per week are scheduled along with a one-hour discussion section.

212. Marriage and the Family (3)

Marriage, family life, and the family as a social institution.

231. Criminal Justice System (3); Fa

A sociological analysis of the criminal justice process in the United States with special emphasis on law enforcement and the courts.

235 - 435. Selected Topic in Sociology (1 - 4 VC)

Course in a topic or topics in sociology. May be repeated with change of content.

283. Social Problems (3); Fa

The study of specific social problems that are significant at the present time.

300. Socio-Cultural Theory (3); Fa

Survey of the principal developments of Socio-Cultural Theory that have contributed to the emergence, development and consolidation of the disciplines of anthropology and sociology.

301. Sociological Theory (3)

A survey of the principal developments in social thought that have contributed to the emergence and consolidation of the discipline of sociology, as well as other contemporary disciplines dealing with social phenomena. Prerequisite: One introductory course in sociology or anthropology.

323. Deviant Behavior (3)

Analysis of behavior that deviates from institutionalized expectations, by using specific sociological theory and method.

327. Juvenile Delinquency and Justice (3);

Sp

An overview of definitions and social theories of delinquency and an analysis of the legal system for processing juvenile offenders in the United States; special consideration of juvenile justice in New Mexico.

329. Institutional Corrections (3); Fa

A sociological analysis of the role of ails and prisons in the criminal justice system and larger society in the United States; emphasis on operation of adult correctional facilities, from perspective of both staff and inmates, with special consideration of institutional corrections in New Mexico.

330. Research Methods in Social Relations (4); Fa

The social context, structure of inquiry, and modes of observation in research of social and cultural phenomena. Prerequisite: One introductory course in sociology or anthropology. Cross-listed as: Anth 330.

411. The Community (3)

Analysis of human communities in terms of social structure, social class, participation in formal and informal associations, power structure, and inter-group conflict.

412. Social Stratification (3); Sp

Differentiation, status, social mobility, class, and caste in selected societies. Prerequisite: One introductory course in sociology or anthropology.

415. Development and Socio-Cultural Change (3)

This course concerns the nature and consequences of development and culture change as understood by social scientists. Course will address theoretical Orientations, consequences of development, and case studies. Prerequisite: One introductory course in sociology or anthropology. Cross-listed as: Anth 415.

422. Religion and Culture (3)

The origins, elements, forms, and symbolism of religion including a comparative survey of religious beliefs, myths, practices, and symbolism. Course focuses on religion in the context of culture with an emphasis on appreciating religious differences. Prerequisite: One introductory course in sociology or anthropology. Cross-listed as: Anth 422

424. Social/Cultural Dynamics in the Greater Southwest (3)

Investigation of the interrelationships among the major cultural groups living in the Greater Southwest today.

427. Criminology (3); Sp

An overview of definitions and types of crime, and social theories of crime causation; special issues related to crime, crime control, and crime prevention.

428. Comparative Legal Systems (3); Fa

A sociological and anthropological analysis of social control and law in a variety of social and cultural contexts.

430. Applied Social Research and Data Analysis (3); Sp

Instruction in and application of techniques used in the analysis of quantitative and qualitative social science research data. Prerequisite: Soc 330 or permission of instructor.

431. Political Sociology (3)

Sociological theory and research as applied to the study of political behavior, including such topics as the social bases of power (class, occupation, religion, cultural values), decision-making, leadership and communications.

439. Classical Sociological Theories (3); Sp

An analysis of classical sociological theory and theorists, including Marx, Durkheim, and Weber.

450. Seminar in Sociology (I - 4 VC)

Seminar course in a topic or topics in sociology: may be repeated with change of content.

490. Independent Study (I -4 VC)

Independent, directed study arranged with an instructor. Prerequisite: Permission of instructor.

493. Race and Ethnic Relations (3); Sp

The basic processes operating in the present day interrelations of ethnic groups.

498. Field Experience (I - 6 VC); Sp

A field placement in an institution or agency providing opportunity for observation and limited exposure to the use of professional techniques under staff supervision. Prerequisite: Permission of instructor.

498. Field Experience (1 - 3 VC)

A field placement in a local service agency providing opportunity for observation and learning under staff supervision. May be taken twice for credit. Prerequisite: Senior status in psychology and permission of instructor.

499. Independent Research (I - 4 VC)

An individual, directed research investigation arranged with an instructor on a topic of mutual interest to the student and the instructor.

Projects require a final written report that includes a presentation of the problem, review of the literature, description of procedures, data analysis, and interpretation of results.

Prerequisite: Permission of instructor.

site: One introductory course in sociology or anthropology.

Department of Communication and Fine Arts

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The Department of Communication and Fine Arts includes instructional programs in art and design studies, music, media arts, and theatre.

Mission of the Department of Communications and Fine Arts

The general mission of the Department of Communication and Fine Arts (CFA) is to educate Students in the technical skills, the theoretical underpinnings and the socio-cultural context for the disciplines represented by the academic programs. CFA seeks to inspire students to make creative and expressive ideas in the foundation of their lives and in their work, which is the essence of the 'cultivation of the human mind and spirit'.* In its collaborative enterprises, CFA seeks to provide opportunities for students to work closely with faculty and staff in its academic courses, thus demonstrating that 'faculty and staff readily interact with students'.* Community members join the department for many productions and activities. CFA aims to incorporate appropriate elements from northern New Mexico's artistic, theatrical and musical culture in its courses and productions, which relate to the 'rich heritage of Hispanic and Native American cultures that are distinctive of the State of New Mexico'.* Ultimately, CFA aims to prepare its students for an active professional life in each discipline through the knowledge, creativity, teaching skills and dedication of its faculty and staff, showing 'excellence in teaching, discovering, preserving and applying knowledge'.*

* Quotes taken from the University Mission Statement, phrases 15, 3, 7, and 1, respectively.

Faculty

Drake Bingham (Media Arts)
Andre Garcia-Nuthmann (Music)
Pat Kikut (Art)
Miriam Langer (Media Arts)
James Leger (Music)
David Lobdell (Art)
Robert Fry (Media Arts)
Deborah Wagner (Music)

Resources and Facilities

New Mexico Highlands University provides a newly renovated communication arts building with state-of-the-art computer systems; music studios for group rehearsal and individual practice; art studios for ceramics, painting, drawing, jewelry and metalsmithing, printmaking, sculpture, and a fully-equipped art foundry; a 1000-seat proscenium stage theatre; a blue screen special effects studio; and a computer lab dedicated to video graphics, effects and animation.

Students in communication arts and fine arts are joined by other students on campus and by community members in the Concert Choir, Madrigal Choir, HU Jazz Singers, Pep Band, Chamber Orchestra, Guitar Ensemble, Jazz Ensemble, and Mariachi, as well as four main-stage productions. Two galleries in the fine arts building (Burriss Hall) and the design studies wing of the communication arts building serve as the focal point for artistic work produced through various classes and studios. The Art Club, Communication Arts Club, Music Club, and Theatre Club are an active part of campus life, as well as serving to promote their various programs.

Art

The goal of the art faculty at NMHU is to provide students with a strong foundation

in the visual arts. Experience and instruction in the historical fields provide students with knowledge of the skills, techniques, and critical thinking required of a committed artist. By nurturing ideas and creativity, as well as learning about the tradition of artmaking, a student is able to gain insight into his/her own personal expression.

Student Artwork and Supplies

NMHU's art discipline reserves the right to retain students' work submitted for course credit for a limited time for purposes of education, exhibition, and promotion.

A materials list for each studio course will be available for students during registration. Expenses may vary from course to course and some supplies will be provided from student fees.

Major in Art, Pre-Professional (B.F.A.)

Required courses: 36

Art	121	Fund of Design (3)
OR		
Des	121	Fund of Design (3)
Art	202	Drawing I (3)
Art	203	Drawing II (3)
Art	221	Painting I (3)
Art	241	Sculpture I (3)
Art	271	Printmaking I (3)
Art	491	Senior Colloquium (2)
Art	495	B.F.A. Exhibit (1)
AH	310	Art History I (3)
AH	311	Art History II (3)
AH	340	19th/20th Cent Art (3)
AH	380	Art of the Americas (3)
AH	450	Sem in Art History (3)

Electives: 30

Choose ten courses from the following list totaling 30 credits:

Note: All B.F.A. majors must have at least one complete sequence of coursework in a specific studio area, i.e., a sculpture major must complete Art 241, 341, 441, 442, and

Directed Study in Sculpture, 493.

Art	231	Ceramics I (3)
Art	251	Photography I (3)
Art	261	Jewelry & Metalsmithing I (3)
Art	281	Weaving I (3)
Art	285	Art Foundry I (3)
Art	302	Life Drawing I (3)
Art	321	Painting II (3)
Art	322	Painting III (3)
Art	331	Ceramics II (3)
Art	335	ST in Art Studio (1-4)
Art	341	Sculpture II (3)
Art	351	Photography II (3)
Art	361	Jewelry & Metalsmithing II (3)
Art	371	Printmaking II (3)
Art	372	Printmaking III (3)
Art	381	Weaving II (3)
Art	385	Art Foundry II (3)
Art	390/490	Directed Study in Art Studio (1-4)
Art	402	Life Drawing II (3)
Art	422	Painting IV (3)
Art	431	Ceramics III (3)
Art	435	ST in Art Studio (1-4)
Art	441	Sculpture III (3)
Art	442	Sculpture IV (3)
Art	460	Prof Editions (3)
Art	461	Jewelry & Metalsmithing III (3)
Art	472	Printmaking IV (3)
Art	481	Weaving III (3)
Art	485	Art Foundry III (3)
Art	498	Prof Internship (1-4)
MArt	233	Intro Elect Imag (3)
MArt	343	Electronic Paint (3)
MArt	443	Elect Photography (3)

Major Total: 66

Note: No minor is required for the completion of the professional degree program (B.F.A.) in art.

Major in Art, Liberal Arts (B.A.)

Required courses: 18

Art	121	Fund of Design (3)
OR		
MArt	121	Fund of Design (3)
Art	202	Drawing I (3)
Art	203	Drawing II (3)
AH	310	Art History I (3)
AH	311	Art History II (3)
AH	340	19th/20th Cent Art (3)

Electives: 18

Choose at least six art studio courses (18 credit hours) from the elective course list for the B.F.A. program.

Major Total: 36**Minor in Art (Art Studio Emphasis)**

Required courses: 15

Art	202	Drawing I (3)
Art	203	Drawing II (3)
Art	121	Fund of Design (3)
OR		
Des	121	Fund of Design (3)
AH	310	Art History I (3)
AH	311	Art History II (3)

Electives: 9

Choose a sequence of three courses in print-making, painting, or sculpture. Two of these courses must be 300 or 400 level.

Minor Total: 24**Minor in Art History**

Required courses:

Art	100	Intro to Art (3)
Art	121	Fund of Design (3)
OR		
MArt	121	Fund of Design (3)
AH	310	Art History I (3)
AH	311	Art History II (3)
AH	380	Art of the Americas (3)
AH	340	19th & 20th Cent Art (3)
AH	450	Sem in Art History (3) (Repeatable)

Minor Total: 21**Media Arts (B.F.A)**

Over the last decade, changes to the communications and design fields have been massive—the divisions that once existed between graphic design and communication arts have disappeared, creating a merged field that we call Media Arts. The B.F.A in Media Arts includes concentrations in Design, Interactivity and Multimedia, and Digital Filmmaking, with room for experimentation within each area. Students choose their area of concentration at the end of their second year.

Students who complete the B.F.A. in Media Arts will have expertise in design and technology, preparing them to work in this constantly evolving field, whichever concentration area they choose.

The many and varied media arts industries need career professionals who are broadly trained and adaptable. Graduates of this program may find positions in traditional graphic design, the film industry, in web development or as exhibit designers, to name just a few of the possibilities.

Students entering the B.F.A. program in Media Arts will be working towards building a professional portfolio in their area of concentration. In order to work towards this goal, yearly portfolio critiques are required.

Media Arts (BFA)

Required Core

5 Courses for 15 credits

MArt	121	Visual Concepts (3)
MArt	221	Videography (3)
MArt	233	Digital Imaging (3)
MArt	318	Principles of Multimedia (3)
MArt	320	Color Theory (3)

Students will complete one of the following areas of emphasis:

Communication Design Emphasis

Students will select 27 credit hours from the following:

MArt	309	Conceptual Imaging & Methods (3)
MArt	311	Form, Identity, and Advertising
MArt	312	Package, Product and Promotional Design (3)
MArt	313	Design for the Web (3)
MArt	314	Portfolio (3)
MArt	315	Design Issues (3)
MArt	317	Publication Design (3)
MArt	327	Web Production Workshop (3)
Art	340	19th and 20th Century Art History (3)
MArt	373	Typography (3)
MArt	415	Design and Social Advocacy (3)
MArt	433	Adv. Digital Imaging (3)
MArt	443	Electronic Photography (3)
MArt	490	Independent Study (1-4)
MArt	495	Exhibition Design (3)
MArt	496	Adv. Exhibition Design (3)
MArt	498	Professional Internship (1-6)
Interactivity & Multimedia Emphasis		
Student will select 27 credit hours from the following:		
MArt	326	Multimedia Project Management (3)
MArt	327	Web Production Workshop (3)
MArt	328	Principles of Game Design (3)
Art	340	19th & 20th Century Art History (3)
MArt	362	Video Effects (3)

MArt	363	Video Animation (3)
MArt	367	Character Animation (3)
MArt	410	Media Law & Ethics (3)
MArt	429	Adv. Game Design (3)
MArt	433	Advanced Digital Imaging (3)
MArt	456	Designing Physical Interfaces (3)
MArt	465	Advanced Media Projects (3)
MArt	492	Independent Research (1-6)
MArt	495	Exhibition Design (3)
MArt	496	Advanced Exhibition Design (3)

Digital Filmmaking Emphasis

Students will select 27 credit hours from the following:

MArt	322	Digital Filmmaking I (3)
MArt	323	Digital Filmmaking II (3)
MArt	362	Video Effects (3)
MArt	363	Video Animation (3)
MArt	366	Audio for Video, Radio and Animation (3)
MArt	367	Character Animation (3)
MArt	410	Media Law and Ethics (3)
MArt	413	Non-Linear Digital Video Editing (3)
MArt	436	Digital Filmmaking III (3)
MArt	446	Screenwriting (3)
MArt	464	Digital Filmmaking IV (3)
MArt	468	Advanced Lightwave Modeling (3)
MArt	469	Advanced Video Animation (3)

Electives: 24

Students will complete 24 elective credit hours in Media Arts in consultation with an advisor

Major Total: 66

Note: No minor is required for the completion of the professional degree program (B.F.A.) in Media Arts.

Media Arts (B.A.)

The Bachelor of Arts in Media Arts is available for students who choose to minor outside the Media Arts program. The major in Media Arts Addresses the basic concepts of design, multimedia and digital flimmkaing. Students who major in Media Arts will complete the degree with the skills to either continue their studies or add technical skill to other interest areas.

Media Arts (BA)

5 Courses 15 credits

MArt	121	Visual Concepts (3)
MArt	221	Videography (3)
MArt	233	Digital Imaging (3)
MArt	318	Principles of Multimedia (3)
MArt	320	Color Theory (3)

Electives: 21

Students will complete 21 elective credit hours in Media Arts in consultation with an advisor.

Major Total: 36

Minor in Media Arts

Students may minor in Media Arts if they are majoring in another discipline. The minor will give students a taste of some of the skill and topics that media arts students study in depth.

Required core: 15

MArt	121	Visual Concepts (3)
MArt	221	Videography (3)
MArt	233	Digital Imaging (3)
MArt	318	Principles of Multimedia (3)
MArt	320	Color Theory (3)

Electives: 9

Students will complete 21 elective credit hours in Media Arts in consultation with an advisor.

Minor Total: 24

Music

The music program at NMHU offers a variety of options to meet the needs of students

with personal or pre-professional interests in music. A wide range of choral and instrumental ensembles provide students from all areas of the campus with opportunities to participate in active music making. These include the concert Choir, Madrigal Choir, HU Jazz Singers, Pep Band, Chamber Orchestra, Guitar Ensemble, Jazz Ensemble, and Mariachi, (Vaqueros de la Sierra and Charros de Oro). Other choral and instrumental ensembles are offered as student interest dictates. Scholarship opportunities include activity awards and the Lorraine Schula Scholarship.

Students in the music program will become proficient in the necessary skills of music performance according to their particular choice of instrument or voice, while acquiring a thorough knowledge in the philosophy, aesthetics, literature and history of music from Western culture and from the Southwest. They will be enabled to enter the teaching profession with the requisite training and knowledge to teach music at the elementary and secondary levels.

Students wishing to pursue music studies in more depth may select music as a major or minor. The music performance concentration allows serious performers the opportunity to develop appropriate technical skills in preparation for a professional career as a musician. The music education concentration prepares music graduates for full licensure as K-12 music teachers in the public schools of New Mexico, and throughout the region. Three minors are offered as options to further develop musical skills. The music performance minor allows for students to pursue serious performance opportunities as soloists and as members of university ensembles; it is open to majors in music performance and music education as well as to all other majors. The music literature and history minor allows students to pursue research into a variety of

music in terms of their cultural, social and historical contexts: it is also open to majors in music performance and music education as well as to all other majors. The general music minor is designed for students who have a vocational interest in music as a supplement to their principal studies at NMHU.

In addition, the music program cooperates with other academic areas within the university by providing opportunities for musical training in conjunction with programs in mass communications, anthropology, southwest studies and languages and literature.

Bachelor of Arts in Music (B.A.)

Required core: 28

Mus	211	Theory I (4)
Mus	213	Theory II (4)
Mus	311	Western Art Music to 1750 (3)
Mus	312	Western Art Music since 1750 (3)
Mus	322	Choral Conducting (2)
Mus	323	Instrumental Conducting (2)
Mus	331	Theory III (3)
Mus	332	Theory IV (3)
Mus	360	Half Recital (1)
Mus	426	Arranging (3)

Core Total: 28

Concentration in Music Performance

Required courses: 10

(In addition to required core courses)

Mus	383	Ensemble (4)*
Mus	451	Applied Music (4)**
Mus	470	Full Recital (2)

*4 credits in ensemble in four different semesters minimum (repeatable).

**4 credits in applied music in two different semesters (repeatable).

Major Total: 38

Concentration in Music Education

Required courses: 12

(In addition to required core courses)

Mus	350	Multicult Approaches in Music Ed (4)
Mus	425	Instrumental Techniques (4)
Mus	451	Applied Music (4)**

**4 credits in applied music in two different semesters (repeatable).

Major Total: 40

Minor in General Music

This minor is for students who are majoring in fields other than music. No students majoring in music performance or music education may minor in general music.

Required courses: 6

Choose at least two courses from the following:

Mus	100	Intro to Music (3)
Mus	101	Rudiments of Music (3)
Mus	211	Theory I (4)
Mus	213	Theory II (4)
Mus	251	Applied Music (1)

Electives: 15

Choose 15 credits from the following, in consultation with an advisor:

Mus	235-435	ST: Music (1-4)
Mus	276-476	Musical Theater (2)
Mus	311	Western Art Music to 1750 (3)
Mus	312	Western Art Music since 1750 (3)
Mus	331	Theory III (3)
Mus	332	Theory IV (3)
Mus	350	Multicult Approach in Music Ed (3)
Mus	383	Ensemble (1-2)
Mus	425	Instrumental Techniques (4)
Mus	426	Arranging (3)
Mus	450	Sem in Music (1-4)
Mus	451	Applied Music (1-2)
Mus	471	History of Jazz (3)
Mus	472	Chicano & Latino

		Music(3)
Mus	473	Blues, Rock, & Soul Music(3)
Mus	474	Country Music (3)
<hr/> Minor Total: 21		

Minor in Music Performance

Students majoring in music performance or music education are allowed to minor in music performance. It is noted that for music performance majors, the minor hours in ensemble and applied music are in addition to those required for the major. Students majoring in other fields may also opt for the music performance minor as well.

Students must complete a minimum of nine credit hours in applied music:

Mus	251	Applied Music (1-2)*
Mus	451	Applied Music (1-2)*

*Note: These are repeatable courses. A minimum of 6 credit hours must be successfully completed in Music 451.

Students must complete a minimum of 12 credit hours in Ensemble:

Mus	283–383	Ensemble (1 – 2)*
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*Note: The course is repeatable. A minimum of six credit hours must be successfully completed in Music 383.

Minor Total: 21

Minor in Music Literature and History

Students majoring in music performance or music education are allowed to minor in music literature and history as well. It is noted that for music majors, courses required for the major do not count toward the minor as well. Students majoring in other fields may also opt for the music literature and history.

Mus	235–435	ST: Music (1–4)
Mus	311	Western Art Music to 1750 (3)
Mus	312	Western Art Music since 1750 (3)
Mus	450	Sem in Music (1–4)
Mus	471	History of Jazz (3)

Mus	472	Chicano & Latino Music (3)
Mus	473	Blues, Rock, & Soul Music (3)
Mus	474	Country Music (3)

Students may choose in consultation with their advisor an additional 9 credit hours at the 300 level or higher from history or literature courses in other fields, particularly anthropology, art, media arts, English, design studies, Spanish (and other languages), history or philosophy.

Minor Total: 21

Additional requirements:

A placement examination for Mus 211 will be given during the first class in the fall term and during freshman orientations; students who do not pass will be advised to enroll in Mus 101 prior to beginning their coursework for the major.

All music majors are required to pass the Keyboard Skills Proficiency examination. This examination is given during the first week of each semester, and during freshman orientation sessions. All students must pass this examination before permission is granted to enter Mus 331.

Mus 331 is generally taken during the sophomore or junior years. Students may take Mus 201 or Mus 251, to prepare for the exam should they need to do so. These courses will not substitute for passing the examination, however. The music program faculty recommends that this requirement be satisfied simultaneously with Mus 211.

Minor in Theatre

The Minor in Theatre has temporarily been suspended. Student applications are not being accepted at this time.

Courses in Art (Art)

100. Introduction to Art (3)

Presents the nature, vocabulary, media, and formal elements of art. Students will gain visual literacy enabling them to appreciate artistic, aesthetic, and social values in art.

121. Fundamentals of Design (3); 2,4

An introductory studio course in design basics for both two-dimensional and three-dimensional visual arts, including the concepts of unity, emphasis, balance, scales, rhythm, line, texture, space, motion, and color.

135-435. Selected Topics in Art (1 – 4 VC)

Course in a topic or topics of art studio: may be repeated with a change of content. Prerequisite: Permission of instructor.

202. Drawing I (3); 2,4

Basic drawing concepts and skills to assist the student in acquiring a graphic vocabulary in a variety of drawing media.

203. Drawing II (3); 2,4

A continuation of Art 202, with emphasis placed on the figure, still life, landscape, and personal imagery. Prerequisite: Art 202 or permission of instructor.

221. Painting I (3); 2,4

This course serves as an introduction to painting materials, techniques, color and fundamental composition. A brief history of painting will be acquired through lectures. Prerequisite: Art 121 and 202, or Des 121, permission of instructor.

231. Ceramics I (3); 2,4

The fundamentals of ceramic construction involving activities in pottery and sculpture, throwing, hand building, glazing, firing, and equipment design and maintenance. Prerequisite: Art 203 and Des 121 or permission of instructor.

241. Sculpture I (3); 2,4

Study of three dimensional design and techniques for sculpture in non-permanent materials. Prerequisite: Art 121 and 202, or permission of instructor.

251. Photography I (3); 2,4

Introduction to black and white photography. Studio and lecture will address camera operation, film selection, exposure and shutter speed, composition, film processing, and darkroom techniques.

261. Jewelry and Metalsmithing I (3); 2,4

A comprehensive study of the history, techniques, and processes used in the fabrication of jewelry and related small objects. Prerequisite: Art 203 and Des 121 or permission of instructor.

271. Printmaking I (3); 2,4

Acquisition of the basic printmaking skills of the relief processes of linoleum and woodblock, and knowledge of intaglio processes of line etch, soft and hard ground, and aquatint. The basic history of prints and editioning techniques will be acquired. Prerequisite: Art 121 and 202, or Des 121, or permission of instructor.

281. Weaving I (3); 2,4

The fundamentals of hand weaving, including off-loom, two- and four-harness and tapestry techniques, and design approaches. Prerequisite: Art 203 and Des 121 or Permission of instructor.

285. Art Foundry I (3); 2,4

This course is designed to introduce the student to all aspects of lost wax casting in bronze. Prerequisite: Art 241 or permission of instructor.

302. Life Drawing I (3); 2,4

This is an advanced drawing class working with the human figure, the landscape and still life. Students explore a variety of techniques, expressive and conceptual approaches in image making. Prerequisite: Art 203 or permission of instructor.

321. Painting II (3); 2,4

This course is a continuation of Art 221 with an introduction to advanced painting

techniques and concepts through still life, landscape, and the figure. Contemporary issues in painting will be explored through lectures. Prerequisite: Art 221 or permission of instructor.

331. Ceramics II (3); 2,4

The fundamentals of ceramic construction involving activities in pottery and sculpture, throwing, hand building, glazing, firing, and equipment design and maintenance. Prerequisite: Art 231 or permission of instructor.

334–434. Practicum (1 – 4 VC)

Experience in an on-campus or work placement. Prerequisite: Permission of instructor.

341. Sculpture II (3); 2,4

A continuation of Art 241. Exploration of three-dimensional form in permanent materials. Prerequisite: Art 241, or permission of instructor.

351. Photography II (3); 2,4

A continuation of Art 251. An emphasis is placed on critical issues of photography and creativity. Prerequisite: Art 251, or permission of instructor.

361. Jewelry and Metalsmithing II (3); 2,4

A comprehensive study of the history, techniques, and processes used in the fabrication of jewelry and related small objects. Prerequisite: Art 261 or permission of instructor.

371. Printmaking II (3); 2,4

A continuation of Art 271 with emphasis on advanced methods of intaglio and relief processes in color, and introduction to black and white stone lithography. Prerequisite: Art 271, or permission of instructor.

372. Printmaking III (3); 2,4

A continuation of Art 371 with emphasis placed on innovative techniques in intaglio, the art of monotype, and advanced practices in lithography including color. Attention will be placed highly on individual imagery. Prerequisite: Art 371, or permission of instructor.

381. Weaving II (3); 2,4

The fundamentals of hand weaving, including off-loom, two- and four-harness and tapestry techniques, and design approaches. Prerequisite: Art 281 or permission of instructor.

385. Art Foundry II (3); 2,4

A continuation of Art 285 with an emphasis on the aesthetics of cast sculpture. Prerequisite: Art 285 or permission of instructor.

390 – 490. Independent Study (1–4 VC)

Individual research in a selected area of art history or criticism arranged with an instructor. Prerequisite: The appropriate 300-level course and permission of instructor.

402. Life Drawing II (3); 2,4

A continuation of Art 302. Prerequisite: Art 302 or permission of instructor.

422. Painting IV (3); 2,4

A continuation of Art 421 with emphasis placed on an individual topic decided upon both student and instructor resulting in a series of paintings. This course is intended for majors anticipating a B.F.A. or B.A. degree in studio art. May be repeated for additional credit.

431. Ceramics III (3); 2,4

A continuation of Art 331, including firing and glaze formulation. Course may be repeated for credit. Prerequisite: Art 331 or permission of instructor.

441. Sculpture III (3); 2,4

A continuation of Art 341, and an introduction to bronze casting. Prerequisite: Art 341 or permission of instructor.

442. Sculpture IV (3); 2,4

A continuation of Art 441. Development of a personal aesthetic in sculpture course intended for majors anticipating the B.F.A. or B.A. degree. Course is repeatable for multiple credit.

460. Professional Editions (3)

This course is designed for B.F.A. candidates majoring in the Printmaking discipline within

the studio arts program. The course instructs students in the methods and practices of fine art editing of relief, intaglio and lithographic media. Prerequisite: Permission of instructor.

461. Jewelry and Metalsmithing III (3); 2,4

A continuation of Art 361. Prerequisite: Art 361 or permission of instructor.

472. Printmaking IV (3); 2,4

Continuation of Art 372 with emphasis placed on an individual topic decided upon by both student and instructor resulting in a suite or series of images in print. This course is intended for majors anticipating a B.F.A. or B.A. in art studio art. May be repeated for additional credit.

481. Weaving III (3); 2,4

A continuation of Art 381 which will involve experimental problems. Prerequisite: Art 381 or permission of instructor.

485. Art Foundry III (3); 2,4

A continuation of Art 385 with an emphasis on refining aesthetic knowledge and technical skills. Course may be repeated for multiple credit. Prerequisite: Art 385 or permission of instructor.

491. Senior Colloquium (2)

This course is taken during the fall semester of the senior year of a B.F.A. candidate. The student will make slides, prepare a portfolio and artist's statement. Prerequisite: Permission of instructor.

493. Directed Study in Art Studio (1 – 4 VC)

Advanced independent work arranged with a faculty member to expand upon knowledge and techniques gained in other studio classes. This course is intended for majors anticipating a B.F.A. or a B.A. degree in studio art. May be repeated for credit. Prerequisite: The appropriate 400 level course or permission of instructor.

495. B.F.A. Exhibit (1)

Preparation for exhibition of works in the student's major area that demonstrates ability and achievement. Faculty will provide some

guidance in the projects required; however, evaluation is based on an individual's self-motivated approach. Prerequisite: Permission of instructor.

498. Professional Internship (1–6 VC)

A student will work under the joint supervision of a work-supervisor and an art faculty member either at an on- or off-campus site.

Courses in Art History (AH)

310. Art History I (3)

Survey course of Western art and architecture from pre-history to the Medieval period.

311. Art History II (3)

Survey course of Western art and architecture from the Renaissance to the modern period.

340. 19th and 20th Century Art (3)

A survey of European and American art from the late eighteenth century until the present. Major artists and trends in painting, sculpture, photography and architecture will be discussed with particular emphasis on personality and innovation. Prerequisite: AH 311 or permission of instructor.

380. Art of the Americas (3)

A survey of the arts of the Americas, covering the pre-Columbian indigenous cultures, Hispanic colonial presence, and contemporary Native American and Hispanic arts.

390–490. Independent Study (1 – 4 VC)

Individual research in a selected area of art history or criticism arranged with an instructor. Prerequisite: AH 310, AH 311, or permission of instructor.

450. Seminar in Art History (3)

Seminar course in a topic or topics of art history. May be repeated with a change of content. Prerequisite: AH 310, AH 311, or permission of instructor.

Courses in Media Arts (MArt)

121. Visual Concepts (3)

An introductory course in visual literacy for both two-dimensional and three-dimensional visual arts, including the concepts of unity, emphasis, balance, scales, rhythm, line texture, space, motion, and color. Students will become acquainted with these fundamental visual concepts through the use of both manual and digital tools.

124. Beginning Speech (3)

A beginning course in public speaking with emphasis on the composition and delivery of the extemporaneous speech.

135-435. Selected Topics in Media Arts (1-4 VC)

Course in a topic in media arts: may be repeated with a change of content. Prerequisite: Permission of instructor.

221. Videography (3); 2,2

The study of the basic production theories of video production, with special emphasis in the areas of camera operation, shot composition, shot sequencing, and lighting.

233. Digital Imaging (3)

An introduction to computer generated graphics technology in art and design. Students will generate and manipulate various image types including vector graphics, bit-maps, and animations, as well as, determine the image type useful for given situations.

234-434. Media Arts Practicum (1-4VC)

Campus work placement with specific responsibilities appropriate to the discipline.

261. History of Motion Pictures (3) 2,2

A course for both majors and non-majors intended to familiarize students with the technological and aesthetic evolution of motion picture. Students will be introduced to the major genres through viewing and analyzing representative films. Satisfies the fine arts requirement in the general education core.

290-490. Independent Study (1-4VC)

Individual directed study arranged with an instructor. Prerequisite: Permission of instructor.

298-498. Internship (1-6VC)

A student will work under the joint supervision of a work-supervisor and a faculty member either at an on-or off-campus site. Prerequisite: Permission of instructor.

309. Conceptual Imaging and Methods (3)

Emphasis on development and improvement of conceptualizing and visual problem-solving.

311. Form, Identity, and Advertising (3)

An exploration of print media designs and production for public, commercial, and corporate communications. This course introduces current materials, processes, and technologies.

Emphasis will be on aesthetic and commercial conceptualization and visual problem-solving. Prerequisite: Some familiarity with computer-based graphics applications.

312. Packaging and Promotional Design (3)

A continuation of the print media design process and an introduction to other surface graphics applications such as packaging and signing systems design. Emphasis is on the use of the computer as a primary tool in the design and documentation process. Prerequisite: Some familiarity with computer-based graphics applications.

313. Design for the Web (3)

This course is designed to introduce digitally savvy students to web site structure, design, function and terminology.

314. Portfolio (3)

This is considered the official exit course for the discipline. Subject areas include portfolio and resume development, copyright and liability, job search and interview procedures, professional associations and continuing education.

315. Design Issues (3)

Examines global relationships between design movements, styles, and socio-economic issues. The notion of design in the future is addressed. Projects focus on the impacts of stylization in conjunction with problem-solving and digital skill development.

317. Publication Design (3)

The study of computerized design, layout, typography, illustration, photo manipulation, and work processing applications in the preparation of printer materials. Prerequisite: Familiarity with the operation of a Macintosh-based computer, an adequate keyboarding skill of 40 wpm or equivalent.

318. Principles of Multimedia (3)

Study of the principles and implementation of multimedia production, especially in the creation on interactive movies and websites.

320. Color Theory (3)

Understanding color is fundamental to understanding and producing effective art and design. This course will explore the physics, aesthetics and psychology of color. An emphasis will be placed on light vs. pigment theories in the class.

322. Digital Filmmaking I (3);2,2

A course designed to familiarize students with the technical skills utilized by film production crews and the techniques of coordinating crew activities. Prerequisite: Media 221 or Permission of instructor.

323. Digital Filmmaking II (3); 2,2

A course designed to provide students an understanding of cinema principles and training in the performance techniques of acting for the camera. Prerequisite: Media 322 or Permission of instructor.

326. Multimedia Project Management (3)

The course is designed to teach students how to work in creative teams for the production of multimedia materials such as CS-ROMs, interactive websites, or DVDs. Prerequisite: Media 318.

327. Web Production Workshops (3); 2,2

A course dealing with internet history, information architecture, and interface design and usability. This class will address issues such as change in technologies, designing for the small interface (cell phones and palm pilots), and streaming audio and video. Prerequisite: Media 233 or Permission of instructor.

328. Principles of Game Design (3)

This course provides the basic theories and implementation of game design. Students will study structure, strategy and work on developing their own games, digital or analog.

362. Video Effects (3);2,2

Advanced study of video graphics, focused on computer manipulations of video imagery.

363. Video Animation (3);2,2

The study of 3-D video animation, utilizing Lightwave.

366. Audio for Video, Radio, and Animation (3)

The course prepares students to create multiple-track audio for use in a variety of video, film, and multimedia programs. Animated programs are given special emphasis in the course.

367. Character Animation (3)

This course focuses on character animation. Students will develop their skills in 2D and clay animation by learning the concepts of storyboarding, character movement, walk cycles, facial expression, audio syncing and camera angles.

373. Typography (3)

An introduction to typographic form and technology. The course covers the design and appropriateness of letterform systems in the communication process and gives experience with current typographic production equipment and techniques. Prerequisite: Permission of instructor.

410. Media Law and Ethics (3)

Study of the laws that govern mass media; codes of ethics as controlling factors; net

interpretation of First Amendment rights.

413. Non-Linear Digital Video Editing (3)

The study of video editing techniques and systems which have emerged from the intersection of television and computer techniques.

414. Portfolio (3)

An exit course in which media arts students prepare their individual resumes and portfolios, research the job market, refine presentation and interview techniques. Prerequisite: Graduating senior in Fine Arts Or Media Arts (BA and BFA candidates).

415. Design and Social Advocacy (3)

This class involves working in a group situation to promote the efforts, visibility and ideas of a local non-profit organization. It involves selecting a cause, determining what is needed with regard to design, raising the funds to support the appropriate venues and creating, designing and completing the project.

429. Advanced Game Design (3)

The study of more complex concepts of game design including the use of programming and concept development. Students will complete an interactive game during the course.

433. Advanced Digital Imaging (3)

This class is designed to further the skills of the digitally experienced student with various and emergent image types and software. Emphasis at the advanced level is on complexity, efficiency, appropriateness, and output.

436. Digital Filmmaking III (3)

A course devoted to the analysis, planning and on-set skills required by the director in producing a digital film.

443. Electronic Photography (3);2,2

Electronic Photography explores the technology and application of photographic image making. Students will use various hardware and software to capture and manipulate

digital imagery.

446. Screenwriting (3)

The study of the format, the writing styles, and the creative and technical techniques useful in the development of the dramatic screenplay for television and film.

450. Seminar (1-4VC)

Seminar in topic(s) appropriate to the discipline. Prerequisite: Permission of instructor.

456. Designing Physical Interfaces (3);2,2

This course focuses on physically interactive technology, enabling student's work to sense and respond to its environment. This course is geared towards people interested in exploring new possibilities for screen based and installation art, robotics, and "smart" architecture. The course begins with the basic theories of electronics and leads to fully functional interactive projects. Through current examples, technical lectures, and hands-on supervised work time, students will learn the process of building projects which react to physical interactions, as well as, build a series of working prototypes.

464. Digital Filmmaking IV (3);2,2,

A capstone course in digital filmmaking that requires the students to write, produce and direct a professional quality digital film.

465. Advanced Media Projects (3)

This course is for advanced students who wish to develop professional quality projects for their portfolio. Students will have their current work evaluated, then focus on one project to highlight their strongest skills. Students will look at existing professional work in Video Effects, 3D Animation, Web Development, Interactive Media, Animation, and Video/Audio Production. Students will have one-on-one group critique, resulting in presentation of a final high quality media project.

468. Advanced Lightwave Modeling (3)

The study of three-dimensional computer modeling techniques for virtual objects.

Prerequisite: Media 363.

469. Advanced Video Animation (3)

The study of advanced techniques of lightwave animation, including the use of metanurbs, inverse kinematics, multiple-target morphing, and quasi-cel animation. Prerequisite: Media 363.

475. Advanced Screenwriting Workshop (3)

The goal of advanced screenwriting is to establish a workshop atmosphere, where students can develop seriously and intently into the discussions of each other's work. Students will be expected to complete a feature-length screenplay. Prerequisite: Media 446.

490. Independent Study (1-4VC)

Individual directed study arranged with an instructor. Prerequisite: Permission of instructor.

491. Colloquium in Media Arts (1)

Students participate in discussions and reports on current issues of concern to the profession. May be repeated. Prerequisite: Permission of instructor.

492. Independent Research (1-5VC)

Independent research under the direction of a faculty member. Prerequisite: Permission of instructor.

495. Exhibition Design (3)

In this class students will be introduced to exhibition design principles. Projects include the participation in designing of a physical space, the static and interactive elements, and combining design, construction and multimedia skills to produce a final exhibit for the public.

496. Advanced Exhibition Design (3)

This advanced course is for students who have already taken Exhibition Design. In this class students will expand their understanding of designing in a physical space, static and interactive elements, and combining design, construction and multimedia skills to produce a final exhibit for the public. Prereq-

uisite: Media 495.

498. Professional Internship (1-6VC)

A student will work under the joint supervision of a work-supervisor and a faculty member either at an on- of off-campus site. Prerequisite: Permission of instructor.

Courses in Music (Mus)

100. Introduction to Music (3); All

A survey of the range of musical expressions devised by humans in all times and places. Examines music as a uniquely human expressive means, with particular attention to its historical, social, and cultural contexts. Satisfies the fine arts requirement in the general education core.

101. Rudiments of Music (3); Fa, Sp

A study of the basic elements of music, especially the rhythmic, melodic, and harmonic aspects. Intended as a first course in music theory for students with little or no academic music background, and as a review of basic musical concepts for potential music majors and minors in preparation for the music theory sequence. Satisfies the fine arts requirement in the general education core.

201. Piano Class (1); 0,2; Fa, Sp

Study of the fundamentals of keyboard technique, for students with little or no prior experience. This class serves as preparation for the proficiency exam. Majors may test out of this class by proficiency exam.

203. Voice Class (1); 0,2; Fa, Sp

Study of the fundamentals of singing, vocal production, and technique. Repertoire will be drawn from Classical, Broadway, and Folk song traditions.

206. Guitar Class I (1); 0,2; Fa, Sp

Introduction to guitar performances in all styles. Includes basic guitar performance technique, music reading, chordal accompaniment, and melody playing.

207. Guitar Class II (1); 0,2; Sp

A continuation of Music 206. Intermediate-level study of guitar technique, and exploration of various styles of guitar performance. Prerequisite: Mus 206, or permission of instructor.

211. Theory I (4); 4,0; Fa

Basics of functional harmony in Western Art Music Tradition. Includes harmonic analysis, composition, and ear training. Prerequisite: Mus 101 or successful completion of the Theory Placement Exam.

213. Theory II (4); 4,0; Sp

Further study of material presented in Mus 211. Prerequisite: Mus 211.

235–435. Selected Topic in Music (1–4 VC); All

Course in a topic or topics in music: may be repeated with change of content.

251. Applied Music (1-2 VC); 1-2,0; Fa, Sp

Private study in voice, keyboards, guitar, string, wind, and percussion. Students receive one 30 minute lesson per week for each credit hour and perform before a jury at the end of the semester. Course may be repeated for credit. Prerequisite: Permission of instructor.

276-476. Musical Theatre (2); Fa, Sp

Participation in a current musical theatre production in an on-stage voice role. Assignment varies from production to production. Prerequisite: Permission of instructor.

283–483. Ensemble (1–2 VC); All

Musical performance in large- and small-group contexts, both choral and instrumental. See the Schedule of Classes for a list of ensembles offered during any given semester or summer session. Course may be repeated for credit. Prerequisite: Permission of instructor.

290–490. Independent Study

(1–4 VC); 1-4,0; All

Individual directed study arranged with an instructor. May not replace a course listed in the catalogue. Prerequisite: Permission of

instructor.

311. Western Art Music to 1750 (3); 3,0; Fa

An overview of the history of western art music from the ancient world through the Medieval, Renaissance, and Baroque periods.

Prerequisite: Mus 213.

312. Western Art Music since 1750 (3); 3,0; Sp

An overview of the history of western art music pre-Classical periods to the present.

Satisfies the fine arts requirement in the Gned core. Prerequisite: Mus 213.

322. Choral Conducting (3); 2,2; Alt Sp

A conducting course focusing on the rehearsal and performance of works for choral ensembles. Topics include baton technique, score analysis, rehearsal techniques, and performance preparation. Prerequisite: Mus 213.

323. Instrumental Conducting (3); 2,2; Alt Fa

A conducting course focusing on the rehearsal and performance of works for instrumental ensemble. Topics include baton technique, score analysis, rehearsal techniques, and performance preparation. Prerequisite: Mus 213.

331. Theory III (3); 3,0; Fa

Study of harmonic function in chromatic music, particularly focusing on modulation and advanced harmonic structures. Prerequisite: Mus 213.

332. Theory IV (3); 3,0; Sp

Exploration of theories and techniques of the 19th and 20th century composition. Prerequisite: Mus 331.

350. Multicultural Approaches in

Music Education (3); 3,0; Alt Fa

Music education methods from an ethnomusicological perspective. Examination of the cultural basis of music, and how that focus can be important to students in the music classroom.

360. Half Recital (1); 1,0; Fa, Sp

The student will prepare a 30 minute public recital. Prerequisite: Permission of instructor.

400. Audition (3); 3,3

Audition class is an upper division class which will explore audition techniques and preparation for community, university, and professional theater and music theater. Prerequisite: One semester of acting class (theater) and one semester of voice class (music).

425. Instrumental Techniques (4); Alt Sp

Study of performing and teaching techniques of instruments of the band and orchestra.

426. Arranging (3); 3,0; Alt Sp

A study of the techniques of arranging instrumental and choral music for bands, choirs, and other ensembles.

450. Seminar in Music (1 – 4 VC)

Seminar course in a topic or topics in music.

451. Applied Music (1 – 2 VC); 1-2,0; Fa, Sp

Advanced private study in voice, keyboard, guitar, string, wind, and percussion instruments. Students receive one 30-minute lesson per week for each credit hour and perform before a jury at the end of the semester. Course may be repeated for credit. Prerequisite: Permission of instructor.

470. Full Recital (2); 2,0; Fa, Sp

The student will prepare a 60-minute public recital. Prerequisite: Permission of instructor.

471. History of Jazz (3); 3,0; Alt Sp

Study of the origins and development of jazz from traditional New Orleans jazz through big band swing, bebop and contemporary styles. Satisfies the fine arts requirement in the general education core.

472. Chicano and Latino Music

in the USA (3); 3,0; Alt Fa

An examination of the varied musical expressive forms of Spanish speaking groups in the United States, both in the Southwest (New Mexico, Texas, and California) and the East coast (Florida and New York). Satisfies the

fine arts requirement in the general education core.

473. Blues, Rock, and Soul

Music (3); 3,0; Alt Fa

An examination of the growth and development of blues and rock musical styles from their roots in late nineteenth century folk and popular musical traditions to their emergence as an international phenomena in the twentieth century. Emphasis is on understanding the cultural significance of these styles as well as their technical musical structure. Satisfies the fine arts requirement in the general education core.

474. Country Music (3); 3,0; Alt Sp

An examination of the growth and development of country music from its beginning as a rural southern folk tradition through its emergence as a national commercial popular music industry. Emphasis on the processes of change which have determined the character and style of country music. Satisfies the fine arts requirement in the general education core.

Department of Computer and Mathematical Sciences

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The Department of Computer and Mathematical Sciences offers bachelor of science, bachelor of arts and bachelor of science engineering degrees in mathematics, computer science, engineering, as well as minors in computer science, mathematics and physics.

Mission of the Department of Computer and Mathematical Sciences

The Mission of the Department of Computer and Mathematical Sciences is to train students in the fields of Computer Science, Mathematics, and Engineering. By encouraging and developing problem-solving, numerical methods, mathematical prowess, critical/analytical thinking, and practical, laboratory-based skills, our students will be well-prepared for careers in any combination of these fields, either via solid preparation for further graduate education or immediate entrance into the workforce (industry, teaching, and national labs).

The mission of the engineering program is to prepare students for professional practice and graduate studies in engineering. By offering fundamental core courses in both electrical and mechanical engineering with specialized tracks in General or Computational engineering, the objective of the program is to produce engineers versed in interdisciplinary team approaches to problem solving. The Engineering Program has set its primary goals: (1) the graduation of BSE students with a broad-based knowledge of engineering analysis and skilled in the art of engineering synthesis and design; (2)

the graduation of BSE students possessing skills to communicate effectively their work in written technical reports and oral project presentations; and (3) to graduate students ready to pass the national Fundamentals of Engineering (FE) exam which is required for licensure as a Professional Engineer (PE). Both traditional and contemporary engineering curriculum is offered in the student's selection of either the General or Computational engineering tracks. Importantly, the program is undertaking standards consistent with rigorous national ABET review and accreditation by 2012.

Faculty

Dick Greene (Engineering Consultant)
John S. Jeffries (Mathematics)
C.G. "Tino" Mendez (Mathematics)
Curtis Sollohub (Computer Science)
Jon Schlosser (Mathematics)
Hossein Tahani (Computer Science)
George Zrilic (Engineering)

Resources and Facilities

With its move into a new Science Building in Fall 2004, Computer Science now has new computer laboratories and equipment for them. There are two large teaching labs, three small research labs, a student work lab, and an area set aside for network experimentation. The labs are equipped for the most part with machines running both XP and Linux. Software includes symbolic and numerical mathematics products, compilers for a good number of languages, integrated development environments, web and multimedia development tools, databases, and packages for special fields such as artificial intelligence. Some computers are set aside for student experimentation with the understanding that students may install any software as long as copyright laws are not violated.

The Engineering Program occupies classroom, office, and laboratory spaces in the

new Hilton Science Center. Modern teaching laboratories, equipped with state of the art equipment, are available in the areas of computer science, simulation, modeling, electrical devices, digital electronics, micro-processors, fluid mechanics, bioengineering, biotechnology, and materials science. All research involves undergraduate students who present their work at regional and national engineering conferences. Modern computational facilities, with internet connectivity, are available for student use, as is a student lounge, student offices, and special projects laboratory.

Computer Science

The discipline of computer science offers to NMHU undergraduates a degree in computer science with three areas of concentration: software/hardware systems, information systems, and an individualized program of study. Two minors are also offered. These are designed so that students may convert readily to the computer science major.

The computer science program at NMHU is a five-year curriculum dependent on the student's academic preparation prior to enrollment at NMHU. Most students will need the full five years to complete the program; however, if an entering freshman has a solid foundation in mathematics, English, and science, the student can enter the computer science curriculum at an advanced level and complete the program within four years.

Major in Computer Science (B.S./B.A.)

Required core: 22

CS	144	Intro to Comp Sci (3)
CS	145	Intro to Obj Or Prog (3)
CS	245	Adv Comp Prog (3)
CS	350	Prog Sem 1 (3)
CS	431	Database Mgmt (3)
CS	451	Software Engr (3)

CS	481	Sr. Project Design (1)
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CS	482	Sr. Proj Implem (3)
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Core Total: 22

Required concentration:

Choose from the software and hardware systems, information systems, or individualized software/hardware systems concentration (B.S.).

Concentration in Software/Hardware Systems (B.S.)

Students of computer science concentrating in software/hardware systems follow a program of study designed in line with the guidelines established by the Association for Computing Machinery. Students study computer programming systems for a wide variety of applications in professional, scientific, engineering, and technical settings. Thorough exposure, with plenty of hands-on laboratory work, is given in computer science basics, one or more computer languages, and such topics as data and file structures, database management, algorithms, machine organization, assembly language, and operating systems. A solid foundation is acquired in mathematics: computer science students complete mathematics courses through introductory calculus, applied linear algebra, and introductory statistics.

The program at NMHU stresses not only solid technical and theoretical knowledge, but also the real-world skills of written and oral communication, planning, and organization of tasks. Students completing the major should be prepared to work in industry or go on to graduate school. Minor students may readily convert to major status.

Required courses: 19

CS	341	Mach Arch and Assemb Lang Prog (3)
CS	345	Data & File Struc (4)
CS	421	Adv Data Struct and Algorithm Dev (3)
CS	443	Operating Systems (3)

CS	450	Prog Sem 2 (3)
CS	461	Prog Lang (3)
Electives: 9		
Choose one course from the following list:		
CS	314	The C++ Programming Language (3)
CS	316	Prog in Lisp & Prolog (3)
CS	328	C and Unix (3)
CS	418	Multimedia Progrm (3)
CS	463	Web Programming (3)
CS	471	Artificial Intel (3)

Also choose at least six credits in courses at the 300- or 400-level in computer science, mathematics, or an appropriate science, selected with the approval of the major advisor.

Additional required courses: 23

Engl	367	Tech Writing (3)
Engr	384	Microprocessor Design (3)
Math	211	Calculus 1 (4)
Math	252	Calculus 2 (4)
Math	317	Discrete Math (3)
Math	320	Linear Algebra (3)
Math	345	Math Statistics 1 (3)

Major Total: 73

Minor in Computer Science with Concentration in Software/Hardware Systems

Required courses: 10

CS	144	Intro to Comp Sci (3)
CS	145	Intro to Obj Or Prog (3)
CS	245	Adv Comp Prog (3)
CS	327	Hands on UNIX (1)
Electives: 9		
Choose one programming course from the following list:		
CS	314	The C++ Programming Language (3)
CS	316	Prog in Lisp & Prolog (3)
CS	328	C and Unix (3)
CS	418	Multimedia Progrmmg (3)
CS	463	Web Programming (3)
CS	471	Artificial Intel (3)

Choose at least six credits in courses at the 300- or 400-level in computer science.

Additional required courses: 3

Math	317	Discrete Math (3)
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Minor Total: 22

Concentration in Information Systems (B.A.)

Students within this concentration learn to apply skills and knowledge in programming and systems design to the world of business. A special selection of courses from the School of Business is offered in conjunction with intensive courses in contemporary computer science and information systems. Minor students may readily convert to major status.

Computer science students with a concentration in Information Systems find work in diverse business settings, either managing or designing computer systems. The program at NMHU stresses a solid foundation in programming involving data and file structures and gives students practical experience in hardware, operating systems, and networks. In addition, specific application to the world of business systems is provided by courses in business data processing, software design, and systems analysis.

Required courses: 14

(In addition to the computer science core)

CS	211	Intro to Obj Oriented COBOL for Bus Data Proc (3)
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OR

CS	318	Business Apps Prog (3)
CS	331	Decision Supp Sys (3)
CS	351	Sys Des & Analysis (3)
CS	457	Comp Networks (3)
CS	483	Senior Proj Pres (2)

Electives: 9

Choose three credits from the following list:

CS	131	A Gentle Intro to Internet (1)
CS	325	Comp Hardware

		Install and Maint (1)
CS	326	Comp Software Installation (1)
CS	327	Hands on UNIX (1)
CS	335	Select Topics (1)

Also choose at least six credits in courses at the 300- or 400-level in computer science, mathematics, business, or an appropriate discipline, selected with the approval of the major advisor.

Additional required courses: 15

Acct	287	Prin of Fin Acct (3)
Math	317	Discrete Math (3)
OR		
Math	345	Math Statistics 1 (3)
Engl	367	Tech Writing (3)
Mgmt	303	Prin of Mgmt (3)
Mgmt	386	Hum Res Mgmt 1 (3)

Major Total: 60

Minor in Computer Science with Concentration in Information Systems

Required courses: 18

CS	144	Intro to Comp Sci (3)
CS	145	Intro to Obj Or Prog (3)
CS	245	Advanced Computer Programming (3)
CS	351	Sys Design and Analysis (3)
Math	317	Discrete Math (3)
CS	211	Intro to Obj Oriented COBOL for Bus Data Proc (3)
OR		
CS	318	Business Apps Prog (3)

Electives: 5

Choose one course from the following list:

CS	331	Decision Support System (3)
CS	431	Database Mgmt (3)
CS	451	Software Engr (3)

Choose two courses from the following list:

CS	325	Comp Hardware Install and Maint (1)
CS	326	Comp Software

		Installation (1)
CS	327	Hands on UNIX (1)
OR		
CS	135-335	Sel Topics in Comp Sci (1-4)

Minor Total: 23

Major in Computer Science with an Individualized Concentration (B.S./B.A.)

Computer Science offers a major leading to a bachelor of arts or bachelor of science degree which permits students to develop their own computer science-related course of study. Programs under this option must consist of a coherent sequence of courses and must be approved by a faculty member from the related field. Possible programs of study include scientific computing, communication technology, networking, computer engineering, artificial intelligence, graphics, or advanced multimedia and web programming studies to prepare students for graduate work. Students are strongly encouraged to seek approval prior to completing courses to fulfill this requirement.

Required courses: 3

(In addition to the computer science core)

CS	443	Operating Sys (3)
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Electives: 12

Choose at least 12 credits in computer science selected with the approval of the major advisor:

Additional required courses: 30

Engl	367	Tech Writing (3)
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Choose at least 12 credits in one or more related fields with the approval of the major advisor.

Choose at least nine credits in courses at the 300 or 400 level in computer science or in one or more related fields with the approval of the major advisor.

Choose at least six credits in mathematics starting with Math 140 or above.

Major Total: 67

Computer and Mathematical Modeling

The major in computer and mathematical modeling encourages student research, fostering new creative contexts for application of theory to real world applied problems. Career opportunities for program graduates will be widened as well. Selected upper division course sequences emphasizing applied topics will provide exposure to concepts and technical materials not usually covered in standard math and computer science majors. With the assistance of major facilities in our area, senior internships will allow students the opportunity for mentored projects design and participation in a group problem-solving environment as well as providing students with the opportunity to establish valuable connection and references. Features of this interdisciplinary major are three specialty tracks of applied upper division investigation: Modern Cryptography, Discrete Dynamical Systems and Chaos and Applied Multivariate Statistics.

Major in Computer and Mathematical Modeling (BS)

Required courses in Computer Science:
26 credits

CS	145	Computer Science 1 (3)
CS	245	Computer Science 2 (3)
CS	327	Hands-on UNIX (1)
CS	328	C and UNIX (3)
CS	350	Prog Seminar 1 (3)
CS	421	Advanced Data Structure & Algorithm Develop (3)
CS	451	Software Engineering (3)
CS	481	Sr. Project Design (1)
CS	482	Senior Project Implementation (3)
CS	477	Parallel & Distributed Programming (3)

Required courses in Mathematics :
40 credits

Math	211	Calculus 1 (4)
Math	252	Calculus 2 (4)
Math	273	Calculus 3 (4)
Math	317	Discrete Mathematics (4)

Math	320	Linear Algebra (4)
Math	325	Differential Equations (3)
Math	345	Mathematical Stats 1 (3)
Math	407	Mathematical Models (3)
Math	421	Applied Abstract Algebra (3)
Math	425	Intro to Real Analysis (3)
Math	426	Intro to Complex Variable (3)
Math	444	Matrix Theory & App's (3)

Specialization Sequences

The following comprise a list of three different 400-level tracks with a focused curriculum concentration.

Students will select, with approval by their advisor, one of these tracks to study in their fifth year.

Modern Cryptography

Track 1: 12 credits

Math	415	Intro to Cryptography (3)
Math	419	Modern Methods of Cryptography (3)

And two 400- level Computer Science courses approved by Advisor.

OR

Discrete Dynamical Systems and Chaos

Track 2: 12 credits

Math	401	Discrete Chaos and Fractals (3)
Math	402	Discrete Dynamical Systems and Chaos (3)

And two 400- level Computer Science courses approved by Advisor.

OR

Applied Multivariate Statistics

Track 3: 12 credits

Math	460	Applied Multivariate Statistics 1 (3)
Math	461	Applied Multivariate Statistics 2 (32)

And two 400- level Computer Science courses approved by Advisor.

AND

Other requirements: 9 credits

Math 4XX Elective (3)

CS 4XX Elective (3)

Engl 367 Technical Writing (3)

Total Required: 87 hours

Mathematics

For the mathematics major and minor, NMHU offers a relatively broad program. A student can emphasize the applied areas of mathematics for a future in industry, the theoretical areas for advanced study, or a combination of the two for teachers. The mathematics discipline also provides supportive courses for academic programs throughout the university at both the undergraduate and graduate levels.

Major in Mathematics (B.S.)*

Proficiency and introductory courses, including Math 100, Math 120, Math 140, and Math 150, may be required to correct deficiencies in mathematics preparation.

Required courses: 34

Math 211 Calculus 1 (4)

Math 252 Calculus 2 (4)

Math 273 Calculus 3 (4)

Math 301 Intro to Mathematical Proofs (3)

Math 325 Applied Ord Diff Equations (3)

Math 320 Linear Algebra (3)

Math 345 Math Statistics 1 (3)

Math 421 Appl. Abstract Algebra (3)

Math 425 Into Real Analysis (3)

Math 430 Math Prob Solving (4)

Electives: 6

Choose two 400-level math electives.

Additional required courses: 6

CS 144 Intro Comp Sci (3)

CS 145 Intro Obj Or Prog (3)

*Science minor required

Major Total: 46

Major in Mathematics (B.A.)

The bachelor of arts in mathematics comprises the same curriculum of mathematics courses as for the bachelor of science degree. However, bachelor of arts candidates will select an academic minor in a field other than science.

Minor in Mathematics

Proficiency and introductory courses, including Math 100, Math 120, Math 140, and Math 150, may be required to correct deficiencies in mathematics preparation.

Required courses: 22

Math 211 Calculus 1 (4)

Math 252 Calculus 2 (4)

Math 273 Calculus 3 (4)

Math 301 Intro to Mathematical Proofs (3)

Math 320 Linear Algebra (3)

Math 430 Math Prob Solving (4)

Electives: 6

Choose two 300 or 400-level math electives.

Minor Total: 28

Engineering

Engineers are professional problem solvers. With strong social and environmental awareness and the tools of science, math, and communications, engineers design, build and implement processes and products. They are intrinsically accountable for their work. Engineers are often civic leaders and also make excellent physicians, lawyers, and other professionals. We offer a broad-based BSE degree with General and Computational Tracks. Training emphasizes analysis, teamwork, and an interdisciplinary approach to problem-solving and design. Classes and laboratories are small (generally less than 10 students) and the instructional, computer, and research laboratories are modern

and well-equipped. The faculty are both educational mentors and active masters of their research and industrial endeavors. They teach all the classes and laboratories and encourage student study groups.

The BSE program is a rigorous curriculum that prepares the student for both graduate school and licensure as a Professional Engineer. Students with a solid foundation in English, mathematics, and science may enter the BSE program at an advanced level and graduate in less than five years. Ample scholarships, work study, research internships, and summer jobs are available to qualified and committed students. Regardless of previous academic limitations, all students are assured access to the rich and versatile profession of engineering. Although there is no guarantee of success, resources are available to optimize the student's educational experience, professional options, and lifelong learning.

A sample 4.5 year curriculum from the Engineering Program and advisement brochures is available. All students considering an engineering degree are strongly urged to contact the program and request this brochure prior to enrolling or transferring to NMHU. Importantly, engineering courses are offered once a year (alternate semesters). Thus, it is important that students stay on schedule for efficient completion of their degree.

No minor is required for the BSE program. Students must pass the program's engineering qualifying exam to take upper division (300- and 400- level) courses. This 3 hour exam is given at the end of the student's fifth semester.

The sum total of credits in Senior Design Project I and Senior Design Project II must total six credits.

Students must take at least one humanities course beyond the introductory level (engineering departmental approval is required).

Students are required to meet with their engineering faculty advisor at least twice a semester for advisement.

All prerequisites are enforced.

A grade of "C" or better is required of all courses in the major.

Specific physics and engineering courses are only offered once a year.

Students with Math ACT less than 18 are required to take Math 100.

Students with Math ACT 18-22 will take Math 120.

Students with Math ACT 23 or above may take Math 140, 150, or with approval, Math 211.

Students with Engl ACT less than 18 are required to take Engl 100.

Major in Engineering (BSE) Required Courses: 42

Engr	115	Intro. to Engr. and Computational Sci. (2)
Engr	150	Engr Seminar I (1)
Engr	151	Engr Seminar II (1)
Engr	237	Vector Mech/Statics (3)
Engr	241	Networks I (3)
Engr	301	Engineering Graphics in Design (CAD) (2)
Engr	331	Electronics I (3)
Engr	341	Strength of Materials (3)
Engr	351	Digital Sys Design (3)
Engr	365	Engr Econ and Ethics (3)
Engr	375	Engineering Probability and Statistics (3)

Engr	388	Vector Mechanics/ Dynamics (3)
Engr	398	Thermodynamics (3)
Engr	437	Materials Engineering (Semiconductor Phys) (3)
Engr	496	Senior Design I (3)
Engr	497	Senior Design II (3)
<hr/> Major Total: 42		

ADDITIONAL REQUIRED COURSES FOR BSE: 42

Chem	211	General Chemistry I (3)
Chem	215	Chemistry Lab I (2)
CS	145	Intro. to Object Oriented Prog (3)
CS	245	Advanced Computer Programming (3)
Math	211	Calculus I (4)
Math	252	Calculus II (4)
Math	273	Calculus III (4)
Math	320	Linear Algebra (3)
Math	325	Differential Equat (3)
Phy	291	Calculus Physics I (5)
Phy	292	Calculus Physics II (5)
Engl	367	Technical Writing (3)

Additional Required Courses: 42

Students may earn a Minor in Mathematics by completing two additional Math courses: Math 430 and one other 300- or 400-level Math course.

Students may earn a Minor in Physics by completing four additional Physics courses.

Track 1, General Engineering

Select 4 courses from the following: 12

Engr	242	Networks II (3)
Engr	332	Electronics II (3)
Engr	378	Systems Engineering (3)
Engr	384	Mircroproc Design (3)
Engr	405	Fluid Dynamics (3)
Engr	427	Control Systems Engineering (3)
Engr	480	Mechatronics (3)

B.S.E. Track I Total : 133

Track II, Computational Engineering

Required Courses for Track II

CS	380	Computer Modeling and Simulations (3)
CS	477	Parallel and Distributed Programming (3)

Select 2 courses from the following (6)

CS	312	Advanced Fortran Pro- gramming (3)
Engr	384 (3)	Microprocessor Design (3)
Engr	405	Fluid Dymamics (3)
Engr	427	Control Systems Engi- neering (3)
Engr	480	Mechatronics (3)

B.S.E Track II Total: 133

Recommended Curriculum

Year 1

Semester 1 (Fa)

Chem	211	General Chemistry I (3)
Chem	215	Chemistry Lab I (2)
Engl	111	Freshman Composition I (3)
Engr	115	Intro to Engineering (1)
Math	211	Calculus I (4)
PE		Physical Education (1)

14 Credits

Semester 2 (Sp)

Core		Social Behav Sci (3)
CS	145	Intro to Object-Oriented Programming (3)
Engl	112	Freshman Comp II (3)
Engr	150	Engineering Seminar I (1)
Math	252	Calculus II (4)
PE		Physical Education (1)

15 Credits

Year 2

Semester 3 (Fa)

Comm	124	Beginning Speech (3)
Core		Humanities/Fine Arts (3)
Engr	151	Engineering Seminar II (1)
Math	273	Calculus III (4)
Phy	291	Calculus Physics I (5)

16 Credits

Semester 4 (Sp)

Core		Literature (3)
CS	245	Adv Comp Prog (3)
Engr	237	Vector Mech/Statics (3)
Math	320	Linear Algebra (3)
Phy	292	Calculus Physics II (5)

17 Credits

Year 3

Semester 5 (Fa)

Engr	241	Networks I (3)
Engr	301	Engineering Graphics in Design (CAD) (2)
Engr	341	Strength of Materials (3)
Engr	388	Vector Mech Dynam (3)
Math	325	Differential Equations (3)

14 Credits

76 Credits in First 2.5 years

Semester 6 (Sp)

Engr	367	Technical Writing (3)
Engr	331	Electronics I (3)
Engr	365	Engr Econ and Ethics (3)
Engr	398	Thermodynamics (3)
Language		Language I (4)

16 Credits

Year 4

Semester 4 (Fa)

Core		Humanities/Fine Arts (3)
Engr	351	Digital Sys Design (3)
Engr	375	Engr Prob & Statistics (3)
Engr	437	Materials Engineering (3)
Language		Language II (4)

16 Credits

108 Credits total for first 7 Semesters

Note: First 7 Semester are identical for all engineering students

Students must select one of the two following curriculum tracks at the end of the 7th semester.

Track I, General Engineering

Semester 8 (Sp)

Core		Social/Behav Sci (3)
Engr	496	Senior Design I (Track I) (3)

6 Credits

Select 2 courses from the following 4 elective choices:

Engr	242	Networks II (3)
Engr	384	Microprocessor Design (3)
Engr	405	Fluid Dynamics (3)
Engr	480	Mechatronics (3)

6 Credits

12 Credits total for Semester 8 Year 5

Semester 9 (Fa)

Core		Social/Behav Sci (3)
Engr	497	Senior Design II (Track I) (3)

6 Credits

Select 2 courses from the following 3 elective choices:

Engr	378	Systems Engineering (3)
Engr	332	Electronics II (3)
Engr	427	Control Sys Engr (3)

6 Credits

12 Credits total for Semester 9

24 Credits for Track I, General Engineering Total 133 Credits for BSE in General Engineering

Track II, Computational Engineering

Semester 8 (Sp)

Core		Social/Behav Sci (3)
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CS	477	Parallel & Distri Prog (3)
Engr	496	Senior Design I T(Track I) (3)

9 Credits

Select 1 course from the following 4 elective choices:

Engr	384	Mircoprocessor Design (3)
Engr	405	Fluid Dynamics (3)
Engr	480	Mechatronics (3) 3 Credits

12 Credits for Semester 8

Year 5

Semester 9 (Fa)

Core		Social/Behav Sci (3)
CS	380	Computer Modeling and Simulation (3)
Engr	497	Senior Design II (Track I) (3)

9 Credits

Select 1 course from the following 2 elective choices:

CS	312	Advanced Fortran Programming (3)
Engr	427	Control Systems Engineering (3)

12 Credits for Semester 9

24 Credits for Track II, Computational Engineering Total 133 Credits for BSE

Courses in

Physics

Physics is the most fundamental science since, in its most basic form, it allows the direct application of the scientific method to the description and quantitative understanding of elementary phenomena that are accessible by direct observation.

The central role played by physics in the exposition of modern scientific reasoning

makes physics essential to the understanding of all science and engineering. Consequently, the physics curriculum is designed not only to teach the student the fundamental concepts and laws of physics, but also to develop practical and analytical tools for problem-solving through use of the scientific method. Topics in physics range from the largest dimensions, as in astronomy and cosmology, to the smallest, as in sub-atomic and particle physics. Students of physics progress from an empirical description of the laws of physics to an understanding of the fundamental forces of nature at the frontiers of science. The ability to identify problems, formulate solutions and communicate these findings to others are all highly marketable skills. Today, people with a physics background are in demand in many different careers from stock market analysis to environmental monitoring.

Minor in Physics

Students are required to take Math 211, Math 252, and Math 273 before enrolling in this minor.

Required courses: 16

Phys	291	Calculus Physics 1 (5)
Phys	292	Calculus Physics 2 (5)
Phys	361	Mod Phys and Rel (3)
Math	325	Appl Ordinary Diff Equations (3)

Electives: 6-8

Choose two courses from the following list:

Phys	300	Astrophysics (4)
Phys	311	Mechanics (3)
Phys	402	Stat Mechanics (3)
Phys	421	Elect and Magnetism 1 (4)
Phys	461	Quantum Mech 1 (4)
Phys	468	Solid State Physics (4)

Minor Total: 22 – 24

Minor in Cognitive Science

Cognitive science is an interdisciplinary field concerned with the nature of the mind.

Drawing on the resources of mathematics, philosophy, psychology, computer science, linguistics, and other disciplines, students of cognitive science study such phenomena as consciousness, the relation of the mind to the body, and the nature and limits of computation. This discipline addresses long-standing questions about the nature of thought, intelligence, perception, emotion, and other aspects of mental life by examining the way information is processed in computers, the nature of language, and the relation of cognition to the brain. Please refer to Interdepartmental Programs for further details regarding this minor.

Minor in Combined Science

The combined science minor at NMHU allows students to select courses in two or more of the science fields to include behavioral science, chemistry, computer science, math, biology, chemistry, and/or physics. Also, students are advised to remember that the university requires that all minors contain at least 12 credit hours of courses at the 300-400 level. A minor in combined science may be used to satisfy the university requirements for the bachelor of science degree of a minor in a science field. Please refer to Interdepartmental Programs for further details regarding this minor.

Major in General Science for Secondary School Teachers (Grades 7 – 12)

The purpose of the major is to provide future science teachers a fundamentally strong background in the basic sciences. Therefore, a greater pool of talent in the field of science education will be created, from which surrounding middle schools and high schools can draw. The program has been designed to emphasize the fundamental understanding of both the physical and life sciences.

Courses will be selected from such areas as: 1) environmental science; 2) biology; 3) geology; 4) chemistry; 5) physics; 6) mathematics; and 7) engineering.

Please refer to Interdepartmental Programs for further details regarding this minor.

Major in Math and Computer Science for Secondary School Teachers (Grades 7-12)

This major requires a core of courses from mathematics and computer science. Graduates of the program will be equipped to teach both mathematics and computer science in secondary schools. The purpose of the major is to provide secondary school teachers in training with a fundamentally strong background in mathematics and computer science. This will create a greater pool of talent in math and computer science education, from which middle and high school teachers can be drawn. The program has been designed to emphasize the fundamental understanding of both mathematics and computer science.

The objectives of the Math and Computer Science Major are to:

- Provide secondary teachers in training a program that will adequately prepare and encourage them to teach the expected mathematics and computing courses to students in middle and high school math and computer science programs.
- Train math teachers to develop each of the competencies required by the State Board of Education for licensure in math education.
- Broaden the scope of mathematics and computing to secondary school teachers in training, allowing them to develop methods in which to relay the content material to their students so that the students can fully understand what is being taught.
- Provide secondary teachers in training

with the background so they can assume responsibility for managing the computing facilities at their school.

Prerequisite courses: 6

Math 140 College Algebra (3)

Math 150 Trigonometry (3)

Required courses: 40

CS 144 Intro to Comp Sci (3)

CS 145 Intro to Obj Or Prg (3)

CS 245 Adv Comp Prog (3)

CS 430 Comp Tech in the Classroom (3)

Math 211 Calculus I (4)

Math 252 Calculus II (4)

Math 273 Calculus III (4)

Math 320 Linear Algebra (3)

Math 345 Math Stats (3)

Math 406 College Geometry (3)

Math 421 Appld Abstract Algb (3)

Math 430 Math Prob Solving (4)

Electives: 11

Choose one course from the following:

Math 317 Discrete Math (3)

Any 400-level Math course approved by advisor

Choose two courses from the following:

CS 325 Comp Hardware Install & Maint (1)

CS 326 Comp Software Installation (1)

CS 327 Hands on UNIX (1)

CS 332 Adv Internet (1)

Choose two courses from the following:

CS 350 Prog Seminar I (3)

CS 351 Sys Des & Analy 1 (3)

CS 456 Internet Services (3)

CS 457 Comp Networks (3)

CS 463 Web Programming (3)

Other approved three-credit senior level courses in Computer Science.

Major Total: 51

Minor in Math and Computer Science for Elementary School Teachers (Grades K-8)

The purpose of this minor is to provide

elementary school teachers in training with a fundamentally strong background in Mathematics and Computer Science.

The objectives of the Math and Computer Science minor are to:

- Provide elementary teachers in training a program that will adequately prepare and encourage them to teach the fundamental concepts of mathematics and computing to students at the elementary level.
- Broaden the scope of mathematics and computing to elementary school teachers in training, allowing them to develop methods in which to relay the content material to their students so that the students can fully understand what is being taught.
- Provide elementary teachers in training with the background so they can assume responsibility for managing the computing facilities at their school.

Prerequisites: 9

Math 115 Math for Elementary Teachers 1 (3)

Math 130 Math for Elementary Teachers 2 (3)

CS 101 Living with Comp (3)

Required courses: 15

Math 140 College Algebra (3)

Math 150 Trigonometry (3)

CS 144 Intro to Comp Sci (3)

CS 145 Intro to Obj Or Prg (3)

CS 245 Adv Comp Prog (3)

Electives: 12

Choose two courses from the following:

Math 317 Discrete Math (3)

Math 345 Math Statistics 1 (3)

Math 406 College Geometry (3)

Any 300- or 400-level Math course approved by advisor

Choose three courses from the following:

CS 325 Comp Hardware Install & Maint (1)

CS	326	Comp Software Installation (1)
CS	327	Hands on UNIX (1)
CS	332	Advanced Internet (1)

Any 300- or 400-level Computer Science course approved by advisor

Choose one course from the following:

CS	456	Internet Services (3)
CS	457	Comp Networks (3)
CS	463	Web Programming (3)

Minor Total: 27

Courses in Computer Science (CS)

101. Living with Computers (3); 2,2; All

This course is an introductory survey covering the theory and practice of using computers. Besides learning the fundamental concepts of computer operations, students will study the use of computers as a tool in solving problems and obtaining information. The course will also look at the impact of computers on society. No prior knowledge of computing is assumed.

131. A Gentle Introduction to Internet (1)

An introduction to Internet, exploring the global electronic superhighway. Prerequisite: Proficiency in Windows.

135-435. Selected Topics in Computer Science (1 - 4 VC)

Course in a topic or topics in computer science. May be repeated with change of content.

140. Introduction to Problem Solving and Computers (3); 2,2

Presents methods of analyzing and strategies for solving problems of all types. Introduces a programming language while presenting a model of how a computer works as a problem-solving machine.

144. Introduction to Computer Science (3); 2,2; Fa, Sp

Introduction to computer science and its subfields including the operating systems, hardware, networking, databases, and

artificial intelligence. Prerequisite: Math 120 with a minimum grade of "C"; or permission of instructor.

145. Introduction to Object-Oriented Programming (3); 2,2; Fa, Sp

This course is an introduction to object oriented programming with software engineering emphasis. Major emphasis is placed on object-oriented programming techniques with focus on encapsulation and simple data structures implemented with classes and arrays. Prerequisite: Math 120 with a minimum grade of "C"; or an ACT score of 24, or permission of instructor.

190-490. Independent Study (1 - 4 VC); All Independent study arranged with an instructor. Prerequisite: Permission of instructor.

211. Introduction to Object Oriented COBOL for Business Data Processing (3)

An introduction to Object Oriented COBOL with business applications. Students apply an object-oriented program development process that features a series of steps involving understanding of a problem, formal problem definition, object-oriented and visual design methodologies. Prerequisite: CS 145 with a minimum grade of "C" for Computer Science majors and minors; Bus 110 for Business majors and minors; or permission of instructor.

245. Advanced Computer Programming (3); Fa, Sp

Topics include the principles of software engineering, debugging and testing, string processing, internal searching and sorting, simple data structures, such as stacks, queues and lists, recursion, and object-oriented programming. Prerequisite: CS 144 and CS 145 with a minimum grade of "C".

311. Advanced Business Data Processing with COBOL (3)

Advanced business applications programming. Report generation, file manipulation, building user interfaces, database manipu-

lation through application programs, and use of operating system calls. Prerequisite: MIS 233 or CS 211 or CS 318 with minimum grades of "C".

312. Advanced Fortran Programming (3); 2,2
An advanced treatment of the Fortran programming language. Emphasis will be on advanced techniques for numerical analysis and on the specialized input-output facilities of the language. Prerequisite: Permission of instructor.

314. The 'C++' Programming Language (3); 2,2
An in-depth study of the "C++" programming language. The significant features of the language will be discussed with a special emphasis on those that relate to object-oriented programming. Prerequisite: None; however, "C++" is not considered a good introduction to programming.

315. Introduction to Java Programming Language (3); 2,2; Fa
Introduction to object-oriented programming using Java programming language. Numerous programs will be written to exercise the material covered. Prerequisite: Permission of instructor.

316. Programming in Lisp and Prolog (3)
An in-depth study of Lisp and Prolog, the most popular computer programming languages for artificial intelligence applications. Numerous programs will be written to exercise the material covered. Prerequisite: CS 245 or permission of instructor.

318. Business Applications Programming (3); Sp
An introduction to business applications programming in a visual programming environment. Using a visual programming language to solve business application problems.

325. Computer Hardware Installation and Maintenance (1); 0,2; Fa, Sp
A practical investigation of the processes involved in the installation and debugging

of complex computer hardware systems including disk controllers, sounds and graphic boards, communication hardware, and various peripherals. Students will work on their own and in teams to build computer systems.

326. Computer Software Installation (1); 0,2; Fa, Sp
A practical investigation of the processes involved in the installation of complex computer software including operating systems, communication packages, and Windows-based programs. Students will work on their own and in teams to both prepare computers for installation and actually install a wide range of computer software. Prerequisite: CS 325 or permission of the instructor.

327. Hands on UNIX (1); 0,2; Fa
C programming language and system programming on UNIX and LINUX operating systems. Prerequisite: CS 145 or permission of instructor.

328. C and UNIX (3); 3,0; Fa
C programming language and system programming on UNIX and LINUX operating systems. Prerequisite: CS 327 or permission of instructor.

331. Decision Support Systems (3); Sp
Study of the theory and several practical techniques of computer based support systems including linear programming, simulation, and decision theory. Prerequisite: CS 245, BUS 210 and knowledge of spreadsheets, or permission of instructor. Cross-listed as: MIS 331.

332. Advanced Internet (1)
A continuation to A Gentle Introduction to the Internet focusing on advanced search techniques and methodologies for creating complex web pages. Prerequisite: CS 131 or knowledge of Windows, the internet, and simple HTML.

341. Machine Architecture and Assembly Language Programming (3); Alt Sp

An introductory course in computer systems architecture and assembly language programming. Prerequisite: Grade of at least "C" in CS 245, or permission of instructor.

345. Data and File Structures (4); 3,2; Alt Fa
Methods of organizing data in memory and on peripheral devices and of accessing this information in an efficient manner. The course gives students experience with searching and sorting, trees, binary search trees, graphs, sequential files, merging files, and file update procedures. Prerequisite: CS 245 with a minimum grade of "C".

350. Programming Seminar I (3); 2,2; Fa
The study of advanced programming techniques and technologies involving complex data structures and algorithms, graphical user interfaces, and object-based programming. Emphasis will be placed on the use of sophisticated software development and debugging tools. Prerequisite: CS 245 with a minimum grade of "C".

351. Systems Design and Analysis (3); Fa
Design and analysis of information systems emphasizing the object approach but including elements of traditional analysis and design modeling. Software development lifecycles requirements gathering, decomposition, and formal modeling will be covered. Cross-listed as: MIS 370.

380. Computer Modeling and Simulations (3)
This course introduces computer-based simulation and its applications to engineering and the sciences. The primary goals of this course are to increase students' ability to design useful models of real world situations and to implement those models so that they can be executed on computers to answer questions about the real world. Prerequisites: CS 245, Math 252.

418. Multimedia Programming (3); 2,2; Sp
Introduction to programming multimedia applications. Numerous programs will be

written to exercise the material covered. Prerequisite: CS 315 or CS 245 with a minimum grade of "C" and permission of instructor.

421. Advanced Data Structures and Algorithm Development (3); Alt Sp
An investigation of computer data structures with an emphasis on the design and development of efficient algorithms for solving a wide variety of common computing problems. The course also covers the analysis and measurement of the performance of algorithms. Prerequisite: CS 345 and Math 317 with minimum grades of "C".

430. Computer Technology in the Classroom (3);
This course acts as the culminating experience for the Computer Science side of the major in Math and Computer Science for the Secondary School Teachers. Students will develop their own principles for the proper use of computer-based technology in the classroom and then work on their own project to explore some state-of-the-art hardware or software in terms of its relevance to the classroom setting. Students register once for the class, should complete the project by the end of the semester and will be given an "F" if not completed within three years.

431. Database Management (3); Fa
The development of the major types of database systems, providing the framework for some experience with at least one database model. Assignments will include accessing, updating, and organizing a database. The use of a relational model will be emphasized along with various database inquiry systems, including natural language-like systems. Prerequisite: CS 245 with a minimum grade of "C".

432. Advanced Database Management (3); Alt Sp
An investigation of advanced topics in information management and retrieval. The focus of this course may be changed from

year to year. Some example topics that may be taught: multimedia databases, building digital libraries, relational or object oriented database implementation, building data-base-driven web sites, text and informational retrieval, data mining. Prerequisite: CS 431 with a minimum grade of "C"; or permission of instructor.

436. Human-Computer Interaction (3); Alt Fa
This course investigates theory and practice in Human-Computer Interaction. Students will study the impact of human perception and cognition on user interface design and learn to use tools for building graphical use interface (GUIs) and speech interfaces. In addition, each student will design and implement a user interface. Prerequisite: CS 245 or CS 315 with a minimum grades of "C".

442. Computer Systems Architecture (3)
Acquaints the student with the way a computer works internally. Topics to be covered include basic logic design, data coding, parity generation and detection, number representation and arithmetic, and computer architecture. Prerequisite: CS 341 with a minimum grade of "C".

443. Operating Systems (3); Alt Fa
A study of the concepts associated with the modern operating system. Topics will include supervisors, command processors, device drivers, interrupt handlers, queue managers, resource managers, memory allocation schemes, process activation and control, and timesharing or multi-task control. Prerequisite: CS 341 with minimum, grade of "C".
464. Network Programming (3)
To extend the students' knowledge and practice in analysis, design, and programming of computer networks. Prerequisite: CS 245 and CS 328.

450. Programming Seminar 2 (3); 2,2; Sp
A continuation of the study of algorithms important in software development, providing students with experience in designing

and building large programs. There will be an emphasis on group projects. Prerequisite: CS 350.

451. Software Engineering (3); Alt Sp
A study of the concepts and techniques of software engineering. Emphasis will be on object-oriented design principles, the integration of systems analysis methodologies into software engineering and topics such as formal specifications and proof of program correctness. Prerequisite: CS 350 for Hardware/ Software majors and minors with minimum grade of "C"; CS 351 for Computer Information System majors and minors with minimum grade of "C"; MIS 370 for Business majors and minors with minimum grade of "C".

455. Introduction to Computer Graphics (3)
To provide an introduction to the applications and basic techniques involved in the general field of computer graphics. The course will be a combination of surveying the different hardware and software used in graphic systems and of implementing some basic graphic algorithms. Students will have access to SGI computers. Prerequisite: CS 245 or CS 314 or permission of instructor.

456. Internet Services (3); 2,2; Fa
An introduction to telecommunications and the Internet. This course introduces the use of Internet for both research and problem-solving. Students will be expected to develop tools for enhancing and accessing the Internet.

457. Computer Networks (3); Fa
A study of the major concepts of computer networking. Topics discussed will include the Open System Interconnection (OSI) model, data communication networking, computer communications architectures and protocols as well as applications including Local Area Networks (LAN) and Integrated Services Digital Network (ISDN). Cross-listed as: MIS 420.

458. Network Management (3); Alt Sp

Application of networking concepts related to the management of local area networks. Includes topics related to repair, setup, management, and maintenance of local area networks. Prerequisite: CS 457, MIS 420, or permission of instructor.

459. Network Security (3); Alt Sp

This course addresses security issues for TCP/IP-based and NT networks. Access control and communications security issues will be covered as well as Internet and intranet security. Prerequisite: CS 457, MIS 420, or permission of instructor.

460. Wide Area Networks (3)

Application of networking concepts related to the wide area networks. Includes topics related to nature and use of wide area networks including topologies, software and hardware. Special emphasis on the TCP/IP Suite of Protocols. Prerequisite: CS 457, MIS 420, or permission of the instructor.

461. Programming Languages (3); Alt Fa

A comparative study of programming languages and their features. The course is aimed at developing an understanding of the organization of programming languages, especially the run-time behavior of programs. Students will gain experience with a variety of languages. Prerequisite: CS 245 and one other programming language course.

462. Compiler Design (3)

Formal treatment of programming language interpreter, translator, and compiler design concepts. Topics include lexical analysis, parsing, code generation, and code optimization. Emphasis will be on the theoretical aspects of parsing context-free languages, translation specifications, and machine-independent code improvement. Programming projects that demonstrate various concepts will be assigned. Prerequisite: CS 461.

463. Web Programming (3); Sp

Introduction to programming on the Inter-

net. Prerequisite: CS 131 and CS 145, equivalent, or permission of instructor.

464. Network Programming (3);

To extend the students' knowledge and practice in analysis, design, and programming of computer networks.

Prerequisites: CS 245 and CS 328

471. Artificial Intelligence (3); Alt Sp

A general introduction to the theories and problems involved in the development of computer-based intelligence systems with specific emphasis on knowledge representation and search. The focus will be on artificial intelligence research that provides information for the understanding of human intelligence and on application research in areas such as expert systems, natural language systems, and intelligent computer-aided instruction.

472. Cognitive Science (3)

An interdisciplinary investigation of the foundations of human knowledge representation and understanding, the functioning of the human mind, and how these impact on recent computer technologies. Cross-listed as: Psy 472 and Phil 472.

473. Artificial Neural Networks (3); Fa, Sp

Basic Neurobiology; Neural Networks; Single Neuron Models; Single Layer Perceptrons; Multi-Layer Perceptrons; Radial Basis Function networks; Committee machines; Kohonen networks; Applications of neural networks. Prerequisites: CS 245 and Math 273.

474. Machine Learning Algorithms (3); Fa, Sp

This course studies different machine learning techniques/paradigms, including decision trees, neural networks, genetic algorithms, Bayesian learning, rule learning, and reinforcement learning. The applications of these techniques to problems in data analysis, knowledge discovery and data mining are discussed. Prerequisites: CS 245, Math 320, Math 345 recommended.

475. Image Processing (3); Fa, Sp

The course will provide mathematical foundations and practical techniques for digital manipulation of images; preprocessing; segmentation; Fourier domain processing; and compression. Prerequisites: CS 245, Math 320

476. Animation and Visualization (3) Fa, Sp

Computer-based graphical representations, or visualizations, or scientific processes and phenomena have become commonplace in scientific communities. For example, geologists like to visualize plate tectonics; meteorologists like to visualize weather systems; and computer scientists like to visualize algorithms. After briefly surveying the use of visualization in scientific communities, this course pursues an in-depth investigation of its theoretical underpinnings, from the three diverse perspectives; the cognitive perspective, the social perspective, and the cultural perspective. Prerequisites: CS 245, Math 320

477. Parallel and Distributed

Programming (3); Fa, Sp

This course introduces algorithms and techniques for programming highly parallel computers. Topics covered include trends in parallel and distributed computing; shared address space and message passing architectures; design issues for parallel algorithms; converting sequential algorithms into equivalent parallel algorithms; synchronization and data sharing; improving performance of parallel algorithms; interconnection network topologies, routing, and flow control; latency limits on speedup of algorithms by parallel implementations. Design, coding, performance analysis, debugging and other aspects of parallel algorithm development will be covered. Prerequisites: CS 245, CS 421

481. Senior Project Design (1); Fa, Sp

The project proposal phase of an integrated senior-year course that combines each student's previous course work into a complete

system design project. Prerequisite: CS 350, Senior status or permission of discipline.

482. Senior Project

Implementation (3); Fa, Sp

The implementation and presentation phase of an integrated senior-year course that combines each student's previous course work into a complete system design project. Students will sign up for the course once and be given credit upon completion. If the project has not been completed by the end of the semester, the student may be given a PR. If not completed within three years, an "F" will be given. Prerequisite: CS 481.

483. Senior Project Presentation (2); Fa

Students will write a paper on some topic in Computer Science, perhaps in conjunction with their senior project and submit it to an appropriate publication or conference. Papers not accepted for publication or presentation will be presented formally on campus. Students will sign up for course once and be given credit and a grade upon completion. If it is not completed at the end of the semester, students may be given a PR. If not completed within two years, an "F" will be given.

499. Independent Research (1 – 4 VC); All

Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor. Courses in Engineering (Engr)

115. Introduction to Engineering (2); 1, 2, 1; Fa

Seminar/laboratory course to develop a systems orientation to problem-solving. Includes reflective thinking and decision-making, questioning of paradigms and techniques for conceptualizing complex systems. Prerequisite: Engr 108 or permission of instructor.

150. Engineering Seminar I (1); 1, Sp

Weekly seminar series with NMHU faculty and visiting scientist and engineers address-

ing current science, math, and engineering topics and issues. Multidisciplinary approaches to engineering problems also will be highlighted. To enhance participation and viewpoints, alternate weekly seminars will be shared with the biweekly NMHU Science Seminar.

151. Engineering Seminar II (1); 1, Fa
Weekly seminar series with NMHU faculty and visiting scientist and engineers addressing current science, math, and engineering topics and issues. Multidisciplinary approaches to engineering problems also will be highlighted. To enhance participation and viewpoints, alternate weekly seminars will be shared with the biweekly NMHU Science Seminar.

237. Vector Mechanics/Statics (3); 2, 2, 1; Sp
A lecture/laboratory course concerning the application of laws of Newtonian mechanics to stationary systems and rigid bodies. Topics included are: fundamental concepts, review of vector operations, types of forces, systems of forces and moments, objects and structures in equilibrium, centroids and center of mass, moments of inertia, friction, internal forces and moments. Prerequisite: Math 252 and Phys 291.

241. Networks 1 (3); 2, 2, 1; Fa
Engineers of all disciplines must be familiar with the basic network concepts in order to practice their profession. Topics included are: electrical quantities, circuit principles, network theorems, natural and forced response of first order networks, natural and forced response of first order networks, natural and forced response of second order networks. Prerequisite: Math 252 and Phys 292.

242. Networks 2 (3); 2, 2, 1; Sp
This class is a continuation of Networks 1. Topics included are: phasors and impedance, transfer function AC circuit analysis, AC node-voltage analysis, AC mesh-current

analysis,, Thevenin and Norton equivalent circuits of AC circuits, AC response with SPICE, power in AC circuits, frequency response, resonance, s-domain circuit analysis, quality factor, transformers, simple three-phase power circuits. Prerequisite: Engr 273 and Math 343.

301. Engineering Graphics in Design (CAD) (2); 1, 2, 1; Fa
Engineering design, descriptive geometry, pictorial sketching, computer-aided graphics, and their application in the solution of engineering problems. Prerequisites: Math 343, Engr 237.

331. Electronics 1 (3); 2, 2, 1, Sp
A lecture/laboratory course covering diodes, bipolar and field-effect transistors. Topics included are: analysis, design and characterization of diode circuits, BJT, FET type amplifier circuits, and PSPICE modeling and simulation. Prerequisite: Engr 241.

332. Electronics 2 (3); 2, 2, 1; Fa
A continuation of Engr 331 covering differential, multistage and operational amplifiers, frequency response and feedback. An introduction to analog integrated circuits is also given. Prerequisite: Engr 242 and Engr 331.

341. Strength of Materials (3); 2, 2, 1; Fa
A lecture/laboratory course analyzing the response of static systems composed of various materials to the application of loading forces. Topics included are: tension, compression, and shear; axially loaded members, torsion of circular shafts, shear and bending moments in beams, stresses in beams, deflection of beams, columns and analysis of stress and strain. Prerequisite: Engr 237.

351. Digital Systems Design (4); 3, 2, 1; Fa
The purpose of this course is to provide students with material fundamental to the design and analysis of digital circuits. The material is comprehensive in that it covers classical combinational and sequential logic. Topics included are: material on PAL, EPLD,

TTL, and CMOS logic families, basic principles and number systems, combinational logic, sequential circuit analysis and design, and introduction to finite-state machine. Class is supported with 8-12 lab experiments using both discrete logic design approach and FPGA approach. Prerequisite: Engr 241 and Engr 331.

365. Engineering Economics and Ethics (3); 2, 2, 1; Sp

Lecture/ laboratory course which prepares for careers in engineering by introducing basics of engineering economics, business finance and entrepreneurship and ethics. Topics included are: comparative financial desirability of engineering decisions, time-value of money (interest), depreciation methods, modern techniques for analysis of management decisions, professional practice, ethics, and ethical issues facing practicing engineers. The laboratory section is focused on Senior Design (see Engr 496) planning using principles of engineering economic analysis. Prerequisite: Junior standing in Engineering.

375. Engineering Probability and Statistics (3); 2, 2, 1; Fa

Lecture/laboratory course to prepare students to analyze the effects of uncertainty in engineering systems and measurements. Topics included are: probability, distributions, statistical analysis, random variables, correlation, spectral density, noise in linear systems and reliability. Prerequisite: Engr 311, Engr 351, and Math 325

378. Systems Engineering (3); 2, 2, 1; Fa

Lecture/laboratory course covering signal and system modeling concepts, system modeling and analysis in the time domain, Fourier Series and Fourier Transform, Laplace Transform and its applications, state variable techniques and discrete-time signals and systems including Z-Transform. Prerequisite: Engr 242, Math 325.

384. Microprocessor Design (3); 2, 2, 1; Sp

A lecture/laboratory course to prepare students to design microprocessor-based systems. Review of random logic and introduction to computer architecture. Topics included are: details of MC68000 family organization, programming model, instruction set, and addressing modes, bus timing relations and constraints, memory allocation, serial and parallel output devices, exception (interrupt) handling. Other topics include: design software solutions using machine assembler and high level language programming, use of simulators, monitors, cross assemblers/compilers, and design hardware support circuits (reset, single step), memory allocation and I/O. Prerequisite: Engr 351 (non-engineering majors may substitute CS 442), CS 145 or proficiency in C-Language programming.

388. Vector Mechanics

Dynamics (3); 2, 2, 1; Fa

A lecture/ laboratory course concerning the application of Newtonian laws to the motions of particles, systems of particles, and rigid bodies. Topics included are: review of general principles, Newton's law, energy methods, momentum methods, kinematics of particles and kinetics of rigid bodies. Prerequisite: Engr 237.

398. Thermodynamics (3); 2, 2, 1; Sp

A lecture/laboratory course concerning the application of classical thermodynamics to engineering systems. Topics included are: properties of a pure substance, work and heat, the first law of thermodynamics, first law of analysis for a control volume, and second law analysis for control volume, and power and refrigeration cycles. Prerequisite: Chem 211, Phys 192, and Math 273.

405. Fluid Mechanics (3); 2, 2, 1; Sp

A lecture/laboratory course illuminating basic concepts and principles of the statics and dynamics of fluids. Topics included are: fluid statics, control volume equations, dimen-

sional analysis, viscous flow through pipes and channels and boundary layer problems. Prerequisite: Engr 388.

427. Control Systems Design (3); 2, 2, 1; Fa
A lecture/laboratory course covering the mathematical and design analysis of continuous-time control systems. Topics included are: modeling, state-space representation, block diagrams, stability (Routh-Hurwitz and Nyquist Criteria, Root locus), error analysis, frequency domain techniques (ode and Nyquist Plots, Nichols Chart) and compensator design. Applications include controls for electrical and mechanical systems. Prerequisite: Engr 378.

437. Materials Engineering
(Semiconductor Physics) (3);
Properties of engineering materials and their relation to the internal structure of materials, including semiconductor physics. Prerequisites: Math 273, Chem 211/215

480. Mechatronics (3);2,3;Sp
This course is designed to provide the engineering student with an understanding of mechatronics systems concepts and overview, control system design overview, control software architecture, control hardware architecture, microcontroller and interface technology for mechatronics control, sensor for mechatronics systems, and actuator drives. Prerequisites: A grade of "C" or better in Engineering 331 and 388.

496. Senior Design Project 1 (3); 0, 9-0; Sp
The sum total credits in Senior Design Project 1 and Senior Design Project 2 must total six. Students select a project for which they must brainstorm initial design solutions, choose the best alternative, formulate a budget, allocate resources, and develop a project plan to successfully conclude the project. Prerequisite: Engr 365.

497. Senior Design Project 2 (4); 0, 9-0; Fa
The sum total credits in Senior Design Project 1 and Senior Design Project 2 must total six.

Students must implement the plan developed in Senior Design Project 1 to realize the selected design. Students will use accepted practices for customer interface, project definition, and reporting. Prerequisite: Engr 496.

498. Independent Research (1-4 VC)
Directed research arranged under the guidance of an engineering faculty member. Prerequisite: Permission of instructor.

Courses in Mathematics (Math)

070. Fundamentals of Arithmetic (3); All
An intensive review of the properties of arithmetic and signed numbers. Note: This course does not count towards the 128 hour credit requirement for graduation.

100. Introduction to Algebra (3); All
A review of the arithmetic of integers and rationals, a study of linear equations and inequalities in one variable with applications, integer exponents, scientific notation, the equation of the line, ratio, proportion, and percent. Prerequisite: Math 070 or the appropriate compass test score. Note: This course does not count towards the 128 hour credit requirement for graduation.

115. Mathematics for Elementary
Teachers I (3); 2,2; Fa, Sp
This course is designed to provide the prospective elementary teacher with a conceptual framework for mastering K-8 mathematics. It is the first of a two-course mathematics requirement for elementary education majors. Prerequisite: Math 100 with a minimum grade of "C" or ACT score of 18 or above.

120. Intermediate Algebra (3); All
A study of linear equations and inequalities in one variable with applications, integer and rational exponents, the equation of the line, polynomials and rational expressions. Prerequisite: Math 100 with a minimum grade of "C" or ACT of 18 or above.

130. Mathematics for Elementary**Teachers II (3); 2,2; Fa, Sp**

The course is designed to provide the prospective elementary teacher with a conceptual framework for mastering K-8 mathematics. It is the second of a two-course mathematics requirement for elementary education majors. Prerequisite: Math 115 with a minimum grade of "C".

140. College Algebra (3); All

A study of rational exponents and radicals, complex numbers, quadratic equations, functions including polynomial, rational, exponential and logarithmic functions, systems of equations, matrices and determinants. Prerequisite: Math 120 with a minimum grade of "C", or ACT score of 23 or above.

150. Trigonometry (3); Fa, Sp

A study of the trigonometric functions, the inverse Trigonometry, polar coordinates, and conic sections. Prerequisite: Math 140 with a minimum grade of "C".

155. Applied Calculus I (3); Fa

A short introduction to Calculus not requiring Trigonometry and including a review of logarithm and exponential functions. Both the derivative and the integral are introduced. Numerous applications are included. Prerequisite: Math 140 with a minimum grade of "C".

160. Precalculus (5)

A study of the algebra and trigonometry necessary to thoroughly prepare a student for calculus. Math 160 covers the same material that is covered in Math 140 and Math 150 but at an accelerated pace. Topics include: rational exponents, complex numbers, quadratic equations, functions including polynomial, rational, exponential, logarithmic, trigonometric and inverse trigonometric functions, linear systems of equations, matrices and determinants, trigonometric identities, vectors, polar coordinates, conic sections, applications of algebra and trigo-

nometry. Prerequisite: ACT score of 25 or Math 120 with a minimum grade of "B", and permission of the instructor.

205. Applied Calculus II (3); Sp

A continuation of Math 155. Topics include partial derivatives, max and min problems, Lagrange multipliers, brief trigonometry, techniques of integration, differential equations and probability. Prerequisite: Math 155 with a minimum grade of "C".

211. Calculus I (4); Fa, Sp

A study of differential and integral calculus of functions of one variable. Topics include: the product, quotient, and chain rule for differentiation, related rates, Newton's Method, Mean Value Theorem, optimization, antiderivatives and definite integral, Fundamental Theorem of Calculus, integration by substitution, and applications of integration. Prerequisite: Math 150 with a minimum grade of "C", or permission of instructor.

235-435. Selected Topic in Mathematics (1 – 4 VC)

Course in a topic or topics in mathematics. May be repeated with change of content.

252. Calculus II (4); Fa, Sp

A continuation of Math 211 Calculus 1. Topics include numerical methods of integration, integration techniques, L'Hopital's Rule, improper integrals, applications of integration, sequences, and series.

Prerequisite: Math 211 with a "C" or better.

273. Calculus III (4); Fa, Sp

A study of differential and integral calculus or functions of several variables. Topics include: partial derivatives, tangent planes, the chain rule, the gradient, extrema of functions of two variables, Lagrange Multipliers, double integration in rectangular and polar coordinates, triple integration in rectangular, cylindrical, and spherical coordinates. Prerequisite:

Math 252 with a "C" or better.

290-490. Independent Study (1 – 4 VC)

Independent study arranged with an instructor. Prerequisite: Permission of instructor.

301. Intro to Mathematical Proofs (3); Fa

An introduction to reading and writing mathematical proofs. Techniques of proof writing (constructive, contradiction, contrapositive, etc.) will be emphasized over a wide variety of settings (number theory, set theory, introductory analysis, e.g.). Prerequisite: Math 252 with a minimum grade of "C" or permission of instructor.

317. Discrete Mathematics (4); Fa, Sp

An algorithm-based treatment of sets, matrices, functions, graphs, and relations along with a study of modular arithmetic, enumeration, induction, recursion, algorithm efficiency, Boolean algebra, trees, and graphs. Prerequisite: Math 140 or Math 150 with a grade of "C" or better.

320. Linear Algebra (3); Fa, Sp

An introduction to solutions of linear systems of equations, properties of matrices, nonsingular matrices, determinants, eigenvalues and eigenvectors, similar matrices and Euclidean vector spaces.

Prerequisite: Math 211 with a minimum grade of "C".

325. Applied Ordinary Differential Equations (3); Fa

An introduction to ordinary differential equations. Topics include linear and separable first-order equations, linear second-order equations with constant coefficients, applications of first-order and second-order equations, and Laplace transform methods. Prerequisite: Math 252 with a minimum grade of "C".

345. Mathematical Statistics I (3); Fa

A calculus-based introductory course in statistics including probability, discrete and continuous distributions, confidence inter-

vals, p-values and the analysis of decision rules. Prerequisite: Math 205 or Math 211 with a minimum grade of "C".

401. Discrete Chaos and Fractals (3); Fa, Sp

An introduction to fractal geometry and discrete dynamics in one dimension. Topics include stability of one dimensional maps, periodic points, bifurcations, period three orbits, Sharkovsky's theorem, Schwarzian derivative, chaos in one dimension, metric spaces, transitivity, conjugacy, fractals, fractal dimension, Julia and Mandelbrot sets. Prerequisite: Math 317 and Math 273 with a minimum grade of "C", or permission of instructor.

402. Discrete Dynamical Systems and Chaos (3); Fa, Sp

A continuation of Math 401 in higher dimensions. Topics include discrete linear dynamical systems, orbits, stability, spectral decomposition theorem, affine systems, nonlinear dynamical systems, bounded invariance, global stability of fixed points, sinks, repellers and saddles, bifurcation, attractors, Li-Yorke chaos, and more on fractal dimension. Prerequisite: Math 320 and Math 401 with a minimum grade of "C".

404. Introduction to Numerical Analysis (3); Alt Fa

An introduction to numerical methods for determining the roots of nonlinear equations, numerical interpolation and integration, and numerical methods for approximating solutions to ordinary differential equations. Prerequisite: Math 320 and Math 325 with a minimum grade of "C".

406. College Geometry (4); 3,2; Fa, Sp

A rigorous treatment of the elements of Euclidean geometry. Prerequisite: Math 317 with a grade of "C" or better.

407. Mathematical Models (3)

An overview of model construction with many different examples. The course includes differential equations, Markov

chains, linear programming, zero sum games, graphs, and queues. Prerequisite: Math 320 and Math 325 with a minimum grade of "C".

410. Optimization Techniques (3)

The study of unconstrained and constrained optimization computational algorithms, including both linear and nonlinear methods. Prerequisite: Math 320 and Math 273 with a minimum grade of "C".

415. Introduction to Cryptography (3); Alt Fa

An introductory course on the mathematics of cryptography. Topics include column transposition, monoalphabetic and polyalphabetic ciphers, the one-time pad, and the Hill cipher. Prerequisite: Math 317 with a grade of "C" or better.

417. Mathematical Statistics II (3)

A continuation of Math 345 covering the topics of contingency tables, multiple regression, analysis of variance, and other special topics in Mathematical Statistics. Prerequisite: Math 345 with a minimum grade of "C".

419. Modern Methods of Cryptography

A study of modern methods of cryptography and their applications. Topics include the Data Encryption Standard, the RSA public-key cryptosystem, and Digital Signatures. Prerequisite: Math 317-415 with a grade of "C" or better.

421. Applied Abstract Algebra (3); Fa, Sp

An introduction to abstract algebra and its applications to error-correction codes, cryptography, polynomial algorithms and Fast Fourier Transforms. Prerequisite: Math 317 and Math 320.

425. Introduction to Real Analysis (3); Fa

This course is to give students a solid background in theoretical undergraduate analysis with the theory and deeper understanding of calculus stressed. Students are introduced to proofs that motivate them toward clear thought and understanding of limits, continuity, differentiation, and series. This

provides a rigorous training in mathematical thinking. Prerequisite: Math 301, Math 320, and Math 273 with a minimum grade of "C".

426. Introduction to Complex Variable (3); Fa, Sp

An introduction to the properties of analytic functions. Topics include mappings, limits, continuity, differentiation, Cauchy-Riemann equations, harmonic functions, multi-valued functions and branch points, definite integrals and the Cauchy-Goursat theorem, Cauchy integral formula, maximum modulus theorem, Liouville's theorem, fundamental theorem of algebra, Taylor and Laurent series, residues and poles. Prerequisite: Math 425 with a minimum grade of "C".

430. Mathematical Problem

Solving (4); 3,2; Fa, Sp

A study of problem solving techniques and the applications of such techniques to challenging problems in mathematics. In addition, students will be required to demonstrate mastery of the fundamentals of undergraduate mathematics by passing a series of examinations on college algebra, trigonometry, calculus, and linear algebra. Prerequisite: Math 273 and Math 320 with a grade of "C" or better.

444. Matrix Theory with Applications (3); 3; Fa, Sp

A study of advanced topics in linear algebra and the theory of matrices with emphasis on computer-based applications. Similarity, characteristic and minimal polynomials, diagonalizable matrices and symmetric matrices, Jordan canonical form, vector and matrix norms, spectral radius, stable matrices, functions of matrices, non-negative matrices and Perron-Frobenius theory, differential equations, stability, location of eigenvalues, Rayleigh quotient and Gersgorin's Theorem. Prerequisite: Math 317, Math 320 and Math 325 with a minimum grade of "C".

450. Seminar in Mathematics (1-- 4 VC)

Seminar course in a topic or topics in mathematics.

460. Applied Multivariate Statistics I (3)

Introductory matrix analysis for statistics, multivariate distributions, multiple regression, multiple analysis of variance and covariance, principal component analysis, and canonical correlations. Prerequisite: Math 320 with a minimum grade of "C".

461. Applied Multivariate Statistics II (3)

A continuation of Math 460, including discriminant analysis, factor analysis, categorical techniques, distance concepts, and cluster analysis. Prerequisite: Math 460 with a minimum grade of "C".

499. Independent Research (1 - 4 VC)

Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

Courses in Physics (Phys)

105. Elementary Physics (4); 3,2

A survey of physics for technical and general education students. Prerequisite: Math 100.

110. Survey of Astronomy (4); 3,2

A course designed to introduce the student to the concepts of modern-day astronomy. Topics to be investigated include the sun, planets, meteors, asteroids, comets, stars and star formation, galaxies and galaxy formation, black holes and quasars, cosmology, and cosmogony.

151. Algebra Physics I (4); 3,3,1 recitation; Fa

A non-calculus-based introduction to physics. Does not apply for credit in degree requirements for engineering or chemistry majors. Co-requisite: Math 140.

152. Algebra Physics II (4); 3,3,1 recitation; Sp

A continuation of Phys 151. Phys 151 and Phys 152 together provide a unit of introductory physics that is particularly suitable for

biology and pre-medical students. Prerequisite: Phys 151.

235 - 435. Selected Topic in Physics (1 - 4 VC)

Course in topic or topics in physics. May be repeated with change of content.

291. Calculus Physics I (5); 4,3,1 recitation; Fa

This is the calculus-based introductory physics course for physics, chemistry, and engineering majors. The course covers kinematics, classical dynamics, and thermodynamics. Co-requisite: Math 211.

292. Calculus Physics II (5); 4,3,1 recitation; Sp

This is the second semester of introductory physics course for physics, chemistry, and engineering majors. The course covers electricity and magnetism, simple circuits, optics and introduction to relativity theory. Prerequisite: Phys 291. Co-requisite: Math 252.

300. Astrophysics (4); 3,3

A study of celestial mechanics; the earth-moon system; the sun, planets and satellites, asteroids, stars and galaxies. Prerequisite: Phys 292.

305. Introduction to Computational

Physics (4); 3,3

Introduction to numerical techniques for solving physics problems. Includes an introduction to programming and computer graphics. Prerequisite: Phys 292, Math 252. CS 145 is strongly recommended.

311. Mechanics (3); 3,1 recitation

Review of Newtonian mechanics of point particle systems, including linear and coupled oscillators; central force motion; rigid body motion; LaGrange's equations. Prerequisite: Phys 292. Co-requisite: Math 325.

337. Mathematical Methods in Physics (4)

Vector analysis, matrices, calculus of variations, complex variables, orthogonal functions and Fourier series, and ordinary and partial differential equations with applications to physical problems. Prerequisite: Math 325.

361. Modern Physics and Relativity (3); 3,3 recitation
Introduction to post-Newtonian physics. Through examples from atomic physics, particle scattering and black-body radiation, the student is introduced to concepts from quantum mechanics such as wave-particle duality and energy quantization. The student continues the study of post-Newtonian physics with special relativistic dynamics and kinematics. Prerequisite: Phys 292. Co-requisite: Math 273.

380. Advanced Laboratory I (4); 2,4
Quantitative laboratory experiments in topics associated with classical and modern physics. Prerequisite: Phys 292.

381. Advanced Laboratory II (3), 1,4
Continuation of Phys 380. Quantitative laboratory experiments in topics associated with classical and modern physics. Prerequisite: Phys 380.

390 - 490. Independent Study (1 - 4 VC)
Independent study arranged with an instructor. Prerequisite: Permission of instructor.

402. Statistical Mechanics (3)
Mechanical theory of the thermodynamics of gases, including ensembles and distributions; connection between statistical and thermodynamic quantities. Prerequisite: Phys 292 and Math 325.

421. Electricity and Magnetism I (4); Fa
Electrostatics, dielectrics, boundary value problems, magnetism, Maxwell's equations. Prerequisite: Phys 292 and Math 325.

422. Electricity and Magnetism II (3); Sp
Continuation of Phys 421, with an emphasis on applications. Prerequisite: Phys 421.

430. Computational Fluid Dynamics (5)
This course presents a review of numerical methods, introduces the basic equations of fluid dynamics, explores computational methods for and limitations of these solutions, and provides an opportunity

to computationally solve fluid dynamical problems having applications in science and engineering. Prerequisites: Phys 337.

450. Seminar in Physics (1 - 4 VC)
Seminar course in a topic or topics in physics.

453. Optics and Modern Optics (4)
This course is offered to students in the physical sciences and engineering who will be exposed to optics in such diverse areas as optical imaging, communications, spectroscopy and light. Prerequisite: Phys 292.

455. Physics Research Seminar (1)
Upper division students participating in a physics research project will present one or two 30-minute presentations on their project to faculty members and other undergraduate students registered in the course. In addition, the students will participate in the discussion evolving from other student presentations. Cross-listed as: Chem 455.

461. Quantum Mechanics I (4); Fa
The algebra of quantum mechanics; the Hamiltonian; examples in a finite basis; the Schrodinger equation; examples in one and three dimensions. Prerequisite: Phys 361 and Math 325.

462. Quantum Mechanics II (3); Sp
Continuation of Phys 461, with an emphasis on applications. Prerequisite: Phys 461.

468. Solid State Physics (4)
Mechanical and thermal properties of solids, the electron theory of metals, and band theory. Prerequisite: Phys 461.

499. Senior Project (1 - 3 VC)
Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

Department of Humanities

Dr. Peter Linder
 Department Chair
 Douglas Hall, Room 144
 505 454-3414
 FAX: 505 454-3389

E-MAIL: linderpeter@nmhu.edu

Mission of the Department of Humanities

The Department of Humanities includes the disciplines of English, Philosophy, History, Political Science, and Languages. Its mission is to provide quality education leading to intellectual growth and professional success. Majors and/or minors are offered in each area of Humanities.

The English program endeavors to develop fluency in the use of English through critical, creative, and technical writing. The departmental curriculum is designed to meet a variety of interests: literature, creative writing, linguistics, rhetoric, cultural studies, mythology, and professional writing. Study of English prepares students for careers in teaching, publishing, arts, journalism, technical writing, business, law, and government.

Philosophy involves critical and reflective thinking about beliefs, values, and modes of knowledge. Our program offers courses for students of all disciplines in such areas as critical thinking, ethics, art and aesthetics, and philosophy of science.

History and Political Science forms an academic unit serving the undergraduate and graduate student body with a wide range of courses and possibilities for study. Historical and political understanding and awareness are perceived as one of the chief attributes of a functional and involved citizen of the United States. It is the mission of this program to provide services that will contribute to this goal as well as train students to work

in appropriate fields utilizing historical and political skills and knowledge. The program is committed to preserving, interpreting, and promoting the unique multicultural heritage of the region.

The success of the university depends upon an appreciation of the region's cultural and linguistics identities. New Mexico Highlands University's undergraduate program in Languages and Literature is committed to developing broadly literate students educated in analytical and critical thought and promoting a wide understanding of the liberal arts and sciences. Because of its location and student population, NMHU recognizes the importance of Spanish language and culture in the local and global community.

Faculty

Regina Briefs-Elgin (Composition, Creative Non-fiction)

Helen Aparicio Blythe (English)

Peter Linder (History)

Roy Lujan (History, Political Science)

A. Manafy (Political Science)

Daniel Martinez (English)

Barbara Risch (English Linguistics)

Veronica Saunero-Ward (Spanish, Italian)

Carmen Vidal-Lieberman (Spanish, Portuguese)

Alice Lee Stauffer (Philosophy)

Eduardo Tafoya (Creative Writing-Fiction, American Lit., New Testament)

Steve Williams (History)

Donna Woodford (English)

Resources and Facilities

The Humanities department is located in Douglas Hall, a newly renovated building that houses classrooms, the Writing Center, the Language Learning Center, and offices for faculty and graduate assistants in the humanities.

The English program provides the services of the Writing Center to students in all university courses as well as in English composition courses. The facility offers individual tutoring and small group work. Teaching assistants in the English M.A. program begin learning tutoring pedagogy while working at the Writing Center during their first semester.

The English program houses Sendero, a national humanities journal that publishes poetry, fiction, and essays in Spanish, Navajo, and English. Students earn practicum credit for their work in the production of the journal. The department also sponsors a chapter of the international English honor society, Sigma Tau Delta.

The socio-cultural richness of northern New Mexico provides one context for historical and political studies at New Mexico Highlands

University. Las Vegas is one of the outstanding historical communities in the Southwest, making it a living laboratory for studies in regional history and historical preservation. The programs capitalize on the University's proximity to Santa Fe, the state capital, in offering contacts with state policy-makers and research opportunities to both faculty and students in the New Mexico State Archives and State Library.

Research in local history and politics is based in the area's old Hispanic villages, nineteenth century towns, Fort Union and Pecos National Monuments, local churches, and schools. Genealogical and archival studies are conducted through the University library's resources in local journals, the Arrott collection of regional military materials, and microfilms of major county and church records. The history discipline sponsors a chapter of the national honor society in history, Phi Alpha Theta.

Students of language at NMHU hear Spanish spoken in the community and on campus every day. The university's location in northern New Mexico, where 70 percent of the population is Hispanic, offers a richly varied setting for studies in local, regional, and international culture and languages. The program offers beginning and intermediate courses in Spanish language to students across campus. Spanish is the language of instruction, except when noted otherwise in course descriptions. The Spanish major emphasizes skills and knowledge in Spanish language, literary analysis and appreciation, international and cultural contexts, and applied course work in written and oral communication.

Introductory and intermediate-level courses are offered in American Sign Language and other languages to meet the demand for exposure to the important languages of the world. Courses may also be offered in French, Portuguese, Navajo, Italian, and other languages as the department continues to grow.

The program's Language Learning Center (LLC) is equipped with computers, recorders, and a large media collection of audiovisual programs and recordings. Thomas C. Donnelly Library has more than 5,000 titles in Spanish culture and literature, with especially rich holdings in the Golden Age of Spanish literature. International studies are enhanced by the university's International Students' Club, and language students participate in an active Spanish Club.

English

The English program offers intensive study of literature, writing, rhetoric, linguistics, mythology, and cultural studies. The program core for the major consists of literature

surveys, a course in language, and a course in criticism, all of which provide foundational knowledge of literary periods, genres, theory, and language. The English major, in conjunction with the School of Education, prepares students for careers as secondary school English teachers. The department also offers a pre-professional major for those interested in preparing for graduate studies in law and other fields, or for careers in professional writing, advertising, or publishing.

The English program provides the services of the Writing Center to students in the English Composition sequence and in other university courses. The Center, staffed by English Ph.D.s, M.A.s, and graduate students, offers one-on-one instruction in all stages of the writing process, from developing a thesis through citing sources accurately. Teaching assistants in the English M.A. program develop their pedagogical skills by serving as instructors at the Writing Center during their first semester.

English minors have three options: a general minor with a literary emphasis, a minor in professional writing, or a minor in religious studies.

Philosophy

The program offers a minor in philosophy, which includes course work in formal logic, ancient and medieval philosophy, and modern philosophy. English and Philosophy also participate in the cognitive science minor, as described elsewhere in the catalog.

Major in English (B.A.)

Traditional, English Education, and Pre-Professional Tracks

In order to earn a B.A. in English, students are required to complete at least twelve, three-credit courses in English beyond the

composition sequence (Engl 100, 111, 112): a total of 36 credit hours. Students must also satisfy the following general distribution requirements:

- One American Literature Survey-Engl 294 or Engl 295 (two courses are recommended)
- One British Literature Survey – Engl 290 or Engl 291 (two courses are recommended)
- One World Literature Survey – Engl 292 or Engl 293 (two courses recommended)
- English 302: Literary Theory (To be taken in the junior year. Students in the pre-professional track may substitute any course in rhetoric, linguistics, or writing)
- At least one course in grammar, linguistics, or rhetoric.
- At least one course in Shakespeare, Chaucer, or Milton.
- Engl. 412- Major British Writers

Electives (15 hours):

Students majoring in English and minoring in Secondary Education must take

Engl	317	Intro to Modern Grammar
AND		
Engl	350	Methods of Teaching Writing

The remaining courses (for a total of 36 credit hours) are program electives.

Students are cautioned that there are other university requirements which must be satisfied before the diploma can be conferred. The registrar mandates that in order for a student to graduate, at least 51 credits at the 300 level or above (from any discipline) must be accumulated. While many of these upper-level credits may be accumulated through coursework in the minor, it is highly recommended that students also take additional English elective courses in order to satisfy this requirement. Students are advised to check with the registrar far in advance of

the anticipated graduation date in order to determine that all graduation requirements have been or will be satisfied.

Please note: These courses have certain pre-requisites; see specific course descriptions for details.

All English majors must consult with their advisor in English prior to registration each term for advisement. During the first meeting, the advisor and student will develop a long-term plan for completing the program.

English Education Track

Students preparing for careers as high school English teachers must major in English (in the English Education track), minor in secondary education, and complete course work required for state licensure. They must consult with two faculty advisors, one in the English department and one from the School of Education. Furthermore, students on this track must take the New Mexico Teacher Assessment exam between their sophomore and junior year and must plan to have all course work in English completed before the start of their final semester (which will be devoted to field preparation).

Pre-Professional Track

Students interested in majoring in English as preparation for professional careers in such areas as business, government, law, or administration should concentrate on courses in writing, rhetoric and linguistics. Those specifically interested in law school should also take courses in philosophy and logic. This track is not intended for students pursuing teaching careers. The pre-professional track is recommended for students double-majoring in English and a field with heavy course requirements.

Minor in English

Required courses: 9

Engl 317 Intro to Modern

Grammar (3)

Choose two courses from the following:

Engl 290	Early Brit Mstrwks (3)
Engl 291	Ltr Brit Mstrwks (3)
Engl 292	World Lit to 1700 (3)
Engl 293	World Lit from 1700 to Modern (3)
Engl 294	Amer Lit to 1865 (3)
Engl 295	Amer Lit, 1865 to Present (3)

Electives: 12

Minor Total: 21

Minor in Professional Writing

Required courses: 12

Engl 317	Intro to Modern Grammar (3)
Engl 310	Creative Nonfiction (3)
OR	
Engl 367	Technical Writing (3)
Engl 463	Rhetoric & Reality (3)
Engl 485	Stylistics (3)

Electives: 12

Choose four courses from the following:

Engl 214	Autobiography (3)
Engl 309	A Hist of Writing (3)
Engl 350	Meth of Teaching Wrtg (3)
Engl 362	Creative Wrtg: Poetry (3)
Engl 364	Creative Wrtg: Fiction (3)
Engl 365	Nonfiction Prose (3)
Engl 400	Creat Wrtg: Experimental Fiction (3)
Engl 401	Creat Wrtg: Adv Poetry (3)
Engl 441	Hist of the English Lang (3)
Engl 443	Sociolinguistics (3)
Engl 464	Women & Rhet (3)
Engl 234 – 434	Practicum (1-4)

Minor Total: 24

Minor in Philosophy

Required courses: 12

Phil	100	Intro to Phil (3)
Phil	201	Ancient and Medieval Philosophy (3)
Phil	203	Modern Phil (3)
Phil	211	Formal Logic (3)

Electives: 12

Choose one course from the following list:

Phil	321	Business Ethics (3)
Phil	322	Biomedical Ethics (3)
Phil	323	Envir Ethics (3)

Choose one course from the following list:

Engl	302	Literary Theory (3)
Phil	472	Cognitive Science (3)
Phil	484	Phil of History (3)
PolS	458	Political Theory and Philosophy (3)

Choose two courses from the following list:

Phil	235-435	ST: Philosophy (3)
Phil	312	Phil of Science (3)
Phil	316	Phil of Religion (3)
Phil	317	The Bible as History (3)
Phil	300-400	Major Philosophers (3)
Phil	305-405	Major Philosophical Movements (3)
Phil	440	Philosophy of Art and Aesthetics (3)

Minor Total: 24

Religious Studies Minor

Required courses: 6

(Students taking this minor are strongly encouraged to select Phil 100 as part of their core requirements.)

Choose at least two courses from the following list:

Anth	422	Religion & Culture (3)
(Students taking Anth 422 should fulfill the prerequisite for this course by selecting the appropriate anthropology or sociology options in the core.)		
Engl	282	Classical Myth (3)
Phil	316	Phil of Relig (3)

Electives: 15

15 additional credits will be chosen in

consultation with the religious studies minor committee for the courses listed below. Six credits must be at the 300 or 400 level.)

Anth	274	Indian Cultures in Latin America (3)
Anth	235-435	Selected Topic in Anth (1-4)
AH	310	Art History I (3)
AH	380	Art History: The Americas (3)
Engl	281	Norse Mythology (3)
Engl	283	Celtic Mythology (3)
Engl	341	Bible as Lit: Old Testament (3)
Engl	342	Bible as Lit: New Testament (3)
Engl	343	Eastern Spiritual Classics (3)
Engl	391	Arthurian Lit (3)
Engl	423	Milton (3)
Hist	321	The Ancient World (3)
Hist	322	Medieval Europe (3)
Hist	435	ST: The Triumph of Christianity (3)
Mus	311	Western Art Music Before 1750 (3)
Mus	435	ST: Sacred Hispanic Musical Traditions (3)
Phil	201	Ancient and Medieval Philosophy (3)
Phil	317	Bible as History (3)
Phil	318	Native American Philosophy (3)
Phil	325	Ethics (3)
Psy	479	Psychology of Religion (3)
Span	462	Southwest Folklore (3)

Minor Total: 21

Cognitive Science

Cognitive science is an interdisciplinary field concerned with the nature of the mind.

Drawing on the resources of mathematics, philosophy, psychology, computer science,

linguistics, and other disciplines, students of cognitive science study such phenomena as consciousness, the relation of the mind to the body, and the nature and limits of computation. This discipline addresses long-standing questions about the nature of thought, intelligence, perception, emotion, and other aspects of mental life by examining the way information is processed in computers, the nature of language, and the relation of cognition to the brain.

Please refer to the Interdepartmental Programs section in this catalog for further details regarding this minor.

History

Historians investigate the past so that we can understand the present, "how we came to be where we are and what we are." The word "history" derives from the Greek word for "inquiry." Historians are, broadly speaking, interested in the social, political, economic, and religious daily affairs of all people. Their methods range from interviewing eyewitnesses of recent events to researching old diaries and letters or public or private documents and records, to compiling computer-generated data on people and their activities. The history faculty at Highlands especially encourage their students to make connections between their own lives and times and the past.

Students of history may seek careers in teaching or professional applications, and many will continue for an advanced degree or enter law school. Professional applications of history include a variety of careers in public affairs, business, and the private sector where research, communication, and other liberal arts skills are valued. Some history students obtain positions in museums or archival settings or in historical research and preservation for private and public

institutions.

Political Science

Aristotle characterized politics as the "queen of the sciences." Political science is, in one sense, an ancient discipline and, in another sense, one of the most recently developed social sciences. The origins of the study of politics reach back to the beginnings of human society, for people have always made observations about the nature of their government. It is also true that political science, as it is taught today, is a very new discipline as current scholars have attempted to move from observations about politics to scientific observations about politics. Political science, in the broadest sense, is the study of governments, governing procedures and political processes. The political science faculty encourage their students to make connections between the theoretical (or textbook) study of government/politics and how government affects their lives in contemporary times.

Students in political science may seek careers in government, teaching, or private industry. The political science major serves as excellent preparation for law school or other academic pursuits such as graduate study. It provides pre-professional training for governmental or public sector positions involving policy-making or administration. Representative employers are government agencies at the national, state or local levels, corporations and research institutions.

Major in History (B.A.)

Required courses: 6

Hist 301 Rsrch Meth in Hist (3)

Hist 480 Historiography (3)

Electives: 26

Choose at least 9 additional credits in 300- and 400-level courses from history (or political science courses that are cross-listed in history), selected in consultation with the major advisor. Choose 17 additional credits

in courses at any level from history (or political science courses that are cross-listed in history), selected in consultation with the major advisor.

Major Total: 32

Minor in History

Choose at least 20 credits from courses in history and allied fields, in consultation with the minor advisor, according to the following criteria: At least seven of the credits must be from courses at the 300 or 400 level; at least 14 of the credits must be from courses in history.

Minor Total: 20

Major in Political Science (B.A.)

The major in political science is offered with two emphases: liberal arts, and law. The law emphasis provides a foundation in government and political systems and addresses legal systems and dimensions of constitutional, public and criminal law. The liberal arts emphasis provides extensive study of American national, state, and local government, comparative and international politics, political theory, and political behavior. A special feature of political science at NMHU is found in its focus on Southwest and minority political studies.

Liberal Arts Emphasis

Required courses: 12

PolS	151	Amer Natl Govt (3)
PolS	312	Pol Parties & Beh (3)
PolS	316	State & Local Gov (3)
PolS	328	Comp Political Sys (3)

Electives: 20

Choose one course from the following:

PolS	410	Amer Constitution (3)
PolS	458	Pol Theory & Phil (3)

Choose at least 17 additional credits from courses in political science (or history courses such as 315, 401, 403, 413, 414), in consultation with the major advisor. At least five of

the credits must be from courses at the 300- or 400- level.

Minor Total: 32

Law Emphasis

Required courses: 21

PolS	151	Amer Natl Govt (3)
PolS	314	Intro to the Law (3)
PolS	316	State & Local Govt (3)
PolS	328	Comp Political Sys (3)
PolS	410	Amer Constitution (3)
PolS	417	Legislative Process (3)
PolS	453	IR, Human Rights & Int'l Law (3)

Electives: 11

Choose at least 11 additional credits from political science courses (or from history courses cross-listed in political science), in consultation with the major advisor.

Major Total: 32

Minor in Political Science

Required courses: 6

PolS	151	Amer Natl Govt (3)
PolS	316	State & Local Govt (3)

Electives: 14

Choose one course from the following:

PolS	410	Amer Constitution (3)
PolS	458	Pol Theory & Phil (3)

Choose at least 11 additional credits in courses from political science and allied subjects, selected in consultation with the minor advisor. At least four of these credits must be from 300- or 400- level courses.

Minor Total: 20

Pre-Law Preparation for Students Planning to Attend Law School

Comprehensive advising is made available for students planning or considering a career in law. Law or pre-law does not constitute a major, and in fact a wide variety of fields of study may be appropriate for the prospective lawyer. Many students select the major in political science, which offers a law emphasis; others select major and minor fields in the

humanities, social sciences, or sciences.

Careful planning of appropriate fields of study, with special attention to a foundation of skills in written and oral communication, research, calculation, and critical thinking, is strongly recommended. The pre-law advisor will help all students with their plans to gain an appropriate preparation for entering law school. This advisor is a source of much information about law schools and their requirements as well as the LSAT examination, which is used to help law schools evaluate students' qualifications for entrance. The pre-law advisors is Andrew Israel, Room 5, Ford Hall.

Major in History with a concentrartion in Social Studies, Secondary Teaching (B.A.)

Required courses: 1

Hist	350	Meth & Curr of Sec Ed in Soc Studies (2)
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Electives: 10

Select in consultation with a major advisor: In United States history, choose at least ten credits, to include three courses from the following:

Hist	201	US Hist to 1877 (3)
Hist	202	US Hist Since 1877 (3)
Hist	215	Hist of NM (3)
Hist	453	Hist of the SW (3)

In world history, choose at least two courses from the following:

Hist	321	Ancient World (3)
Hist	322	Medieval Europe (3)
Hist	325	Modern Europe to 1815 (3)
Hist	326	Modern Europe Since 1815 (3)

and one course from the following:

Hist	344	Colonial Latin Amer (3)
Hist	345	Mod Latin Amer (3)
Hist	346	Cont Latin Amer (3)
Hist	347	Hist of Modern Mexico (3)

In political science/government, choose at least three courses from the following:

PolS	314	Intro to the Law (3)
PolS	316	State & Local Govt (3)
PolS	328	Comp Political Sys (3)
PolS	353	Intl Relations (3)
PolS	417	Legislative Process (3)

Major Total: 32

Minor in Social Studies, Secondary Teaching

Required courses: 1

Hist	350	Meth & Curr of Sec Ed in Soc Studies (2)
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Choose one of the following, including at least ten credits from courses at the 300 or 400 level:

A) Complete at least 22 credits in courses from one of the course options listed above for the social studies major for teachers: either 1) United States history, 2) world history, or 3) political science/govt.

B) Complete at least ten credits in courses from two of the course options listed above for the social studies major for teachers: 1) United States history, 2) world history, and 3) political science/govt, together with additional courses to total at least 22 credits

Minor Total: 24

Spanish

The Languages and Literature program offers a Major in Spanish with two concentrations: Peninsular and Latin American Literature and Culture, and Southwest Hispanic Literature and Culture. It also offers a Major in Spanish for Elementary and/or Secondary School Teachers and a Minor in Spanish. The program emphasizes the four language skills (reading, writing, listening comprehension, and speaking) and strives to develop in its majors and minors a thorough and high cultural literacy of the Hispanic world through

study of the Spanish language, literature, and culture.

Major in Spanish (B.A.)

Prerequisite:

Proficiency in first-year Spanish, as demonstrated by completion of Span 101 and Span 102, or Span 103 and Span 104, or Span 111 or Span 112 or the equivalent competency. (Does not count toward the major.)

Required courses: 24

- Span 201 Intermed Span 1 (3)
- Span 202 From Reader to Writer: Intro to Hisp Lit (3)
- Span 310 Intermed Convers Video in the Class (3)
- Span 325 Span for Written Comm (3)
- Span 400 Adv Grammar & Composition (3)
- Span 495 Senior Year Paper (3)

Choose one of the following :

- Span 431 LA Civil & Cult (3)
- Span 432 Span Civil & Cult (3)
- Span 433 NM & SW Civil & Cult (3)

Choose one of the following:

- Span 430 Span Ling & Phon (3)
- Span 467 Hist of Span Lang (3)

Option 1 courses: 15

Choose two of the following:

- Span 301 Span Lit: Poetry (3)
- Span 302 Span Lit: Drama (3)
- Span 303 LA Lit: Poetry (3)
- Span 304 LA Lit: Drama (3)

Choose two of the following:

- Span 401 Span Lit: Shrt Stry (3)
- Span 402 Span Lit: Novel (3)
- Span 403 LA Lit: Short Story (3)
- Span 404 LA Lit: Novel (3)

Electives: 3

Student will choose at least three additional credit hours from the list of courses in Spanish.

Major Total: 39

Option 2 courses: 12

Choose one of the following course sequences:

Span 320 Panorama of Chicano Poetry (3)

OR

Span 370 Perspectives on Chicano Drama (3)

Span 420 Chicano Short Story of the SW (3)

OR

Span 470 Chicano Novel of the SW (3)

Choose two of the following:

Span 462 SW Folklore (3)

Span 464 Hisp Women of NM: 1598 - 1888 (3)

Electives: 3

Choose at least three additional credit hours from the list of courses in consultation with the major advisor.

Major Total: 39

Major in Spanish for Elementary and/or Secondary School Teachers (K – 12) (B.A.)

The following course must be taken as one of the six additional credits used in fulfillment of the general Spanish major:

Span 445 Teach of Spanish: Theory & Meth (3)

Those pursuing a teaching career must contact the School of Education for required certification/endorsement course work, as stipulated by the State of New Mexico Public Education Department.

Major Total: 39

Minor in Spanish

Prerequisite:

Proficiency in first-year Spanish, as demonstrated by completion of Span 101 and Span 102, or Span 103 and Span 104; or Span 111 or Span 112 or the equivalent competency. (Does not count toward the minor.)

Required hours: 18

Span	201	Intermed Span 1 (3)
Span	202	From Reader to Writer: Intro to Hisp. Lit. (3)
Span	310	Intermed Convers: Video in the Class (3)
Span	325	Spanish for Written Comm (3)
Span	400	Adv Grammar & Comp (3)
Span	452	Nobel Prize Laureates Hisp Lit (3)

Choose one of the following courses:

Span	431	Spain: Civil & Cult (3)
Span	432	Latin Amer Civil & Cult (3)
Span	433	NM & SW Civil & Cult (3)

Electives: 6

Choose at least six additional upper division credit hours from the list of courses in Spanish, in consultation with the minor advisor.

Minor Total: 27

Courses in English (Engl)

Note: Any 100, 200- or 300-level literature course will satisfy the core requirement. Writing courses do not satisfy the core requirement.

100. Reading and Writing for College (3); 3,1 (Required of students scoring below 18 on the ACT. These students may attempt to test out by taking the NMHU Writing placement test.) Intensive practice in reading, interpreting, and responding to written works. Students will be required to write a number of essays and to pass a committee-graded exit exam at the end of the course. Note: This course does not count towards the 128-credit-hour requirement for graduation.

111. Freshman Composition I (3)
Students will be required to write a number of essays demonstrating mastery of a variety of forms of organization. Prerequisite: 18 or higher on the ACT English Usage Test or completion of Engl 100 with a grade of "B" or better. Students may also test out through the ETS Advanced Placement exam. See the

Office of the Registrar for details.

112. Freshman Composition II (3)
Introduction to the analysis and interpretation of textual sources and the writing of documented papers, emphasizing use of secondary sources, bibliography, organization of material, and effective presentation of research findings. Prerequisite: A grade of "C" or better in Engl 111, or 29 or higher on the ACT English Usage Test. Students may also test out through the ETS Advanced Placement exam or the CLEP exam. See the Office of the Registrar for details.

151. Introduction to Drama (3)
Close reading and analysis of drama selected from world literature of all ages. Prerequisite: Engl 100, passed with a grade of "B" or better.

152. Introduction to Fiction (3)
Close reading and analysis of prose fiction selected from world literature of all ages. Prerequisite: Engl 100, passed with a grade of "B" or better.

214. Autobiography (3)
Approaches autobiography through both theory and practice by analyzing major autobiographies and by producing autobiographical writings. Prerequisite: Engl 111.

234 – 434. Practicum (1 – 4 VC)
Students gain practical knowledge through internships in such areas as tutoring, editing, public relations, and feature writing. Prerequisite: Engl 111.

235 – 435. Selected Topic in English (1 – 4 VC)
Course in a topic or topics in English. May be repeated with change of content. Prerequisite: Engl 111.

272. Introduction to Poetry (3)
A survey course in the close reading and analysis of poetry. Class discussions are lively and engaging, encouraging students to take critical pleasure in poetry. The course covers a variety of United States and world poets and poetic themes. Prerequisite: Engl 111.

277. Introduction to Popular Culture (3)

Survey of popular literary genres (romances, action-adventure) as well as film and television. Focuses on the interrelationship between myth, culture, politics, and the "culture industry." Prerequisite: Engl 111.

278. Science Fiction (3)

Close reading and analysis of major science fiction works. Explores science fiction as cultural metaphor and modern myth. Prerequisite: Engl 111.

279. Horror Literature (3)

A study of the folk origins of the horror story and its manifestations in mainstream and genre fiction and film. Prerequisite: Engl 111.

281. Norse Mythology (3)

Norse myths and sagas examined for their literary and cultural significance. Prerequisite: Engl 111.

282. Classical Mythology (3)

Greek and Roman myths examined for their literary and cultural significance. Prerequisite: Engl 111.

283. Celtic Mythology (3)

Celtic myths and sagas of medieval Ireland and Wales, examined for their literary and cultural significance. Prerequisite: Engl 111.

284. Twentieth-Century Literature (3)

A study of modern sensibility as manifested in contemporary works written in English and English translation. Prerequisite: Engl 111.

290. Early British Masterworks (3)

Significant works of major authors from the early Middle Ages through the Renaissance, including Beowulf, Sir Gawain and the Green Knight, and selected works of Chaucer, Spenser, and Milton. Prerequisite: Engl 112.

291. Later British Masterworks (3)

A study of representative authors of the Neoclassic, Romantic, Victorian, and modern British periods. Prerequisite: Engl 112.

292. World Literature to 1700 (3)

Readings in world literature from the Ancient World through the comparative literature of the European Renaissance. This course excludes British and American literature. Prerequisite: Engl 112.

293. World Literature from 1700 to Modern (3)

Literature from the European Neo-classic period through the modern schools of Eastern and Western literature. This course excludes British and American literature. Prerequisite: Engl 112.

294. American Literature to 1865 (3)

A study of major American works that exemplify the changing philosophies and literary trends of Colonial America, the Early Republic, and the American Renaissance. Emphasis on changing views of humankind and God and on the literary treatment of the elusive "American Dream." Prerequisite: Engl 112.

295. American Literature, 1865 to the Present (3)

The development of American poetry and fiction from Mark Twain and the rise of Realism to the present. Emphasis on the major literary schools and authors of the period. Prerequisite: Engl 112.

302. Literary Theory (3)

Theories of literature from Plato to the present. Application of these theories to various works, ancient and modern. Prerequisite: Two English courses beyond 111 and 112.

309. A History of Writing (3)

A cross-cultural study of writing and writing systems; the development of script and the social contexts of use. Prerequisite: Engl 112.

310. Creative Nonfiction (3)

An advanced composition class for students in the Arts and Humanities. Students compose creative nonfiction essays suitable for publication. Prerequisite: Engl 112.

312. The American Fool (3)

An in-depth study of the archetype of the fool and his apparitions in American litera-

ture. Prerequisite: Engl 112.

314. Women in Literature (3)

Study of literary works chosen to demonstrate the historical and contemporary representation (including stereotyping) of women in poetry and fiction. Prerequisite: Engl 112.

315. Native American Women's Literature: Voices and Visions (3)

Study and exploration of women's voices in contemporary Native American literature. Prerequisite: Engl 112.

317. Introduction to Modern Grammar (3)

This class provides an introduction to the components of language-phonology, morphology, syntax, and semantics-as well as various grammar models. Topics also include the relations between language and social contexts, and language and writing.

318. Chicana/o Literature (3)

A survey examining the major texts of the Chicana/o experience, including traditional, community-centered folktales and corridos, contemporary prose, poetry, drama, and non-fiction, supported by theoretical readings. Prerequisite: Engl 112.

341. The Bible as Literature:

Old Testament (3)

Study of Old Testament literature, emphasizing techniques and conventions of biblical narrative and poetry. Prerequisite: Engl 112.

342. The Bible as Literature:

New Testament (3)

Study of New Testament literature, focusing on the various literary arts of Gospels, Acts, Epistles, and Revelation. Prerequisite: Engl 112.

343. Eastern Spiritual Classics (3)

Literary aspects of the Eastern spiritual classics – Hindu, Buddhist, Taoist, Zen, Islamic, Sufi, Kabbalistic, and Hassidic. Prerequisite: Engl 111.

350. Methods of Teaching Writing (3)

Provides a review of traditional and current

methods of teaching composition. Students examine current writing theory and research with an eye toward the implications for pedagogy.

362. Creative Writing: Poetry (3)

An intensive and creative course in the craft of poetry. Course readings will include selected works and poetics. Objectives include the recognition and imitation of selected techniques and the writing of original works. Prerequisite: Engl 112 and Engl 272.

364. Creative Writing: Fiction (3)

Intensive study of selected works of short fiction with emphasis on the components of this literary form; writing of original works in the form. Prerequisite: Engl 112.

365. Nonfiction Prose (3)

An introduction to the reading and analysis of creative nonfiction essays: biography, travel, nature, social commentary, the urban scene, sports, and the domestic and fine arts. Prerequisite: Engl 112.

367. Technical Writing (3)

Students develop the principles of scientific, professional, and technical writing. Major assignments include formal proposals and reports. Minor assignments include resumes, short reports, instructions, correspondence, and memoranda. Stress is placed on developing a clear and concise writing style. Prerequisite: Engl 112.

381. African-American Writers (3)

A study of the scope, excellence, and distinctive qualities of the writing of African-Americans in the United States. Prerequisite: Engl 112.

391. Arthurian Literature (3)

Literature generated by the legends of King Arthur and his court, studied in a variety of European texts from the Middle Ages. Prerequisite: Engl 112.

400. Creative Writing:

Experimental Fiction (3)

Advanced fiction writing with an emphasis

on experimental techniques, styles, and approaches, including stream-of-consciousness and fictive-autobiography. The reading component of this course will include theoretical and creative texts.

401. Creative Writing: Advanced Poetry (3)
A writing workshop for experienced poets. Students will write original poems and read 20th century poetry and poetics from the United States and around the world. Prerequisite: Permission of the instructor after review of a writing sample.

411. Major American Writers (3)
In-depth student of a major author or authors, school, genre, tradition in American literature. Possible topics: Literature of the American West; American Modernism; American poetry. May be repeated with change of content.

412. Major British Writers (3)
In-depth study of a major author or authors, school, genre, or tradition of British literature. May be repeated with change of content. Possible topics: Byron and the "Satanic School," The British Moderns (Lawrence, Woolf, Joyce). Prerequisite: Junior standing.

413. Major World Writers (3)
In-depth study of a major author or authors, school, genre, or tradition of world literature, generally excluding British and American works. May be repeated with change of content. Possible topics: Kafka and the Kafkaesque, Ancient Erotic Literature, Post-Colonial African Fiction, The Epic. Prerequisite: Junior standing.

414. Literary Realism (3)
Covers the international development of the theory and practice of the realist novel. Prerequisite: Junior standing.

421. Chaucer (3)
Intensive study of The Canterbury Tales and selected minor works. Prerequisite: Junior standing.

422. Shakespeare (3)
Intensive study of a group of Shakespeare's plays, such as comedies, tragedies, Greek plays, English history plays, or late romances. May be repeated with a change of content. Prerequisite: Junior standing.

423. Milton (3)
Intensive study of Paradise Lost and selected minor works. Prerequisite: Junior standing.

434. Practicum (1 – 4 VC)
Students gain practical knowledge in such areas as tutoring, editing, public relations, and feature writing. Prerequisite: Junior standing.

435. Selected Topic in English (1 – 4 VC)
Course in a topic or topics in English. May be repeated with change of content. Prerequisite: Junior standing.

441. History of the English Language (3)
Investigation of the origin of modern English, with a study of the evolution of English sounds, inflections, vocabulary, and syntax, from earliest times to the present. Prerequisite: Junior standing.

442. Contemporary English Linguistics (3)
An examination of the structures, processes, and functions of elements of the English language, with particular attention to their description in the theories of cognitive grammar.

443. Sociolinguistics (3)
This course is an examination of language use and variation. Topics to be addressed include sociolinguistic theory, research methods and application; diglossia and multilingualism; pidgins and creoles; patterns of discourse; forms of addresses and reference; sociolinguistics of writing. Prerequisite: Junior standing and Engl 317.

445. Cultural Criticism and Theory (3)
Selections from advanced cultural criticism from the Birmingham school and its contemporary derivatives. Authors to be studied will include Foucault, Hall, Hebdige, Barthes,

and others. Emphasis will be on the study of contemporary culture from a theoretical perspective. Prerequisite: Junior standing.

450. Seminar in English (1 – 4 VC)

Seminar course in a topic or topics in English. Possible topics: literature of exploration, existentialism, literature and the law. Prerequisite: Junior standing.

458. Colonial Literature of the Americas (3); 3,1 Alt Fa

This course examines in depth literature written in Spain and in Spanish speaking America prior and during Latin America's colonial period which would, by geographical extension, include the American Southwest. Texts will include historically prior European works which influenced the conquistador's ideology, and poetry, letters, diaries, and historical chronicles of Latin America and the southwest from 1492 until the beginning of the 19th century. Prerequisite: Span 201, 202, and 325.

463. Rhetoric and Reality (3)

A survey of rhetorical writings and theory from classical times to the present. Prerequisite: Junior standing.

464. Women and Rhetoric (3)

Provides a historical and thematic overview of rhetorical writings by and about women. Prerequisite: Junior standing.

475. Latina Writers in

Translation (3); 3,0 Alt Sp

This course examines the literary production of Hispanic women in the U.S.. Gender, race, ethnicity, and socioeconomic issues are analyzed. Through their writings these women are active in developing new categories of knowledge and creative expression, which demonstrate how Hispanic women position themselves and are positioned within the context of history, culture, and society. Prerequisite: Span 201, 202, and 325.

482. Literature of the Southwest (3)

An examination of the tri-cultural literary

heritage of the southwestern United States. Readings include journals and diaries of the Territorial Period as well as imaginative works by novelists of the Southwest. Emphasis on cultural traditions that shaped the literature. Prerequisite: Junior standing.

485. Stylistics (3)

An examination of linguistic principles specifically as they apply to the analysis of written texts. Students will learn to make the kind of textual observations needed to reveal the stylistic traits and tendencies in the language of literature. Prerequisite: Junior standing.

490. Senior Readings (1 – 4 VC)

Primarily intended for English majors. Individual, directed study of selected author(s) or topic(s) arranged with an instructor. Prerequisite: Junior standing and permission of instructor required.

499. Supervised Research (1 – 4 VC)

Primarily intended for English majors. Individual, directed research project arranged with an instructor. Prerequisite: Junior standing and permission of instructor required.

Courses in Philosophy (Phil)

100. Introduction to Philosophy (3)

The nature of philosophical inquiry; classical and contemporary solutions to major philosophical problems; ethics; philosophy of religion; philosophy of science; basic principles of logic and critical thinking.

201. Ancient and Medieval Philosophy (3)

A survey of ancient and medieval philosophy including but not limited to the Pre-Socratics, Socrates, Plato, Aristotle, Augustine, and Aquinas.

203. Modern Philosophy (3)

Survey of the philosophies of Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant.

211. Formal Logic (3)

Contemporary logical analysis.

235 – 435. Selected Topic in Philosophy (3)

Course in a topic or topics in philosophy. May be repeated with change of content.

300 – 400. Major Philosophers (3)

Study of a major philosopher's work. May be repeated with change of content.

305 – 405. Major Philosophical Movements (3)

Study of a major philosophical movement or philosophy. May be repeated with change of content.

312. Philosophy of Science (3)

Foundations of science: nature, scientific methods, the ultimate constituents of matter, causality, laws of nature, the nature of hypotheses and theories.

316. Philosophy of Religion (3)

Proofs for the existence of God; the problem of evil; the immortality of the soul.

317. The Bible as History (3)

A study of how the areas of Biblical criticism and archaeology have contributed to our understanding of the Old Testament (Hebrew Bible) as a historical document.

318. Native American Philosophy (3)

This course will consider the world view(s), values and ideas which characterize various Native American groups in North America.

321. Business Ethics (3)

Moral reasoning and issues in business with an emphasis on the application of ethical theories to practical business decision-making.

322. Biomedical Ethics (3)

Topics include euthanasia, research methods (fetal research, research on animals, drug experiments), patient-medical staff relationships, abortion, and the patient's right to know.

323. Environmental Ethics (3)

Study of the moral issues raised by human interactions with nonhuman forms of life and

the environment as a whole.

325. Ethics (3)

Study of the basic theories of ethics and the application of these theories to ethical issues presented to us by modern society.

440. Philosophy of Art and Aesthetics (3)

Study of the theoretical grounds for the various philosophers of art.

450. Seminar in Philosophy (1 – 4 VC)

Seminar course in a topic or topics in philosophy.

472. Cognitive Science (3)

An interdisciplinary investigation of the foundations of human knowledge, representation and understanding, the functioning of the human brain, and how these impact on recent computer technologies. Cross-listed as: Psy 472 and CS 472.

484. Philosophy of History (3)

A chronological survey of the development of the concept of history and its philosophical foundations. Cross-listed as: Hist 484.

490. Independent Study (1 – 4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

Courses in History (Hist)

100. The Western World (3)

From the ancient civilizations of the Middle East to contemporary European developments.

160. Chicano History to 1900 (3)

Review of the Chicano historical experience in the United States beginning with the Spanish conquest of Mexico in 1521 and ending with the eve of the statehood movement for New Mexico.

161. Chicano History Since 1900 (3)

History of Chicanos in New Mexico and the United States, beginning with the early 1900s and ending with the Chicano civil rights movement of the late 1960s.

201. United States History to 1877 (3)
Colonial period through Reconstruction.
202. United States History Since 1877 (3)
The rise of industrialism and international involvement to the present.
215. History of New Mexico (3)
A survey from Cabeza de Vaca to statehood, including the Spanish period, the Mexican period, and the territorial period of the United States.
216. La Raza: A History of Hispanics in the Southwest (3)
Problem-oriented history of the evolution of political consciousness of Hispanics in the Southwest.
225. Spain and Portugal (3)
Evolution of the Spanish and Portuguese peoples from Roman times to the present.
- 235 – 435. Selected Topic in History (1 – 4 VC)
Course in a topic or topics in history. May be repeated with change of content.
- 290 – 390. Independent Study
Directed study arranged with an engineering faculty member. Prerequisite: Permission of instructor.
301. Research Methods in History and Political Science (3)
Training in historical methods, including location and use of sources, critical analysis, and historical writing. Cross-listed as: PoIS 301.
311. Indians and the Law (3)
Legal and governmental development of Native American peoples in North America from pre-contact times to the present.
315. American Foreign Relations (3)
Foreign policies and relations of the United States since 1776, with emphasis on twentieth century development.
321. The Ancient World (3)
Ancient middle eastern kingdoms and the classical civilizations of Greece and Rome.
322. Medieval Europe (3)
Christianity, Carolingian Epoch, feudalism, and the foundations of Modern Europe.
325. Modern Europe to 1815 (3)
From the Renaissance through the fall of Napoleon.
326. Modern Europe Since 1815 (3)
From the Congress of Vienna to the post-World War II era.
344. Colonial Latin America (3)
Survey of Latin American history from 1492 to early 1800's with emphasis on economic, social and cultural development of the region.
345. Modern Latin America (3)
Survey of Latin American history from independence through the present. Topics include independence, political unrest in the nineteenth century, economic modernization, revolution, and current problems in the region.
346. Contemporary Latin America (3)
Current United States-Latin American relations, contemporary philosophies, and intellectual currents.
347. History of Modern Mexico (3)
Political, social, and economic development of modern Mexico.
348. Revolutions in Contemporary Latin America (3)
Consideration of the patterns of revolution in Latin America in the twentieth century.
350. Methods and Curriculum of Secondary Education in Social Studies (2)
A comprehensive course in secondary-level social studies teaching. Prerequisite: 20 hours toward a major or minor in history and admission to teacher education program.
401. The Chicano Experience (3)
Major trends in the historical experience and development of Chicanos in American society.
403. Chicano Leadership (3)

A study of significant leaders among the Hispanic population in the Southwest during the Mexican territorial and early statehood periods.

406. North American Frontiers (3)

Patterns of settlement in North America, with emphasis on frontier experience in the United States.

411. Women in the United States (3)

A survey of the role of women in the history of the United States, including methodological and conceptual developments.

412. The Civil War and Reconstruction (3)

The Old South, secession, civil conflict, Radical Reconstruction.

413. The United States Since World War II (3)

American society and foreign policy from Pearl Harbor to the present.

414. The American Presidency (3)

History, institution, and powers of the chief executive of the United States.

450. Seminar in History (1 – 4 VC)

Seminar course in a topic or topics in history.

452. Seminar: New Mexico History (3)

Seminar course in a topic or topics in New Mexico history.

453. History of the Southwest (3)

Analysis of historic and contemporary issues confronting peoples of the Southwest.

480. Historiography (3)

Development of historical thought and writing.

490. Senior Readings (1 – 4 VC)

Individually assigned readings and supervised investigations of selected topics, arranged with an individual instructor. Prerequisite: Advanced standing toward a major or minor, with a "B" average, and permission of instructor.

499. Supervised Research (1 – 4 VC)

Individual, directed research arranged with an individual instructor. Prerequisite: Advanced standing toward a major or minor,

with a "B" average, and permission of instructor.

Courses in Political Science (PoIS)

151. American National Government (3)

Constitutional foundations, structural organization, citizenship, powers, functions, and services.

217. Ethnic Politics (3)

Ethnic basis of minority group politics in the United States with emphasis on the political development, problems, contemporary status, and activity of the Chicano, Afro-American, and Native American.

235 – 435. Selected Topic in Political Science (1 – 4 VC)

Course in a topic or topics in political science. May be repeated with change in content.

251. Introduction to Political and Economic Systems (3)

The fundamentals of comparative economic and political systems, public finance, and international relations.

301. Research Methods in History and Political Science (3)

Training in historical methods, including location and use of sources, critical analysis, and historical writing. Cross-listed as: Hist 301.

312. Political Parties and Behavior (3)

Organization, function, and methods of American political parties combined with analysis of political opinion formation and political participation including voting behavior and styles of leadership.

314. Introduction to the Law (3)

Introduction to civil procedure, criminal procedure, and the substantive concepts and principles of civil and criminal law.

316. State and Local Government (3)

Position of the states in the federal system; organization, functions and administrations

of state, county, and city government.

320. Criminal Law (3)

Criminal Law will provide the student with knowledge of the actual and potential use of criminal laws in the American Legal process and how those uses might be evaluated.

328. Comparative Political Systems (3)

Introduction to the comparative analysis of political institutions, ideologies, and political cultures in the world community.

334 – 434. Practicum (1 – 4 VC)

Experiential study directed by an instructor. Prerequisite: Permission of instructor.

353. International Relations (3)

The national state system; international conflicts, development of international cooperation; the United Nations and its problems.

402. Interest Groups (3)

Forms, tactics, and influence of interest groups; their role in a pluralistic society and their importance in a democracy.

410. The American Constitution (3)

Origin and establishment of leading constitutional doctrines.

415. Government and Business (3)

Case study of United States government regulations of economic activity with emphasis on the administrative process.

417. The Legislative Process (3)

Process of national and state law-making in the United States; legislation drafting and legislative procedure.

418. Administrative Law and Procedure (3)

This course will help students become aware of administrative law and its relationship to public administrative programs. Administrative law is the law concerning the powers and procedures of administrative agencies, including especially the law governing judicial review of administrative action. Political science majors who endeavor to enter the public administration arena oftentimes will

be involved in the administrative process, which is a complex of methods by which agencies carry out their tasks of adjudication, rule-making, and related functions.

419. Public Administration (3)

Organization of the administrative structure, problems of internal management, personnel, fiscal management, forms of administrative action, and procedure.

425. History of Economic Thought (3)

Development of economic thought from the Middle Ages to the present.

433. Chinese Communist Government (3)

Analysis of the Chinese government with emphasis on the role of the Communist Party; relationship of policies to tradition and world affairs.

446. Government and Politics of Latin America (3)

Analysis of political systems, contemporary mass movements, and inter-American relations.

450. Seminar in Political Science (1 – 4 VC)

Seminar course in a topic or topics in political science.

451. Seminar: New Mexico Government and Politics (3)

Structure, organization, function, and operation of New Mexico state and local government.

453. International Relations, Human Rights and International Law (3)

A theoretical and critical analysis of the meaning and relevancy of the IR politics and its collision with international law and human rights in the age of globalization. Prerequisite: POLS 353, or permission of instructor.

458. Political Theory and Philosophy (3)

Leading political ideas of the western world.

460. The American and Russian Systems (3)

Comparison of the political and economic institutions including the underlying political

theory of the two nations.

462. International Monetary Systems (3)
Comparative study of the American and Russian political institutions, culture, and structures including their underlying belief systems.

463. Political Economy (3)
Comparative study and analysis of the political economies of the major countries of the world, stressing the interdependence of the study of economics and politics.

490. Senior Readings (1 – 4 VC)
Individually assigned readings and supervised investigations arranged with an instructor. Prerequisite: Advanced standing toward a major or minor, with a “B” average, and permission of instructor.

499. Supervised Research (1 – 4 VC)
Individual, directed research arranged with an instructor. Prerequisite: Advanced standing toward a major or minor, with a “B” average, and permission of instructor.

Courses in Languages Other Than Spanish (Lang)

101. Beginning French 1 (4)
An introduction to the French language with emphasis on conversation, essentials of grammar, and development of the ability to read. One hour weekly required in the LLC in addition to four class hours.

102. Beginning French 2 (4)
A continuation of French 101. One hour weekly required in the LLC in addition to four class hours. Prerequisite: Lang 101.

107. Beginning Italian 1 (4)
This course introduces the student to the language and culture of the Italian world. It also seeks to teach the four basic skills: speaking, listening, writing and reading. One

hour weekly required in the LLC in addition to four class hours.

108. Beginning Italian 2 (4)
Continuation of Italian 101. One hour weekly required in the LLC in addition to four class hours. Prerequisite: Lang 107.

109. American Sign Language 1 (4)
This course introduces the student to American Sign Language (ASL). It is interactive and strives to develop basic ASL competency and to impart grammatical and cultural knowledge useful to the beginning signer.

110. American Sign Language 2 (4)
The second half of the beginning level ASL course expands the general objectives of the first course. The course continues to be interactive and to strive to develop basic ASL competency. Special attention given to impart grammatical and cultural knowledge useful to the beginning signer. Prerequisite: Lang 109

135 –235. Selected Topic: Beginning Language (1 – 4 VC)
Beginning-level course in a language other than Spanish, French, Italian, and American Sign Language. The specific language and level (e.g., SLTP: Beginning Russian 1) are stated when the course is scheduled.

190 –390. Independent Study in a Language (1 – 4 VC)
Individual, directed study arranged with an instructor, in a language other than Spanish. This course is intended only for students who have already completed some formal study in the language. Prerequisite: Permission of instructor.

209. American Sign Language 3 (3)
An intermediate level ASL course. This course is interactive and strives to develop ASL competency and to impart grammatical and cultural knowledge useful to the intermediate signer. Prerequisite: Lang 110 or equivalent.

210. American Sign Language 4 (3)

A continuation of the intermediate level ASL course. This course continues to be interactive, to strive to develop intermediate ASL competency, to impart grammatical and cultural knowledge useful to the intermediate signer. Prerequisite: Lang 209 or equivalent.

Courses in Spanish (Span)

101. Beginning Spanish 1 (4)

An introduction to the Spanish language with an emphasis on conversation and development of ability to read and understand the Spanish language. This course is open only to non-speakers of Spanish. One hour weekly required in the LLC in addition to four class hours.

102. Beginning Spanish 2 (4)

A continuation of Spanish 101, also open only to non-speakers of Spanish. One hour weekly required in the LLC in addition to four class hours. Prerequisite: Span 101 or equivalent.

103. Beginning Spanish for the Native Speaker 1 (4)

This course addresses the needs of the student who requires a course in Spanish as a first language. Materials and methodology are designed for students who have limited knowledge of Spanish; that is, students whose primary form of communication is English. Their conversational skills in Spanish have been acquired through parental or peer influence, yet they do not have an extensive vocabulary, nor do they read or spell correctly in Spanish. One hour weekly required in the LLC in addition to four class hours.

104. Beginning Spanish for Native Speaker 2 (4)

Continuation of Span 103. As in Span 103, Spanish is taught as a first language. One hour weekly required in the LLC in addition to four class hours. Prerequisite: Span 103 or equivalent.

111. Elementary Spanish as a Heritage Language (4)

This first course of the Heritage Language series is designed for students who grew up in a Spanish-speaking home and community but may not speak Spanish themselves. The objective of this class is to build upon the language base which the students already possess, emphasis being placed on the four skills—listening, speaking, reading and writing.

112. Intermediate Spanish as a Heritage Language (4)

This course is designed for students who grew up in a Spanish-speaking home and community but may not speak Spanish themselves. The objective of this class is to build upon the language base, which the students already possess and enhance language skills acquired in Spanish 111.

200. Intermediate Spanish Conversation (3)

Provides the student with the vocabulary necessary to interact effectively in Spanish in practical, real-life situations while also sharpening the student's oral fluency and listening comprehension. Prerequisite: Span 101, 102 or 103, 104 or equivalent.

201. Intermediate Spanish 1: Intensive Review of the Elements of Grammar (3)

For students who understand simple conversational Spanish and have studied the elements of grammar. The course focuses on an intensive review of all verb tenses and reviews different grammatical points and syntax and includes vocabulary building with readings and communicative oral and written exercises. One hour weekly required in the LLC in addition to three class hours. Prerequisite: Span 101, 102 or 103, 104 or equivalent.

202. From Reader to Writer: An Introduction to Hispanic Literature (3)

This introductory literature course specifically emphasized skills to enhance and improve

the student's reading and writing abilities in Spanish through a wide format of literary styles. Special attention is given to developing the conventions of good writing in Spanish: accents, syntax, paragraph development, punctuation, and correct spelling. This course also introduces students to literary terms. Prerequisite: Span 101, 102 or 103, 104 or equivalent.

211. Elementary Spanish as a Heritage Language (2)

This course is designed for students who grew up in a Spanish-speaking home and community but may not speak Spanish themselves. The course will build upon the Spanish Heritage language base the students already possess from Spanish 111 and 112.

212. Intermediate Spanish as a Heritage Language-Adv. Level 2 (4)

This intermediate advanced course is for Heritage language students who possess comprehension, oral, and basic skills in reading and writing. At this level emphasis will be given to writing composition and advanced conversation. Vocabulary acquisition will be at the advanced level.

290 – 490. Independent Study (1– 4 VC)

Individual directed study arranged with an instructor. Prerequisite: Permission of instructor.

301. Spanish Literature: Aspects of Poetry (3)

A study of major literary works from the Spanish Medieval period to the 20th century. Emphasis on Poema del Mio Cid, Jorge Manrique, Luis de Gongora, Rosalia de Castro, Gustavo Adolfo Becquer, Juan Ramon Jimenez and Federico Garcia Lorca. Prerequisite: Span 201 or Span 202, and Span 325.

302. Spanish Literature: Aspects of Drama (3)

A study of major literary works from the Spanish Medieval period to the 20th century. Emphasis on Lope de Rueda, Lope de Vega, Calderon de la Barca, Jose Zorrilla and Federico Garcia Lorca. Prerequisite: Span 201 or

Span 202, and Span 325.

303. Latin American Literature:

Aspects of Poetry (3)

Careful and extensive reading and analysis of the poetry of Latin America. Special attention is given to the different forms of poetry from pre-colonial times to the twentieth century. Prerequisite: Span 201, Span 202, and Span 325.

304. Latin American Literature:

Aspects of Drama (3)

Careful and extensive reading and analysis of the drama of Latin America. Selections representing pre-Columbian, colonial, and republican Spanish America are examined with historical, cultural and dramatic perspectives. Special attention is given to the drama of the 20th century. Prerequisite: Span 201, Span 202, and Span 325.

310. Intermediate Conversation:

Video in the Classroom (3)

Course provides timely, comprehensive, and authentic video materials on current events and language and culture of the Hispanic world to enhance students' oral comprehension and communicative interaction. It targets intermediate students with a vocabulary of 1,500 to 2,000 words. At the completion of the course, students will have achieved total fluency at that level.

320. Panorama of Chicano Poetry (3)

A study of major poets beginning with the Chicano movement of the 1960's with notable pioneer poets such as Alurista, Abelardo Delgado, Tino Villanueva, Rudolfo "Corky" Gonzales, Bernice Zamora and Ricardo Sanchez. Also included will be Angela de Hoyos, Margarita Cota-Cardenas and more recent poets, Gary Soto, Sandra Cisneros, and Dimetria Martinez that comprise the poetics of present-day Chicano literature. Prerequisite: Span 202, Span 325, and Span 433

325. Spanish for Written Communication (3)

Designed to develop writing proficiency

and critical thinking through reading and discussion of a variety of texts from Spain and Spanish-speaking America. It guides students in their understanding of the reading selections at the textual and cultural level, with an ample analysis of vocabulary words that may have multiple meanings in Spanish. It focuses on strategies with which students learn to compose different pieces of writing. Prerequisite: Span 101, 102 or 103, 104 and 201, 202.

360. Spanish Literature for Children (3)
Presents the student with literary material appropriate for children in a bilingual classroom. A wide variety of selections from Spain, Latin America, New Mexico and the Southwest is introduced with special emphasis being placed on the bilingual child. Prerequisite: Span 101, 102 or 103, 104 and 201 and 325.

370. Perspectives of Chicano Drama (3)
A study of major dramatists within the canons of Chicano Literature including Luis Valdez, the father of El Teatro Campesino: Included also will be playwrights such as Estella Portillo, Ysidor R. Macias, Nephtali de Leon, Carlos Morton; plus, and examination of El Teatro de la Esperanza as well as the Zoot Suit and the Pachuco Phenomenon. Prerequisite: Span 202, Span 325, and Span 433

400. Advanced Grammar and Composition (3)
This course has been designed to help students establish a solid foundation as well as functional communicative skills. Subtle but complex conceptual distinctions between Spanish and English will be analyzed and applied to oral and written skills.

401. Spanish Literature: Aspects of the Short Story (3)
Traces the development of the short story from the Middle Ages, Renaissance, and Golden Age to the present. Prerequisite:

Span 201, Span 202, and Span 325.

402. Spanish Literature: Aspects of the Novel (3)
Traces the development of the novel from its origins in prose fiction of the Middle Ages and the Renaissance to the present. Prerequisite: Span 201, Span 202, and Span 325.

403. Latin American Literature: Aspects of the Short Story (3)
Traces the development of the Latin American short story from the 19th to the 20th century. The different literary movements will be traced via genre: romanticism, realism, naturalism and modernism. Particular focus will be placed on the more current 20th century short story. Prerequisite: Span 201, Span 202, and Span 325.

404. Latin American Literature: Aspects of the Novel (3)
Focuses on the Spanish American novel from the colonial period to the twentieth century. It will emphasize different periods within this genre, i.e., the colonial period, the regionalist novel, and the Latin American boom. Prerequisite: Span 201, Span 202, and Span 325.

405. Film in the Hispanic World (3)
This course introduces the field of visual arts and cinematic technique. The work of major Hispanic film directors will be presented and compared. Prerequisite: Span 201, Span 202, and Span 325.

406. Hispanic Women Authors (3)
Designed to introduce the student to women authors in Spanish America, the course covers most genres through the works of Sor Juana Ines de la Cruz, Alfonsina Storni, Domitilia Chungara, Rosario Castellanos, Barbara Delano, and others. Prerequisite: Span 201, Span 202, and Span 325.

410. Advanced Conversation: Video in the Classroom (3)
Targets advanced students with a vocabulary of 2,000 plus words. At the completion of the course, students will have achieved total

fluency at that level. Prerequisite: Span 201 and Span 325.

415. Advanced Translation (3)

This course is the culmination and application of advanced language skills. Students will learn the art of translation while mastering Spanish composition. Prerequisite: Span 325, Span 400.

420. Chicano Short Story of the Southwest (3)

A study of major short story writers since the Chicano movement kicked into high gear in the mid-1960's. Master short story writers ranging from Sabine Ulibarri, Tomas Rivera, Rolando Hinojosa Smith, Miguel Mendez and Rosaura Sanchez to more modern prose writers such as Denise Chavez and Alicia Gaspar de Alba, among others, will be included. Prerequisite: Span 202, Span 325, and Span 433.

425. Spanish for the Profession - Spanish for Medical Personnel (3)

Spanish for the Professions series is offered as a community and interdisciplinary service to professionals in various fields. Spanish for Medical Personnel and Spanish for Law Enforcement, for example, are designed to teach and train community professionals in the practical applications of Spanish. This will be accomplished by the study of specific vocabulary and terminology pertaining to those professions. Prerequisite: Span 201, Span 325, and Span 400.

426. Spanish for the Profession - Spanish for Law Enforcement (3)

An advanced course in Spanish for law enforcement personnel. The course focuses on situations commonly encountered by professionals in the law enforcement field. Prerequisite: Span 201, Span 325, and Span 400.

430. Spanish Linguistics and Phonetics (3)

Applying linguistics and phonetics to the

knowledge and use of Spanish and English in order to provide future teachers with the ability to help students develop their languages. Prerequisite: Span 101, 102, or 103, 104 and 201 or equivalent.

431. Spain: Civilization and Culture (3)

Provides students with a synthetic and highly accessible overview of Spanish history, literature and culture. Prerequisite: Span 101, 102 or 103, 104, 201 and/or 202 and 325.

432. Latin America: Civilization and Culture (3)

Presents the Spanish American experience of yesterday and today through the social, historical, political and literary aspects that this experience encompasses. Prerequisite: Span 101, 102 or 103, 104, 201 and/or 202 and 325.

433. New Mexico and the Southwest: Civilization and Culture (3)

Spanish cultural developments and events that have brought about ethnic, economic, political, social, literary, linguistic and historical changes and typical features in New Mexico and in the southwestern United States. Prerequisite: Span 101, 102 or 103, 104, 201 and/or 202, and 325.

434. Practicum in Spanish (3)

Experiential study directed by an instructor. Prerequisite: Permission of instructor.

436. Studies in Hispanic Literature (3); 3,0 Alt Sp

This course attempts to introduce the student to the literary production in Spanish. Works written in the Americas and Spain will be studied. A myriad of authors, genres, and themes will be studied. The content of the course will vary each semester. Prerequisite: Span 325 and Span 400.

441. Spanish for the Bilingual Classroom (3)

This course targets students of Bilingual Education and it presents the Spanish language as it is applied to school community settings. Use of both vernacular and formal language will be included. Spanish is the language of

instruction inclusive of student presentations/ participation. Prerequisite: Span 101, 102 or 103, 104, 201 and/or 202, and 325.

445. Teaching of Spanish: Theory and Methodology (3)

This course familiarizes prospective teachers with the philosophy, methodology, and practical techniques of teaching Spanish. Prerequisite: Span 101, 102 or 103, 104, 201 and 325 or the equivalent. May also be taken as a co-requisite with 325.

446. New Mexico during the 19th and 20th Centuries: An Intellectual Panorama (3); 3,0 This course endeavors to study writings created in New Mexico from different sources: personal journals, historical accounts, newspaper cultural articles and literary renditions in all genres. Special attention will be devoted to the poetry of the Penitentes and the Oral Tradition of New Mexico's Religious Theater during the 19th century. This course will be taught in Spanish. Prerequisite: Span 325 and Span 400.

450. Seminar in Spanish (3)

Topic to be selected by instructor. Prerequisite: Span 201, Span 202, and Span 325.

452. Nobel Prize Laureates in Hispanic Literature (3)

The principal purpose of the course is to study the Nobel Prize Laureates from Spain and/or Spanish America to ascertain their literary greatness within the genre each one represents in Europe and the Western Hemisphere. May be repeated for credit. Prerequisite: Span 201, Span 202, and Span 325.

458. Colonial Literature of the Americas (3)

This course examines in depth literature written in Spain and in Spanish speaking America prior to and during Latin America's colonial period, which would, by geographical extension, include the American Southwest. Texts will include European works which will influence the conquistadors' ideology, and poetry, letters, diaries, and

historical chronicles of Latin America and the Southwest from 1492 until the beginning of the 19th century. Prerequisite: Span 201, Span 202, and Span 325.

460. Survey of Hispanic Literature of the Southwest (3)

A study of Hispanic southwestern literature written in English and in Spanish. The origins and evolution of this literature are discussed, from the early Spanish exploration, with Gaspar Perez de Villagra's *Historia de la Nueva Mexico*, to the most recent manifestations of the novel. Prerequisite: Span 201, Span 202, and Span 325.

462. Southwest Folklore (3)

A study of the different genres of New Mexican and southwestern folklore along with the analysis of their popular, cultural, and literary values. Prerequisite: Span 201, Span 202, and Span 325.

464. Hispanic Women of New Mexico: 1598-1888 (3)

Course traces the role and contributions of Hispanic women from colonial times to the present. The common-ordinary woman as well as the well-to-do will be studied from a social, cultural, political, and educational perspective. Prerequisite: Span 325, 400, and 433.

467. History of the Spanish Language (3); 3,0 Alt Sp

this course traces the development of the Spanish language from Latin to the present. It analyzes the cultural, literary and historical factors that have contributed to its evolution. The transformations that the language undergoes in a different linguistic setting are studied in a section on sociolinguistics issues of the U.S. southwest Spanish. This course will be taught in Spanish.

470. Chicano Novel of the Southwest (3)

A study of major novelists who spearheaded this genre. This includes premier novelists ranging from the pioneers Tomas Rivera,

Department of Natural Sciences

Dr. Ken Bentson,
 Department Chair
 Ivan Hilton Science Center,
 Room 332
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 E-MAIL: kbentson@nmhu.edu

The Department of Natural Sciences offers instructional programs leading to Bachelor of Science, in Biology, Chemistry, Environmental Geology, and Forestry. The department also offers a Bachelor of Arts degree in Chemistry. The programs offer various undergraduate concentration areas within degree programs.

Visit the NMHU Natural Science website for current information at <http://www.nmhu.edu/naturalscience/degreeprograms.php>
 The Department of Biology is currently proposing changes to its program.

Mission of the Department of Natural Sciences

The Department includes the disciplines of Biology, Chemistry, and Natural Resources Management (NRM; Geology and Forestry programs). The mission of these programs is to provide students with a high quality science education that includes experience with research and field projects. The programs provide scientific and technical background that empowers students to successfully pursue science and technology careers, or, proceed on to advanced graduate studies. Faculty in the Natural Sciences strive to make each student's educational experience challenging and rewarding.

Faculty

Michael Antipin (Chemistry)
 Kenneth Bentson (NRM)
 Dick Greene (Biology)
 David Hacker (NRM)
 Merritt Helvenston (Chemistry)

Carol Linder (Biology)
 Jennifer Lindline (Geology)
 John McIntyre (Chemistry)
 Edward A. Martinez (NRM)
 Rudolfo Martinez (Chemistry)
 Michael Meyer (NRM)
 Mark Minton (Chemistry)
 Ben Nelson (Biology)
 Rolando Rael (Biology)
 Maureen Romine (Biology)
 David Sammeth (Chemistry)
 Mary Shaw (Biology)
 Tatiana Timofeeva (Chemistry)

Resources and Facilities

The Department of Natural Sciences is housed in the new Ivan Hilton Science Center. New laboratory spaces, with state-of-the-art safety and teaching features provide students with hands-on, student-centered learning environments.

The Biology discipline prides itself on its ability to place students into bioscience careers. Data suggests that our graduates are highly successful in being admitted and completing medical, dental, and veterinary schools nationwide. The discipline attributes this success to intensive biology laboratory experiences with cutting edge technology, and, instructors committed to individual student progress. Facilities include physiology, microbiology, biomolecular, greenhouse and plant biology laboratories. A computer laboratory is available for classes and student use. Students majoring in Biology are taught the practical use of common scientific instrumentation they will encounter in their careers. All Biology students are required to complete an undergraduate research project that provides students with a realistic perspective of Biology and the conduct of investigations. Many of the faculty have active research programs that hire undergraduate students and provide further training.

Chemistry has modern laboratories for chemistry classes and research. Chemical measurement instrumentation includes a high-field Nuclear Magnetic Resonance device, x-ray diffraction equipment, gas and liquid chromatographs, mass spectrometers, IR, UV, and visible spectrophotometers, and laser spectroscopy facilities. Students who major in Chemistry are expected to become fully competent in the use of the instruments by the time they graduate. Undergraduate students gain a practical perspective on Chemistry through involvement with research projects. Chemistry has been highly successful in placing its graduates in exciting careers in industry and government, while many students proceed to advanced graduate studies in Chemistry at other institutions. Most Chemistry faculty have research grants that can hire undergraduate students.

The Natural Resources Management discipline is comprised of the Environmental Geology and Forestry programs. The Forestry major is the only one accepted by Federal and state agencies in New Mexico. Furthermore, the Watershed Management concentration in Environmental Geology provides a new, cutting-edge program in an emerging technical field of great importance to New Mexico and the western United States. The Environmental Geology major focuses on classic geological principles applied to environmental problems like groundwater pollution, geologic hazards, mine tailings and reclamation, and other topics. Las Vegas is located near to many types of natural resources. Within minutes of campus, students can be in short-grass prairies, forests, lakes, streams, and alpine tundra ecosystems. Consequently, NRM programs are focused on extensive student field experiences. The area is geologically rich in fossils, mineral ores, and geologic hazards, while having many abandoned and active mines. NRM students are in demand by federal and state agencies,

which need personnel trained in the unique social, ecological, and geological conditions in the southwest. NMHU is also the home of the New Mexico Ecological Restoration Institute that is leading New Mexico in the restoration of forests, ranges, and stream systems. Numerous opportunities for undergraduate student involvement in research and field projects exist at NMHU.

Major in Biology (B.S.)

No minor is required. However, minors in geology, combined science or chemistry can be earned by thoughtful choices of electives. Please note the university requirement of at least 51 credit hours in upper division (300- to 400- level) courses. Consult your advisor in the biology discipline early in your academic career for help on your degree plan.

Core requirements: 39

Biol	211	Gen Biology I (4)
Biol	212	Gen Biology II (4)
Biol	300	Genetics (4)
Biol	301	Gen Microbiology (4)
Biol	302	Animal Struct & Funct (4)
Biol	303	Plant Struct & Funct (4)
Biol	310	Men & Biomet (4)
Biol	385	Bio Molecules (4)
Biol	423	Cell Biology (3)
Biol	424	Cell Biology Lab (1)
Biol	492	Senior Project (3)

Additional requirements: 27-30

Chem	211	Gen Chemistry I (3)
Chem	212	Gen Chemistry II (3)
Chem	215	Chemistry Lab I (2)
Chem	216	Chemistry Lab II (2)
Chem	341	Organic Chem I (4)
Phys	151	Algebra Physics II (4)
OR		
Phys	291	Calculus Physics I (5)
Phys	152	Algebra Physics II (4)
OR		
Phys	292	Calculus Physics II (5)

Choose one set from the following

Math	150	Trigonometry (3)
AND		
Math	211	Calculus I (4)
OR		
Math	155	Applied Calculus I (3)
AND		
Math	205	Applied Calculus II (3)

**Concentration in Pre-Med/Pre-Dental/
Pre-Vet**

Required courses: 23

Biol	131	Hum Anat & Phys I (4)
Biol	132	Hum Anat & Phys II (4)
Biol	432	Vertebrate Phys (4)
Biol	487	Histology (4)
Chem	342	Organic Chem II (4)
Chem	481	Biochemistry I (3)*

Electives: 4

Electives are to be chosen from upper division courses in biology, environmental geology, forestry, or chemistry in consultation with the student's advisor. This applies to all concentrations except the teaching core.

*Note: Some medical schools require two semesters of biochemistry.

Concentration Total: 27

**Concentration in Cell/Molecular
Biology**

Required courses: 14

Biol	415	Biotechnology (4)
Chem	342	Organic Chem II (4)
Chem	481	Biochemistry I (3)
Chem	482	Biochemistry II (3)

Electives: 10

Electives are to be chosen from upper division courses in biology, environmental geology, forestry, or chemistry in consultation with the student's advisor. This applies to all concentrations except the teaching core.

Concentration Total: 24

**Concentration in Ecology/Botany/
Zoology**

Required courses: 14

Biol	389	Ecology (3)
Biol	390	Ecology Lab (1)
Biol	422	Plant Physiology (4)
OR		
Biol	432	Vertebrae Physiology (4)
OR		
Biol	405	Adv Bacteriology (4)
Biol	476	Evolution (3)
For	489	Appl Ecol & Environ Restor (3)

Electives: 14

Electives are to be chosen from upper division courses in biology, environmental geology, forestry, or chemistry in consultation with the student's advisor. This applies to all concentrations except the teaching core.

Concentration Total: 28

Concentration in Teaching

Biol	359	Fund Princ of Lab Safety (1)
Biol	420	Teach Sci & Math in Middle & Secndry Sch (3)

Minor in Secondary Education (28)

Concentration Total: 32

**Major in Biology with a Concentration in
Medical Technology (B.S.)**

(An approved sample Recommended Curriculum and/or Plan of Study is available from the department.)

Required courses: 49

Biol	131	Hum Anat & Phys I (4)
Biol	132	Hum Anat & Phys II (4)
Biol	301	Gen Microbiology (4)
Biol	427	Imm/Path Microbiol (3)
Biol	428	Lab in Imm/Path Microbiol (2)
Biol	448	Med Tech Internship (32)*

*The 32 hours are part of the required hours of an 18-month medical technology program. All hours are taken off-campus at an approved clinical facility, and 32 are transferred to NMHU for completion of the degree.

Electives: 9

Choose at least nine additional credits in biology, in consultation with your major advisor.

Additional requirements: 26

The major in biology with a medical-technology concentration requires completion of a minor in a science field and eight credits of mathematics including Math 211, and four additional credits of mathematics in order to meet the university requirements of at least 51 credit hours in upper division (300- to 400- level) courses. The following courses may be used toward a different science minor.

Chem	211	Gen Chemistry I (3)
Chem	212	Gen Chemistry II (3)
Chem	215	Chemistry Lab I (2)
Chem	216	Chemistry Lab II (2)
Chem	321	Quantitative Analysis (4)
Chem	341	Org Chemistry I (4)
Math	211	Calculus I (4)
Math	xxx	Elective (4)

Concentration Total: 84

Minor in Biology

Required courses: 8

Biol	211	Gen Biology I (4)
Biol	212	Gen Biology II (4)

Additional requirements: 8

Take at least 2 courses from the following list:

Biol	301	Gen Microbiology (4)
Biol	302	Animal Struct & Funct (4)
Biol	303	Plant Struct & Funct (4)

Electives: 8**

** Choose at least eight additional credits in a 300- to 400- level course or courses in

biology

Minor Total: 24

Minor in Biology for Teachers

Complete the biology minor as defined above, with an additional four credits in a 300- to 400- level biology course to bring the total of biology credits to at least 28.

Minor Total: 28

Chemistry

Chemistry has been called the central science because it is the discipline that deals with the molecular structure and reactivity of materials, areas fundamentals to the other sciences and to engineering. Consequently, chemistry is a bridge between the many science disciplines in which molecular level understanding is needed. Such disciplines range from engineering, physics, and geology through the life sciences of psychology, biology, and environmental sciences. Tradition chemistry professions include manufacturing, such as pharmaceuticals and hi-technology materials, as well as research and testing services. A chemistry major also provides an excellent background for students intent on pursuing a health professions in medicine, pre-dentistry, and preveterinary.

Chemistry students learn content and critical thinking skills required for scientific research. The American Chemical Society certifies the NMHU chemistry BS degree. Among the strengths of the program are the outstanding suite of instrumentation required for modern analytical procedures and small class sizes that allow students close contact with instructors.

An approved sample Recommended Curriculum and/or Plan of Study is available.

Major in Chemistry BA

Required Courses: 31

Chem	211	Gen Chemistry I (3)
Chem	212	Gen Chemistry II (3)
Chem	215	Gen Chem Lab I (2)
Chem	216	Gen Chem Lab II (2)
Chem	321	Quantitative Analysis (4)
Chem	341	Organic Chem I (4)
Chem	342	Organic Chem II (4)
Chem	371	Physical Chem I (3)
Chem	481	Biochemistry I (3)
Chem	495	Senior Chem Applic (3)

Electives: 6

Chem	317	Physical Chem Lab (3)
Chem	322	Instrumental Analysis (4)
Chem	372	Physical Chem II (3)
Chem	419	Adv Snyth & Instr Lab (3)
Chem	441	Reaction Mech (3)
Chem	461	Inorganic Chem I (3)
Chem	442	Synthetic Chem (3)
Chem	442	Ch Research Sem (1)
Chem	462	Inorganic Chem II (3)
Chem	473	Chem Kinetics (3)
Chem	482	Biochemistry II (3)
Chem	499	Indep Research (1)

Additional Requirements: 15-17

Engl	367	Technical Writing (3)
Math	211	Calculus I (4)
Phys	151	Algebra Physics I (4)
or		
Phys	291	Calculus Physics I (5)
Phys	152	Algebra Physics II (4)
or		
Phys	292	Calculus Physics II (5)

Major total: 52-54

Students must complete a minor or complete the Forensics option below. Most minors, such as Biology or Psychology, along with the chemistry major will satisfy the university's requirement that students earn 51 upper division credits.

Forensics Concentration

Additional requirements: 35-36

Anth	442	Forensic Anth (3)
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Biol	211	General Biology I (4)
Biol	212	General Biology II (4)
Biol	300	Genetics (4)
Biol	302	Animal Struct & Funct (4)
Biol	415	Biotechnology (4)
Soc	231	Criminal Justice Syst (3)
Soc	427	Criminology (3)
Biol	310	Mensuration & Biomet (3)
OR		
Bus	210	Statistical Analysis Bus (3)
Psy	301	Research Methods (4)
OR		
Soc	330	Research Methods (3)

Total hours: 87--90

Major in Chemistry
(ACS Approved B.S.)

Required courses: 47

Chem	211	Gen Chemistry I (3)
Chem	212	Gen Chemistry II (3)
Chem	215	Chem Lab I (2)
Chem	216	Chem Lab II (2)
Chem	317	Physical Chem Lab V (3)
Chem	321	Quantitative Analysis (4)
Chem	322	Instrumental Analysis II (4)
Chem	341	Organic Chem I (4)
Chem	342	Organic Chem II (4)
Chem	371	Physical Chem I (3)
Chem	372	Physical Chem II (3)
Chem	419	Advanced Synthesis & Instrumental Analysis (3)
Chem	461	Inorganic Chem I (3)
Chem	481	Biochemistry I (3)
Chem	495	Senior Chem Appl (3)

Electives: 6

Chemistry majors must choose a minimum of six elective credits from the following courses or other upper division courses with the approval of the chemistry curriculum advisor:

Chem	441	Reaction Mech (3)
Chem	442	Synthetic Chem (3)
Chem	450	Seminar in Chem (1-3)
Chem	455	Chem Rsrch Sem (1)
Chem	462	Inorganic Chem II (3)

Chem	473	Chem Kinetics (3)
Chem	482	Biochemistry II (3)
Chem	499	Indep Research (1-6)

Additional requirements: 28

The following courses in mathematics and physics must be completed. The inclusion of Calculus 1 meets the bachelor of science degree requirement of three credits in mathematics including Math 211.

Engl.	367	Technical Writing (3)
Math	211	Calculus 1 (4)
Math	252	Calculus 2 (4)
Math	273	Calculus 3 (4)
Math	320	Linear Algebra (3)
Phys	291	Calc Physics 1 (5)
Phys	292	Calculus Physics 2 (5)

Major Total: 81

Chemistry students generally choose mathematics, physics, or biology for their required minor. The combined science minor is sometimes used as an alternative, however. (See Interdepartmental Programs.)

Depending upon high school background and ACT scores, the student may be required to take mathematics courses prerequisite to Calculus 1, and it may also be advisable to take Physics 151 and 152.

The student may also choose a non-ACS approved bachelor of science program. This program deletes Chem 419, Inorganic Chem, Calculus 3, and Diff Equations from the above list of required courses. If students choose this option, they must add nine more upper division credits in consultation with a major advisor.

Minor in Chemistry

Required courses: 18

Chem	211	Gen Chemistry I (3)
Chem	212	Gen Chemistry II (3)
Chem	215	Chem Lab I (2)
Chem	216	Chem Lab II (2)

Chem	321	Quantitative Analysis (4)
Chem	341	Organic Chem I (4)

Electives: 3-4

Choose a minimum of one course from the following list:

Chem	322	Instrumental Analysis II (4)
Chem	342	Organic Chem II (4)
Chem	371	Physical Chem I (3)

Minor Total: 21-22

Environmental Geology (B.S.)

The purpose of the Environmental Geology program is to train students for professional careers in the scientific and technical aspects of geology relevant to environmental hazards, risks, and management. The program of study allows students to develop an understanding of the physical function, operations, hazards, and connectivity of earth systems. Emphasis is placed on the acquisition of scientific knowledge, mathematical proficiency, research skills, technical ability, organizational skills, and writing competencies necessary in an Environmental Geology career. Environmental Geologists integrate information to critically analyze environmental problems and solve growing environmental issues; such as, water supply and pollution, soil stabilization, mine remediation, groundwater modeling and pollution, mineral resource production, amongst many. There are two concentrations in the major: Geology and Watershed Management. Students that complete the Environmental Geology major will have satisfied the basic requirements for federal positions in Geology and Hydrology.

Students that major in Environmental Geology are not required to take a minor, unless their total credit hours with the Environmental Geology major are less than 128. A summer field course is required of all majors prior to graduation. Students that wish to pursue advanced degrees should talk with an advi-

sor for recommended coursework.
 An approved sample Recommended Curriculum and/or plan of study is available from the department.

Geology Concentration

Required Courses: 52

Geol	101	Survey of Earth Science (4)
Geol	301	Env Geology (4)
Geol	325	Earth Materials (4)
Geol	317	Depositional Env (4)
Geol	425	Geomorphology (4)
Geol	330	Structural Geology (3)
For	315	Soil Science (4)
Geol	375	Field Geology (3)
For	340	Quantitative Methods (3)
For	412	Surveying and GIS (4)
Geol	422	Genesis & Impact of Earth Res. (3)
For	453	Toxicology in Life Sciences (4)
Geol	432	Env Geochemistry (3)
OR		
Chem	325	Env Chemistry (3)
Geol	421	Env Groundwater Hydrology (4)
Geol	495	Senior Geol Applic. (1)
Additional Requirements: 31-35hrs		
Chem	211	General Chemistry 1 (3)
Chem	215	Chemistry Lab 1 (2)
Chem	212	General Chemistry 2 (3)
Chem	216	Chemistry Lab 2 (2)
Chem	341	Organic Chemistry 1 (4)
Engl	367	Technical Writing (3)
Math	155	Applied Calculus 1 (3)
OR		
Math	211	Calculus 1 (4)
Math	205	Applied Calculus 2 (3)
OR		
Math	252	Calculus 2 (4)
Phys	151	Algebra Physics 1 (4)
OR		
Phys	291	Calculus Physics 1 (5)
Phys	152	Algebra Physics 2 (4)

OR		
Phys	292	Calculus Physics 2 (5)
Electives (10-11 hrs) Select 11 hours with at least one course in each group.		
		Law and Economics Group
For	330	Natural Resources Law and Policy (3)
For	305	Natural Resources Eco (3)
		Environmental Science Group
For	408	Limnology (4)
For	351	Atmospheric Science (4)
For	400	Surface Hydrology (3)
		Watershed Mgmt Grp
For	417	Watershed Mgmt (4)
For	333	Water Science (4)
Major totals:		93-99

Watershed Management Concentration

Required Courses: 23

Geol	101	Survey of Earth Science (4)
Geol	375	Field Geology (3)
Geol	421	Environmental Groundwater Hydrology (4)
Geol	425	Geomorphology (3)
Geol	301	Env Geology (4)
Geol	317	Depositional Environments (4)
Geol	495	Senior Geology Applications (1)
Additional Requirements: 66-69		
Biol	211	General Biology 1 (4)
Biol	389	Ecology (3)
Chem	211	General Chemistry 1 (3)
Chem	212	General Chemistry 2 (3)
Chem	215	Chemistry Lab 1 (2)
Chem	216	Chemistry Lab 2 (2)
Engl	367	Technical Writing (3)
For	453	Toxicology in Life Science (4)
For	417	Watershed Mgmt (4)
Math	155	Applied Calculus 1 (3)
OR		
Math	211	Calculus 1 (4)

Math	205	Applied Calculus 2 (3)
OR		
Math	252	Calculus 2 (4)
Phys	151	Algebra Physics 1 (4)
OR		
Phys	291	Calculus Physics 1 (5)
For	315	Soil Science (4)
For	305	Natural Resource Economics (3)
For	330	Natural Resource Law and Policy (3)
For	340	Quantitative Methods (3)
For	412	Survey and Geographic Info Sys (4)
For	333	Water Science (4)
For	417	Watershed Mgmt (4)
For	400	Surface Hydrology (3)
Electives: 7-8		
Choose one course from each group.		
Geology Group:		
Geol	325	Earth Materials (4)
Geol	422	Genesis of Earth Resources (3)
Geol	432	Environmental Geochemistry (3)
Anth	481	Cultural Resource Management (3)
Environmental Group		
Biol	301	Microbiology (4)
For	408	Limnology (4)
For	402	Silviculture (3)
For	410	Forest Management (4)
For	420	Wildlife Habitat Management (3)
Major totals:		96-100

Minor in Geology

Required Courses: 20

Geol	101	Survey Earth Sci (4)
Geol	301	Env Geology (4)
Geol	317	Depositional Env (4)
Geol	320	Mineralogy (4)
Geol	321	Petrology (4)

Required Minor Electives: 7 - 8

Geol	105	Planets (4)
Geol	202	Earth History (4)
For	412	Surveying and Geog. Info. Sys. (4)
Geol	330	Structural Geology (3)
Geol	421	Enviro. Groundwater Hydrol. (4)
Geol	432	Enviro. Geochemistry (3)
OR		
Chem	325	Enviro. Chemistry (3)
Minor totals:		27-28

Forestry (B.S.)

Forestry is the application of scientific principles to the sustainable management of forest resources, including alternative forest products (e.g., wildlife, medicinal herbs, craft materials, etc.). The primary goal of the Forestry program is to produce technically competent forest and natural resources managers who understand the ecological notions that underpin human use of forest resources. Students receive training in the various techniques used to determine resource quantities and qualities, economic values, and social constraints in management of natural resources.

Students that major in Forestry are not required to take a minor. A summer field course is required of all students prior to their graduation. Students who wish to pursue graduate degrees should talk to an advisor about recommended coursework.

The two concentrations within the Forestry major are Forestry and Wildland Fire.

Forestry Concentration

Required Courses: 58

For	105	Ecosystems & Humans (4)
For	300	Forestry Field Practices (4)
For	305	Natural Resources Economics (3)
For	310	Mensuration and

		Biometrics (4)
For	315	Soil Science (4)
For	318	Natural Resources Ecology (4)
For	321	Forest Entomology (4)
For	322	Forest Pathology (4)
For	330	Natural Resources Law and Policy (3)
For	340	Quantitative Methods (3)
For	402	Silviculture (3)
For	405	Wildland Fire Mgmt (3)
For	410	Forest Management (4)
For	412	Surveying and Geographic Information Systems (4)
For	415	Dendrology (3)
For	420	Wildlife Habitat Mgmt (3)
For	440	Senior Project (1)
Additional Requirements: 34-36		
Biol	211	General Biology 1 (4)
Biol	212	General Biology 2 (4)
Biol	303	Plant Structure and Function (4)
Biol	389	Ecology (3)
Chem	211	General Chemistry 1 (3)
Chem	215	Chemistry Lab 1 (2)
Engl	367	Technical Writing (3)
Geol	101	Survey of Earth Science (4)
Math	155	Applied Calculus 1 (3)
OR		
Math	211	Calculus 1 (4)
Phys	151	Algebra Physics 1 (4)
OR		
Phys	291	Calculus Physics 1 (5)
Electives: 6 – 8		
Choose one course from each group:		
Resources Group:		
Anth	481	Cultural Resources Management (3)
For	351	Atmospheric Science (3)
For	408	Limnology (4)
For	400	Surface Hydrology (3)
For	417	Watershed Mgmt (4)
For	333	Water Science (4)

Biology Group:		
Biol	300	Genetics (4)
Biol	301	Microbiology (4)
Biol	432	Vertebrate Physiology
Biol	476	Evolution (3)
<hr/> Major Concentration Total: 98-102 <hr/>		

Wildland Fire Concentration		
Required Courses: 64-65		
For	105	Ecosystems & Humans (4)
For	300	Forestry Field Practices (4)
For	305	Natural Resources Economics (3)
For	310	Mensuration and Biometrics (4)
For	315	Soil Science (4)
For	318	Natural Resources Ecology (4)
OR		
For	450	Fire Ecology (3)
For	321	Forest Entomology (4)
For	330	Natural Resources Law and Policy (3)
For	340	Quantitative Methods (3)
For	351	Atmospheric Science (4)
For	402	Silviculture (3)
For	410	Forest Management (4)
For	412	Surveying and Geographic Information Systems (4)
For	415	Dendrology (3)
For	420	Wildlife Habitat Management (3)
For	440	Senior Project (1)
For	451	Project Fires and Rehabilitation (3)
For	452	Prescribed Fire Laboratory (4)
For	454	Landscape Ecology and Wildfires (3)
Additional Requirements: 34-36		
Biol	211	General Biology 1 (4)
Biol	212	General Biology 2 (4)
Biol	303	Plant Structure and

		Function (4)
Biol	389	Ecology (3)
Chem	211	General Chemistry 1 (3)
Chem	215	Chemistry Lab 1 (2)
Engl	367	Technical Writing (3)
Geol	101	Survey of Earth Science (4)
Math	155	Applied Calculus 1 (3)
OR		
Math	211	Calculus 1 (4)
Phys	151	Algebra Physics 1 (4)
OR		
Phys	291	Calculus Physics 1 (5)
Electives: 6 – 8		
Choose one course from each group:		
Resources Group:		
Anth	481	Cultural Resources Management (3)
For	333	Water Science (4)
For	408	Limnology (4)
For	400	Surface Hydrology (3)
For	417	Watershed Mgmt (4)

Major Concentration Total: 104-109

Minor in General Science for Elementary School Teachers

The purpose of the minor is to provide elementary school teachers in training with a fundamentally strong background in a variety of basic science concepts of both physical and life science. Courses will be selected from those areas listed in the major, which provide the needed basic understanding of the sciences.

The objectives of the general science minor are to:

- Provide elementary teachers in training a program that will adequately prepare and encourage them to teach the most fundamental science concepts to students at the elementary level.
- Broaden the scope of science to elementary school teachers in training, so they will be well versed in all aspects of science, allowing them to develop methods

in which to relay the content material to their students so that the students can fully understand what is being taught.

Please refer to Interdepartmental Programs for further details regarding this minor.

Minor in Combined Science

The combined science minor at NMHU allows students to select courses in two or more of the science fields to include behavioral science, computer science, math, life science and/or physical science. Also, students are advised to remember that the university requires that all minors contain at least 12 credit hours at the 300- to 400- level. A minor in combined science may be used to satisfy the university requirements for the bachelor of science degree of a minor in a science field.

(Please refer to Interdepartmental Programs for further details regarding this minor.)

Pre-Professional Programs in Health and Science Fields (Medicine, Dentistry, Veterinary Medicine, Ophthalmology, Optometry, etc.

Entry into professional schools is often dependent upon success in a selected series of courses rather than completion of a particular major program. Thus, the choice of a specific major is frequently flexible. In addition, the extent of pre-professional training needed varies considerably.

Some areas where pre-professional advising is appropriate are:

- Pre-medicine
- Pre-physical therapy
- Pre-veterinary medicine
- Nursing
- Pre-dentistry
- Pre-pharmacy
- Pre-optometry
- Medical technology (all levels)
- Pre-engineering

Refer to the appropriate departments for

further details and advisement regarding these fields.

Courses in Biology (Biol)

110. Biological Perspectives (4); 3,2

An introduction to biology that includes consideration of the diversity of life, the origin of species, and ecology. The course emphasizes those aspects of biology that are of immediate importance to the non-scientist. (Required of biology majors whose ACT Science scores are below 20.)

131. Human Anatomy and Physiology I (4); 3,2; Fa

Structure and function of the human body at the cellular, tissue, organ, and organ-system levels of organization.

132. Human Anatomy and Physiology II (4); 3,2; Sp

A continuation of Biol 131. Prerequisite: Biol 131 or permission of instructor.

135-435. Selected Topics in Biology (1-4 VC)
Course in a topic or topics in biology: may be repeated with change of content.

201. Introductory Medical Microbiology (4); 3,2; Su

An introduction to microbiology with medical emphasis on bacterial, viral, and human interactions.

202. Environmental Microbiology and Bioremediation (4); 3,2

An introduction to environmental microbiology including the use of microbes in remediation of contamination. Prerequisite: Biol 212.

211. General Biology I (4); 3,2

This lecture and laboratory course analytically presents a large scale, evolutionary framework for biological systems. A rigorous, but practical, observational approach to basic evolutionary processes, biodiversity and the ecology of ecosystems is given. This course is one of two parts of a 2-semester

general biology sequence, which is required for students who major in the life sciences.

Prerequisite: An ACT Math score above 18 or Biol 110. Recommended co-requisite: Chem 211.

212. General Biology II (4); 3,2

A survey of fundamental concepts of cell biology including structure and function of cell organelles, an introduction to biochemical pathways, enzyme function, information systems, and nuclear behavior during karyokinesis. Simple Mendelian genetics will be introduced. Recommended co-requisite: Chem 212. Prerequisite: Biol 211.

300. Genetics (4); 3,2; Sp

Fundamental concepts of genetics. The course will cover Mendelian genetics, population genetics and the fundamentals of DNA replication, transcription, translation and regulation. Prerequisite: Biol 212, Chem 211, Math 120 or permission of instructor.

301. General Microbiology (4); 3,2; Fa

This course is designed to offer students an intensive and comprehensive introduction to microbiology. The course will focus on the physiology and molecular biology of bacteria and viruses. Some emphasis will be placed on microbial pathogenesis. Prerequisite: Biol 212.

302. Animal Structure and Function (4); 3,2; Fa

An introduction to the anatomy, embryology, and physiology of animals. Prerequisite: Biol 212.

303. Plant Structure and Function (4); 3,2; Sp
Comparative microscopic and gross structures of plants; major physiological processes. Prerequisite: Biol 212.

310. Mensuration and Biometrics (4); 3,2; Fa

Mensuration is the practice of measuring, particularly lengths and angles. Biometrics is the set of techniques for measurement and analysis of biological phenomenon. Together, these topics provide a comprehen-

sive overview of measurement and analysis techniques used in the life sciences and allied disciplines. Prerequisite: Math 155 and Biol 212, or permission of instructor. Cross-listed as: For 310.

359. Fundamental Principles of Laboratory Safety (1)

Introduction to the principles of laboratory safety including the proper use of emergency safety equipment and personal protective equipment, instructions for the safe handling, labeling, storage and disposal of chemicals, and safety in the biology and physics labs. Emphasis will be placed on preparing science educators in safety procedures. Prerequisite: Chem 211 and Chem 212 or permission of instructor.

385. Biological Molecules (4); 2,4; Sp

An introduction to the molecules and molecular processes of most importance in life science. Specific examples and applications from life sciences will be used. Laboratory work forms an integral part of the class. Prerequisite: Chem 341, Biol 212.

389. Ecology (3); Sp

Organizational and functional processes of ecosystems: distributions, abundances, and interactions of organisms. Prerequisite: Biol 212 and Biol 302 or Biol 303. Co-requisite: Biol 390.

390. Ecology Laboratory (1); 0,2; Sp

Laboratory and field exercises developing pertinent ecological principles. Co-requisite: Biol 389.

399. Undergraduate Research (1 - 6 VC)

Special research problems for selected biology majors. A terminal research paper and oral presentation are required. Prerequisite: Permission of instructor.

405. Advanced Bacteriology (4); 3,2; Alt Fa
Ecological, biogeochemical, industrial, and evolutionary properties of the bacteria. Prerequisite: Biol 301 and Chem 212.

415. Biotechnology (4); 2,4, Alt Sp

Introduces students to latest techniques in biotechnology including recombinant DNA, tissue culture, and organelle isolation as well as genetic engineering, industrial microbiology, and agricultural biotechnology. Prerequisite: Biol 300, Biol 385 and Chem 211. A special fee is charged.

420. Teaching Science and Math in Middle and Secondary School (3)

To familiarize students with learning theory and methods of teaching specifically related to middle and high school students of science and math. National and state science and math standards will be incorporated into the course. Prerequisite: Completion of all level 2 classes in general science major or at least 30 credit hours in life and/or physical science or math, Field-Base 2 or concurrent enrollment and permission of instructor.

422. Plant Physiology (4); 3,2; Alt Sp

The physiology of germination, growth, flowering, fruiting, and senescence in plants. Prerequisite: Biol 303 and Chem 341, or permission of instructor.

423. Cellular Biology (3); Fa

Cell structure and function, with emphasis on molecular biology. Prerequisite: Biol 301, Biol 302, Biol 303. Co-requisite: Biol 424.

424. Cellular Biology Laboratory (1); 0,2; Fa
Laboratory course to accompany Biol 423. Co-requisite: Biol 423.

425. Marine Biology (2)

Major groups of marine invertebrates and algae are observed and studied in their natural habitats. In addition to one class session each week during the fall semester, students participate in a ten-day field trip during the winter break (approximately December 13-23), with a transportation charge of approximately \$90 plus living costs. Enrollment limited to 16. Prerequisite: Major in biology, Biol 302 and Biol 303, and permission of the instructor.

427. Immunology and Pathogenic

Microbiology (3); Alt Sp

Study of diseases of vertebrates with emphasis on host-parasite interactions. The course includes principles of isolation, characterization, and control of pathogenic organisms as well as principles of vertebrate response to infection, antigen-antibody interaction, hypersensitivity, and autoimmune diseases. Prerequisite: Biol 301.

428. Laboratory in Immunology and Pathogenic Microbiology (2); 0,2

Laboratory isolation and identification of pathogenic microorganisms, antibiotic sensitivity testing, and diagnostic and evaluative testing. Prerequisite: Biol 301. Co-requisite: LSci 427.

432. Vertebrate Physiology (4); 3,2; Alt Sp
Fundamental life processes in the vertebrates. Prerequisite: Biol 302 and Chem 341.

445. Biology of Vertebrates (3)
Evolution, comparative morphology, classification, and life histories of vertebrates. Prerequisite: Biol 302. Co-requisite: Biol 446.

446. Biology of Vertebrates Lab (1)
Description and identification of New Mexico vertebrates in a lab setting. Emphasis on distribution, identification, and life histories of endangered vertebrate species. Co-requisite: Biol 445.

448. Medical Technology Internship (32)
The senior year for all medical technology students is spent in an approved hospital in order to complete the requirements for the B.S. degree. Coursework and labs include urology, hematology, pathogenic bacteriology, biochemistry, histology, microbiology, parasitology, and serology, together with a detailed hospital work format. The 32 hours are part of the required hours of an 18-month medical technology program. All hours are taken off-campus at an approved clinical facility and 32 are transferred to NMHU for completion of degree

requirements. Prerequisite: Completion of prescribed three years of coursework and acceptance at an approved clinical facility.

461. Electron Microscopy (4); 2,4

Use of the electron microscope and the making of micrographs. Includes development of skills in fixation, dehydration, embedding, sectioning, and staining of the biological materials to be examined.

476. Evolution (3)

Evolution, studied in terms of molecular, Mendelian, and population genetics. Prerequisite: Biol 300 or permission of instructor.

480. Parasitology (4); 2,4

An introduction to the taxonomy and life cycles of vertebrate parasites and pathogenic effects upon their animal hosts; protozoan, trematode, cestode, nematode, and acanthocephalan parasites of domestic animals and man. Prerequisite: Biol 423 or permission of instructor.

484. Hematology (4); 2,4

Characteristics, formation, function, and destruction of blood: particularly in man. Coagulation, normal blood pictures, and blood pathologies are included. The laboratory includes the techniques for the traditional tests and evaluations of blood. Prerequisite: Biol 423 and Chem 341, or permission of instructor.

485. Endocrinology (4); 3,2; Alt Sp

Embryological origin, histological structure, and function of the endocrine glands, correlating cell types with special hormones produced; and the major physiological actions of the hormones on the major target organs of the body. Prerequisite: Biol 432 or permission of instructor.

487. Histology (4); 2,4; Alt Sp

The microanatomy and functional organization of basic tissues: epithelium, connective tissue, cartilage, bone, muscle, and nerve. The course covers the histology of the blood and lymph vascular systems, glands, and

secretions, particularly of man. Prerequisite: Biol 423 or permission of instructor.

490. Independent Study (1 – 6 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

491. Life Science Colloquium (1); 2,0

Current topics and the use of life science literature.

492. Senior Project (3); 1,4-6

This lecture and laboratory course requires a senior-level life science student to apply their theoretical and experimental expertise to: 1) the development of a simple, but relevant, scientific question and its theoretical or experimental solution; 2) the identification of a basic, practical, biological problem, and its appropriate solution by analysis, simulation, or hardware development. The instructor will assign students to the laboratories of appropriate faculty or other professionals. The instructor will oversee their mentorship and progress. During the lecture periods, the instructor will overview project management theory, practical problem solving, oral and written communication skills, and overall progress on activities. Prerequisite: Senior-level status in a life science discipline.

493. Field Botany (2); 1,2

Qualitative and quantitative techniques of community analysis; including floral sampling techniques estimating population demographic patterns. The taxonomy and natural history of representative groups of land plants will be studied in the field. Prerequisite: Biol 303.

494. Field Zoology (2); 1,2

Qualitative and quantitative techniques of community analysis including faunal sampling techniques to estimate population demographic patterns. The taxonomy and natural history of representative groups of land animals will be studied in the field. Prerequisite: Biol 302.

499. Independent Research (1 – 6 VC)

Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

Courses in Chemistry (Chem)

100. Chemistry for the Non-Scientist (4); 3,2

Introductory chemistry for the non-science major. The course includes a study of basic concepts of chemistry and offers students an understanding of the chemical aspects of nature and how they affect their lives.

105. Introductory Chemistry

(4); 3,1 Recitation

Fundamental principles in chemistry, including units of measurement, characteristics of elements and compounds, atomic structure, chemical bonding, chemical equations and quantitative calculations, gas characteristics and behavior, energy, solutions and solubility, acids and bases. The course is designed primarily for students who have never had a course in chemistry and wish to have a preparatory course before enrolling for Chem 211 and Chem 215. Co-requisite: Math 120.

211. General Chemistry I (3)

Fundamental concepts of chemistry including the metric system, significant figures, characteristics of matter, chemical formulas and equations, periodicity, chemical bonding, electronegativity, Lewis structures, molecular geometry, characteristics of gases, liquids, solids, solutions, and the mole concept and its applications. Prerequisite: Math 120 with a minimum grade of "C". Co-requisite: Chem 215.

212. General Chemistry II (3)

A continuation of Chem 211. Topics include energy forms and changes, introductory thermodynamics, reaction kinetics, chemical equilibria, acids and bases, electrochemistry, nuclear chemistry, and introductory organic chemistry and biochemistry. Prerequisite:

Chem 211 and Chem 215. Co-requisite:
Chem 216 and Math 140.

215. General Chemistry Laboratory
1 (2); 0,3,1 recitation; Fa

The recitation will focus on theoretical problem-solving skills, while the laboratory develops practical experimental skills including basic laboratory techniques, determination of physical and chemical properties of matter, separation of mixtures, determination of empirical formulas, use of molecular models, gas behavior, and colligative properties of solutions. Co-requisite: Chem 211

216. General Chemistry Laboratory
2 (2); 0,3,1 recitation; Sp

The recitation will focus on theoretical problem-solving skills, while the laboratory develops practical experimental skills including calorimetry, chemical kinetics, chemical equilibria, acid/base titrations, electrochemistry, metal reactivity, and qualitative analyses of ions. Co-requisite: Chem 212

235 – 435. Selected Topic in Chemistry (3)
Course in topic or topics in chemistry. May be repeated with change of content.

241. Preview of Organic Chemistry (2)
Overview and introduction to organic chemical nomenclature, structures, and reactions.

255. Chemistry Research Seminar (1)
Lower division students participating in a chemical research project will present one or two 30-minute presentations on their project to faculty members, graduate students and other undergraduate students registered in the course. In addition the students will participate in the discussion evolving from other students' presentations.

299. Undergraduate Research (1 – 3 VC)
Problems in laboratory or literature may be undertaken as individual research arranged with an instructor. Prerequisite: Permission of instructor.

317. Physical Chemistry Lab (3); 0,6

Basic electronics, optics, thermodynamic properties, and reaction kinetics, and instrumentation analysis including IR, UV-VIS, GC, NMR, MS, X-ray, LC, and electro-analytical techniques for the determination of molecular structure and properties. Prerequisite: Chem 322, Chem 342 and Math 252. Co-requisite: Chem 372..

321. Quantitative Analysis (4); 3,3
Quantitative aspects of chemical analysis are covered including statistical data analysis, chemical equilibria especially in acid/base and systems, electrochemistry, and an introduction to optical methods and separations including HPLC, GC-MS, UV-vis, AA, and electrochemistry. Prerequisite: Chem 212, Chem 216, and Math 140.

322. Instrumental Analysis (4); 3,3
Instrument design, use, and range of application are considered. Major instrumentation covered includes gas and liquid chromatography (GC and LC), extraction and pre-concentration methods, mass spectrometry, capillary electrophoresis, and X-ray methods. Prerequisite: Chem 315 and Chem 321.

325. Environmental Chemistry (3)
Environmental chemistry explores the sources, distribution, reactions, fate, transport and consequences of chemicals in natural systems. Reactions in aquatic, terrestrial and atmospheric environments will be considered, including both biological and abiotic transformations. Prerequisite: Chem 341.

341. Organic Chemistry 1 (4); 3, 3, 1 recitation
An intensive study of the chemistry of carbon compounds, including structure, synthesis and reaction mechanisms. The lab component will include the study of the isolation, purification and identification of various classes of organic compounds. Prerequisite: Chem 212 and Chem 216

342. Organic Chemistry 2 (4); 3, 3, 1 recitation
A continuation of Chem 341. Special topics, including an introduction to biochemistry

and polymer chemistry, are included. The lab component will include the synthesis of various classes of organic compounds and their identification using modern spectroscopic techniques. Prerequisite: Chem 341.

359. Fundamentals of Laboratory Safety (1)
Introduction to the principles of laboratory safety, including the proper use of emergency safety equipment and personal protective equipment, instructions for the safe handling, labeling, storage and disposal of chemicals, and safety in the biology and physics labs. Emphasis will be placed on preparing science educators in safety procedures. Prerequisite: Chem 211 Chem 212, or permission of the instructor.

371. Physical Chemistry I (3)
Chemical theory of states of matter, thermodynamics, equilibria, and kinetics. Prerequisite: Chem 342, Math 212, and Phys 292. Co-requisite: Chem 317.

372. Physical Chemistry II (3)
Topics include quantum mechanics, statistical mechanics, spectroscopy, and molecular structure. Prerequisite: Chem 371, Math 252, and Phys 292. Co-requisite: Chem 318.

419. Advanced Synthesis and Instrumental Analysis (3); 0,6
An advanced chemical preparation and chemical instrumentation laboratory. Synthesis emphasizes inorganic compounds, and uses modern separation, purification, and instrumental analysis techniques. Addition instrumental analysis will explore modern methods of trace analysis. Instrumentation may include NMR, GC-MS, FT-IR, fluorescence, HPLC, CE, powder X-ray diffraction, and electrochemistry. Prerequisite: Chem 321 or 322 are required, while Chem 318 and Chem 372 are recommended.

441. Reaction Mechanisms (3)
Theoretical organic chemistry including molecular orbital theory, photochemistry, orbital symmetry, and reaction mechanisms.

Prerequisite: Chem 318, Chem 342, and Chem 372.

442. Synthetic Chemistry (3)
An advanced treatment of synthetic organic and inorganic chemistry and reaction mechanisms. Prerequisite: Chem 318, Chem 342, and Chem 372.

450. Seminar in Chemistry (1 – 3 VC)
Seminar course in a topic or topics in chemistry. Prerequisite: Chem 318, Chem 342, and Chem 372.

455. Chemistry Research Seminar (1)
Upper division undergraduate students participating in a chemical research project will present one or two 30-minute presentations on their project to faculty members and other graduate and undergraduate students registered in the course. In addition the students will participate in the discussion evolving from other student presentations. Cross-listed as: Phys 455.

461. Inorganic Chemistry I (3)
Quantum mechanical approach to chemical bonding, crystal and ligand field theory, acid/base theories, and transition metal chemistry. Prerequisite: Chem 318 and Chem 372.

462. Inorganic Chemistry II (3)
A continuation of Chem 461. Topics include metal, transition metal, and non-metal inorganic topics and symmetry as related to spectroscopy and reaction mechanisms. Prerequisite: Chem 461.

473. Chemical Kinetics (3)
An in-depth study of chemical reaction kinetics. Prerequisite: Chem 318 and Chem 372.

481. Biochemistry I (3)
An introduction to the chemistry of biologically important molecules, including proteins, carbohydrates, lipids, and nucleic acids; physical properties, mechanisms of action, and enzyme kinetics. Prerequisite: Chem 342.

482. Biochemistry II (3)
A continuation of Chem 481. Prerequisite:

Chem 481.

490. Independent Study (1 – 6 VC)

Individual, directed study arranged with an instructor. A thesis and oral presentation are required. Prerequisite: Permission of instructor.

495. Senior Chemistry Applications (3)

This course will consist of an open-ended advanced chemistry project and a series of oral and written examinations that are designed to reveal each student's overall understanding of chemistry. Prerequisite: Chem 372, or permission of the instructor.

499. Independent Research (1 – 6 VC)

A research problem in chemistry, explored through individual, directed research arranged with an instructor. A thesis and oral presentation are required. Prerequisite: Permission of instructor.

Courses in Environmental Geology (Geol)

101. Survey of Earth Science (4); 3, 2

An introduction to the broad spectrum of modern earth sciences, including astronomy, meteorology, oceanography, and physical geology for the science and non-science major student. Volcanoes, earthquakes, continental drift, glaciers, wind action, groundwater, rivers, and landslides are some of the topics discussed.

105. The Planets (4); 3, 2

This course is designed to give the student a basic understanding of the nine planets in our solar system, with emphasis on geologic and atmospheric processes. Topics include the study of faults and tectonic features, impact craters, evolution and internal structures, atmospheres, meteorites, comets, asteroids, and analysis of spacecraft images

202. Earth History (4); 3, 2; Sp

A study of the 4.5 billion-year history of the earth based on information derived from rocks, minerals, and fossils. Trilobites, dino-

sours, saber tooth tigers are but a few of the organisms to be investigated. Prerequisite: Geol 101

235-435. Selected Topic in Geology (1-4 VC)
Course in topic or topics in Geology. May be repeated with a change in content.

290-490. Independent Study (1-4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

301. Environmental Geology (4); 3, 2; Sp

A course designed to instruct students in the geological principles that can be utilized to both prevent and ameliorate environmental problems.

317. Depositional Environments

(4); 3, 2; Alt Fa

Survey of sedimentary rock types, principles of description and classification, sediment genesis and transport, distribution and origin of sedimentary deposits. Includes paleoenvironmental determinations from analysis of modern marine, transitional, and continental environments with the information applied to problems in environmental geology. Course includes an investigation of evolution of life on a dynamic earth. The course will investigate stratigraphic and paleontologic principles to aid in paleoenvironmental interpretation and evolutionary studies. Students will gain an appreciation of the dynamic nature of the Earth and the importance of scientific thought processes. Laboratory portion of the course emphasizes lecture topics through hands-on laboratory experiences, including several field trips. Prerequisites: Geol 101 and 202.

320. Mineralogy (4); 3, 2; Alt Fa

Designed to introduce students to the essentials of minerals and rocks. Topics include the study of major groups of minerals and their crystal structures, crystal chemistry, symmetry, crystal growth, and mineral identification. Aspects of optical mineralogy will

also be included. Prerequisite: Geol 101 or permission of instructor.

321. Petrology (4); 3, 2; Alt Sp

An introduction to the fundamentals of igneous and metamorphic rocks. The lecture will focus on the experimental and field evidence for interpreting rock associations, and the interplay between igneous and metamorphic rock formation and the plate tectonic model. Topics include textures, structures, microscopic identification, geochemistry, and rock classification as a background for discussing rock origins. Prerequisites: Geol 101, 320, or permission of instructor.

325. Earth Materials (3); Fa

The study of the materials that makeup the earth, their geologic settings, and the properties that make them useful to society. Topics include mineral chemistry, crystallography, igneous, metamorphic and sedimentary rock minerals, mineral study techniques and formation processes. Prerequisite: Geol 101.

330. Structural Geology (3); Alt Fa

A detailed study of the forces acting on the Earth's crust and a resolution of these forces in terms of joints, faults, folds, uplifts, and related phenomena. Prerequisites: Geol 101, Math 120, Phys 151 or 291, or by permission of instructor.

350. Seminar in Geology (3)

Seminar course in topic or topics in Geology.

375. Field Geology (3); 0, 12

Principles of geologic mapping, including the use of a Brunton compass, barometer, hand-level, plane table, and other instruments. The course also includes the solution of actual field problems and preparation of reports. Prerequisites: Geol 315, 322, 330, or permission of instructor.

421. Environmental Groundwater

Hydrology (4); 3, 2; Alt Sp

Study of the origin, movement, method of entrapment, and removal of subsurface

waters. Course includes extensive discussion of problems associated with groundwater pollution, and remediation. Prerequisites: Geol 101 and 301

422. Genesis and Environmental Impact

of Earth's Resources (3); Alt Sp

Study of the distribution, mineralogy, classification, modes of occurrence and economic implications to industry and world affairs of mineral deposits. Prerequisites: Geol 101, 301, and 322.

424. Environmental Geophysics (4); 3, 2

Environmental Geophysics provides students with an understanding of the geophysical tools, processes and concepts applied in environmental geology. Processes (e.g., vulcanism, plate tectonics, mountain building, and climates) are discussed in the context of the Earth and other planets. Prerequisites: Geol 101, Phys 151, or permission of instructor.

425. Geomorphology (3); Fa

An introduction to the description of landforms and landscapes on Earth's surface. Emphasis is placed on the basic processes that govern landform evolution, human impact on land surfaces, and on the history of geomorphic study. Several field trips are required. Prerequisites: Senior standing.

432. Environmental Geochemistry (3)

A study of the chemistry of the Earth, including mineral mobility, cosmochemistry, chemical weathering, diagenesis, igneous and metamorphic chemistry, stable isotopes, pollution, and the thermodynamics and kinetics associated with these systems. Prerequisites: Chem 211 and 215, Geol 101 and 301, or by instructor's permission.

495. Senior Geology Applications (1)

Required class for all graduating seniors. The purpose of the course will be to assess the student's understanding of environmental geology, critical thinking, and applications to geology and research methods. Assessment will consist of oral and written examinations

and problem solving. Prerequisite: Permission of instructor.

499. Independent Research (1-4 VC)

Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

Courses in Forestry (For)

105. Ecosystems and Humans (4); 3, 2; Sp

A survey of environmental and ecological sciences with an introduction to the ways humans interact with and change ecosystems. The course introduces students to ecological and environmental concepts that bear on environmental issues, the current practices and management strategies utilized to preserve and sustain ecosystems, and, examples of solutions to environmental and natural resources problems

235 – 435. Selected Topic in Forestry (1 – 4 VC)

Course in a topic or topics in Forestry. May be repeated with a change in course content.

300. Forestry Field Practices (4); 1, 6; Su
An intensive summer experience that will visit various forest types in New Mexico. Forest management practices, harvest systems and natural catastrophes will be assessed by students for their ecological repercussions. Measurement methods used in Forestry will be introduced throughout the session. This is a required course students must complete prior to graduation.

305. Natural Resources Economics (3); Alt Sp

This course will provide an overview of the market economy in development and allocation of scarce resources, and the economic impacts of policy measures used in natural resource systems, and achieving environmental goals.

310. Mensuration and Biometrics (4); 3, 2; Alt Sp

Mensuration is the practice of measuring lengths and angles. Biometrics is the set of techniques for measurement and analysis

of biological phenomena. Together, these topics provide a comprehensive overview of measurement and analysis techniques used in Life Sciences and allied disciplines. Prerequisites: Math 155, Biol 212, or permission of instructor.

315. Soil Science (4); 3, 2; Alt Fa

This course provides students with basic soil science concepts. The physical, chemical, and ecological properties of soils are applied to soil classification, genesis, fertility, productivity, irrigation, and erosion. Prerequisites: Biol 212, Chem 211, Math 140 (or equivalent), For 105, or permission of instructor.

318. Natural Resources Ecology (4); 3, 2; Alt Sp

The ecology of natural and artificial groups of organisms managed for production of values is the focus of this course. Course topics include ecosystem productivity, biodiversity, habitat types, ecosystem management, plant stand dynamics, and endangered species roles in range, forest and aquatic ecosystems, and pest populations. Prerequisite: Biol 389 can be taken concurrently, or instructor's permission.

321 Forest Entomology (3); 3, 2; Alt Fa

A survey of the arthropods and insects found in forest and range communities. Particular focus will be on insects that reduce commodity value, threaten human and animal health, or have beneficial effects in ecosystems. Methods to manipulate arthropod populations to achieve management goals are discussed.

322. Forest Pathology (4); 3, 2; Alt Fa

A survey of the beneficial and pathogenic microorganisms found in forests. Particular focus will be on pathogens that reduce commodity value and stand productivity, and microorganisms that have beneficial effects in forested ecosystems. Methods of detection and response to pathogen infestations will be examined. Prerequisite: Biology 389,

which can be taken concurrently, or permission of instructor.

330. Natural Resources Law and Policy (3)
Natural resources and environmental ethics doctrines and applications with regard to laws and policies are examined. Introduction to laws, regulations, and policies that focus on natural resources and environmental concerns are the focus of this course.

333. Water Science (4); 3, 2; Alt Fa
A course designed to teach the standard methods of water analyses and interpretation of results for surface water, ground water, water supply, and wastewater. The focus will be on the analysis of coliform bacteria, nutrients, organic matter, heavy metals, pesticides and water quality standards. Prerequisites: Biol 212, Chem 211, Math 140 (or equivalent), For 105, or permission of instructor.

340. Quantitative Methods (3)
Quantitative methods are the techniques used to numerically and statistically analyze observational and experimental data. Students will gain first-hand experience with data analysis of biological, geological, and natural resources data sets. Prerequisite: Math 140, or permission of instructor.

351. Atmospheric Science (3); Alt Fa
The physical structure and dynamics of the atmosphere are explored. Air pollutant movement dissipation, and chemistry will be discussed. Weather phenomena and local air circulation patterns will be discussed in terms of pesticide spray movement and wildfire behavior. Prerequisites: Phys 151, Chem 212, or permission of instructor.

400. Surface Hydrology (3)
A course designed for upper-division undergraduate students in earth sciences and natural resources management. The course combines (1) a qualitative conceptual understanding of hydrologic process, (2) an introduction to the quantitative representation of those processes, and (3) an understanding of

approaches to hydrological measurements and the uncertainties involved in those measurements. Prerequisite: Geol 101, or permission of instructor.

402. Silviculture (3); Alt Fa
Silviculture is the set of practices to grow and manage trees in stands. The course focuses on the factors that affect tree growth, tree stand dynamics and health, and the impact of management on ecosystem values. The ecological practices to sustainably produce forest products are emphasized. Prerequisite: For 318, or permission of instructor.

405. Wildland Fire Management (3)
A course on the behavior of wildfires in forest and range communities. Methods of prescribed fire use are discussed. The course reviews methods for fuel load estimation, fire weather prediction, and fire suppression. Prerequisites: For 315 and 318, or permission of instructor.

408. Limnology (4); 3, 2
A study of the interrelationships among plants, animals, and environmental factors in aquatic ecosystems. The course is field oriented and concentrates on the development of sampling techniques and the analysis of biotic and abiotic components of nearby lakes and streams.

Prerequisites: Biol. 389, or R 333, or permission of instructor.

410. Forest Management (3)
This course focuses on the economic and scientific decisions for large tracts of land and multiple types of forest stands over landscapes. The elements of planning management activities to create the least costs and greatest benefits for a landowner are explored.

412. Surveying and Geographic Information Systems (4); 3, 2; Alt Fa
Surveying is the determination of boundaries and positions on the earth's surface. Geographic Information Systems (GIS) are geospatially-referenced databases that relate

positions of points or areas to data and properties. The course will explore the applications of these technologies to environmental and natural resources problems. Prerequisites: For 318, Math 140 w/ at least a "C", or permission of instructor

415. Dendrology (3); 2, 2; Alt Fa

Dendrology studies the biology of trees and woody vegetation. This course explores tree and shrub identification with associated botanical nomenclature, and, the structure and function of shrub and tree morphology. A collection of local trees and shrubs is a requirement for the course. Prerequisite: For 318, or permission of instructor.

417. Watershed Management (4); 3, 2; Alt Fa

This course will emphasize the interdisciplinary characteristics of watershed management. The need to incorporate ecological and socioeconomic factors when planning and implementing programs to achieve sustainable, socially viable natural resource development is emphasized.

Prerequisites: Biol 212, Chem 211, Math 140 (or equivalent), For 105, or permission of instructor.

420. Wildlife Habitat Management (3); 2, 2
Alt Fa

Principles and practice of wildlife management; with an emphasis on habitats, distribution, abundance and legal considerations.

440. Senior Project (1); Fa, Sp

A capstone course that requires students to integrate information from across the Forestry major's courses in the production of a professional management plan. Prerequisite: Senior standing.

450. Fire Ecology (3)

This class investigates the ecology of fire in a variety of ecosystems; and, includes the effects of fire on plants, animals, soils, water, and air. The course will emphasize the prediction and characterization of fire effects

over time and space, and the role of fire in restoration ecology. Case studies of restoration projects using fire in prairies, ponderosa pine and white bark forests will be examined. Prerequisites: Biol 389, For 315, or permission of instructor.

451. Project Fires and Post-Fire Rehabilitation (3)

This class is designed to investigate the potential problems resulting from fires including erosion on slopes and in stream channels, sediment and debris jams in streams, weed infestations, loss of vegetation and forest cover, hazards from fire-killed trees falling, and potential damage from post-fire activities like salvage logging.

452. Prescribed Fire Practices (4); 3, 2; Alt Fa

Prescribed fires are used to meet management objectives of fuel reduction and ecosystem restoration. This course explores the design, planning, conduct and monitoring in prescribed fire utilization. The course includes two (2) mandatory Saturday field trips, and, participation in a prescribed fire. Prerequisites: For 105, For 318, or permission of instructor.

453. Toxicology in Life Sciences (3); Alt Sp

Students will develop an understanding of the general process of conducting release, contamination and risk assessments. Furthermore, students will be able to understand and work with federal and state guidances and regulations that bear on the conduct of environmental public health investigations. The ultimate goal is to equip students with knowledge and skills that are utilized to assess the general impact of substances on human health. Prerequisites: Biol 212, Chem 212, or permission of instructor.

454. Landscape Ecology and Wildfires (3)

Wildfire behavior depends on vegetation and fuel loading over landscapes. Fires that burn through landscape mosaics of habitat types have variable effects on wildlife, vegetation,

School of Business Administration

Dr. William Taylor, Dean
Sininger Hall,
Room 205
505 454-3522
FAX: 505 454-3354

The school offers undergraduate programs in accounting, finance, international business, management, management information systems, marketing and general business.

Accreditation

The School of Business Administration is accredited by the Association of Collegiate Business Schools and Programs (ACBSP) at the undergraduate and graduate level.

Mission of the School of Business

New Mexico Highlands University's School of Business Administration is committed to being the best small HSI Business school in the nation by developing our students to be competitive and ethical professionals with the ability to operate in the global business environment.

Excellence in teaching is evidenced by:

- Faculty recruiting and development that fosters enhancement in the quality of teaching
- Scholarly and research activity that supports and enhances classroom teaching
- Faculty service that narrows the gap between classroom theory and the needs of the business community

Education experience is offered through:

- Small class enrollments to foster interactive and high involvement learning
- Opportunities for students to participate in many real-world scenarios in classroom and internship settings
- Faculty-student relationships that extend from academic advising through career choices, including facilitating employment

opportunities

Faculty

Sergio Alonso (International Business)
Charles Becker (Accounting/Mgmt)
Patricia Bost (Accounting)
John Luhman (Management)
Peter Hughes (Management)
Hal Olafson (Finance)
Luis Ortiz (Management)
Hormuzd Rassam (Business)
Mary Romero (Accounting)
Charles Swim (MIS/Mgmt)
William Taylor (Business)
Kent Tucker (Finance)
David West (MIS)
Margaret Young (Marketing)

Business

The School of Business Administration provides academic programs that provide a solid foundation for students in leadership roles in business, government and education. Performance standards are high for both undergraduate and graduate programs. Academic programs reflect the philosophy and common professional components of the accrediting body, the Association of Collegiate Business Schools and Programs (ACBSP). In order to prepare students for professional careers, the curricula address both the specifics of the work place and the more general aspects of society.

The School of Business Administration offers one degree, the bachelor of business administration (B.B.A.) with concentrations in accounting, finance, international business, management, marketing, management information systems, and general business. Students may select a second major or minor in a field outside the School of Business or may select a minor from within the School of Business. The school's majors and minors are listed below:

The general education requirements for

B.B.A. degree (See University Core Requirements) are 42 to 45 credit hours. All business majors and minors (including non-business minors) are required to take CS 101, Econ 216, and Math 155 within the university core requirements. An approved sample Recommended Curriculum or Plan of Study is available from the school.

Students, in conjunction with their advisors, may select upper divisional electives from the following disciplines: Anthropology, Business, Sociology, Psychology, Media Arts, Exercise and Sport Science. The number of electives varies by concentration.

Exit Requirements for the BBA degree

During the last year of coursework all undergraduate students are required to complete Mgmt 489, Strategic Management. Students will work as a team to prepare and present a strategic business analysis as the final aspect of their undergraduate business preparation. The business case will be presented to members of the School of Business Administration faculty at the end of each semester.

Business Education Core: 45

Acct	287	Prin of Fin Acct (3)
Acct	288	Prin of Mgr Acct (3)
BLaw	360	Business Law I (3)
Bus	110	Bus Analys Meth (3)
Bus	210	Stat Analys for Bus (3)
Econ	217	Prin of Microecon (3)
Engl	367	Tech Writing (3)
Fin	341	Financial Mgmt I (3)
Fin	342	Financial Mgmt II (3)
Mgmt	325	Oper Resrch I (3)
Mgmt	364	Org Behavior (3)
Mgmt	489	Strategic Mgmt (3)
Mktg	302	Prin of Marketing (3)
Mktg	411	Marketing Rsrch (3)
MIS	233	Microcomp Appl in Bus (3)

Core Total: 45

Concentration in Accounting (B.B.A.)

The following categories reflect the philosophy of the American Institute of Certified Public Accountants and the standard for educational components of the ACBSP accrediting body.

Required courses: 21

Acct	301	Cost Accounting (3)
Acct	321	Indiv Taxation (3)
Acct	387	Intermed Acct I (3)
Acct	388	Intermed Acct II (3)
Acct	392	Intermed Acct III (3)
Acct	481	Accounting Sys (3)
Acct	492	Auditing (3)

Electives: 9

Choose three courses from the following list:

Acct	401	Budgeting (3)
Acct	410	Accounting Tech (3)
Acct	422	Corp, Partnership, & Estate Taxation (3)
Acct	482	Int'l Accounting (3)
Acct	483	Not-for-Profit Acct (3)
Acct	487	Adv Acct Topics (3)
Acct	488	Curr Topics in Acct (3)
Acct	489	Govt Accounting (3)

Major Total: 30

Even though the state of New Mexico has not adopted the 150-hour education requirement to sit for the CPA exam, NMHU's School of Business Administration has an obligation to its students to implement such a program. Without this program, many accounting students will encounter restrictive barriers if and when they decide to relocate in other states where this credential is a condition for employment. To this end, the School of Business will extend the 150-hour education program as an option to students who anticipate careers in those specific states. (For specific requirements, check with the School of Business Administration.)

Minor in Accounting for Non-Business Majors

Students must take Bus 110 and MIS 233 before enrolling in this minor.

Required courses: 15

Acct	287	Prin of Fin Acct (3)
Acct	288	Prin of Mgr Acct (3)
Acct	301	Cost Accounting (3)
Acct	387	Intermed Acct I (3)
Acct	388	Intermed Acct II (3)

Electives: 9

Choose three upper division courses from the following list in consultation with an advisor.

Acct	321	Indiv Taxation (3)
Acct	392	Intermed Acct III (3)
Acct	401	Budgeting (3)
Acct	422	Corp, Partnership, & Estate Taxation (3)
Acct	481	Accounting Sys (3)
Acct	482	Int'l Accounting (3)
Acct	487	Adv Acct Topics (3)
Acct	488	Curr Topics in Acct (3)
Acct	489	Govt Accounting (3)
Acct	492	Auditing (3)

Minor Total: 24

Minor in Accounting for Business Majors

Required courses: 9

Acct	301	Cost Accounting (3)
Acct	387	Intermed Acct I (3)
Acct	388	Intermed Acct II (3)

Electives:12

Choose four courses from the following list:

Acct	321	Indiv Taxation (3)
Acct	392	Intermediate Acct III (3)
Acct	401	Budgeting (3)
Acct	410	Accounting Tech (3)
Acct	422	Corp, Partnership, & Estate Taxation (3)
Acct	481	Accounting Sys (3)
Acct	482	Int'l Accounting (3)
Acct	483	Not-for-Profit (3)
Acct	487	Adv Acct Topics (3)
Acct	488	Curr Topics in Acct (3)

Acct	489	Govt Accounting (3)
Acct	492	Auditing (3)

Minor Total: 21

Concentration in Finance (B.B.A.)

Required courses: 21

Fin	309	Investments (3)
Fin	332	Money & Banking (3)
Fin	340	Personal Finance (3)
Fin	410	Real Estate Investments (3)
Fin	452	Mutual Fund Investing (3)
Fin	460	Portfolio Analysis (3)
Fin	475	Int'l Fin Mgmt (3)

Electives: 9

Choose 3 upper division courses in consultation with an advisor.

Major Total: 30

Minor in Finance for Non-Business Majors

Students must take Bus 110 and Fin 341 before enrolling in this minor.

Required courses: 24

Acct	287	Prin of Fin Acct (3)
Fin	309	Investments (3)
Fin	332	Money & Banking (3)
Fin	340	Personal Finance (3)
Fin	410	Real Estate Investments (3)
Fin	452	Mutual Fund Investing (3)
Fin	460	Portfolio Analysis (3)
Fin	475	Int'l Fin Mgmt (3)

Major Total: 24

Minor in Finance for Business Majors

Required courses: 21

Fin	309	Investments (3)
Fin	332	Money & Banking (3)
Fin	340	Personal Finance (3)
Fin	410	Real Estate Investments (3)
Fin	452	Mutual Fund Investing (3)

Fin	460	Portfolio Analysis (3)
Fin	475	Int'l Fin Mgmt (3)

Minor Total: 21

Concentration in International Business (B.B.A.)

Required courses: 27

Span	201	Intermediate Span (3)
Span	202	Reading & Writing (3)
Span	325	Span for Written Communication (3)
Mgmt	440	International Human Resource Management (3)

Mktg	474	International Mktg (3)
IntB	490	Residency in Latin America (6)

Fin	475	Intl Financial Mgmt (3)
Mktg	430	Intl Negotiations (3)

Electives 3 credits required. Choose one IntB upper division courses offered by the School of Business Administration

IntB	420	Intl Economics (3)
IntB	430	International Law (3)
IntB	440	Intl Competiveness (3)
IntB	454	Residency in Hispano America (6)

Major total: 30

Concentration in Management (B.B.A.)

Required courses: 21

Mgmt	321	Business Ethics (3)
Mgmt	386	HR Management (3)
Mgmt	440	Int'l HR Mgmt (3)
Mgmt	453	Org Leadership (3)
Mgmt	465	Personnel Pract & the Law (3)
Mgmt	487	Operations Reserach II (3)
Econ	408	Intermediate Microeconomics (3)

Note: Students must choose nine hours of electives in consultation with your advisor.

Major Total: 30

Minor in Management for Non-Business Majors

Student must take Bus 110 and Bus 210 before enrolling in this minor.

Required courses: 15

Acct	287	Prin of Fin Acct (3)
Mgmt	325	Oper Research I (3)
Mgmt	364	Org Behavior (3)
Mgmt	386	HR Management (3)
MIS	233	Microcomp Appl in Bus (3)

Electives: 9

Choose three courses (at least one must be a management course) from the upper- division courses in consultation with an advisor.

Minor Total: 24

Minor in Management for Business Majors

Required courses: 12

Mgmt	321	Business Ethics (3)
Mgmt	440	Int'l HR Mgmt (3)
Mgmt	465	Personnel Pract & Law (3)
Mgmt	487	Adv Oper Rsch & Sci Mgmt (3)

Electives: 9

Choose three courses (at least one must be a management course) from upper division courses in consultation with an advisor.

Minor Total: 21

Concentration in Management Information Systems (B.B.A.)

Required courses: 26

CS	325	Comp Hdwre Inst & Maint (1)
CS	326	Comp Softwre Inst (1)
MIS	236	Intro to Bus & Info Sys (3)
MIS	370	Sys Des & Analysis (3)
MIS	374	Info Sys Environ (3)
MIS	380	Info Modeling & Databases (3)
MIS	420	Networking in Bus Environ (3)
MIS	485	Sys & Software Architecture (3)

Choose two courses from the following:

CS	211	Intro to Obj Ori COBOL for Bus Data Processing (3)
CS	318	Bus Appl Prog (3)
CS	463	Web Programming (3)

Electives: 6

Students interested in a more technical background may choose up to nine hours from selected Computer Science (CS) courses.

Students should check the prerequisite requirements. All electives require advisor's approval for course of study.

CS	458	Network Mgmt (3)
CS	471	Art Intelligence (3)
MIS	331	Decision Support Systems (3)
MIS	371	Obj Ori Program (3)
MIS	376	Integrated Bus Appl (3)
MIS	378	Enterprise Appl (3)
MIS	480	Proj Mgmt (3)
MIS	486	Web Site Auth & Mgmt (3)
Mktg	445	Elec Commerce (3)

Major Total: 32

Minor in Management Information Systems for Non-Business Majors

Required courses: 15

MIS	236	Intro to Bus & Info Sys (3)
MIS	370	Sys Des & Analysis (3)
MIS	380	Info Modeling & Databases (3)
MIS	480	Project Mgmt (3)

Choose one programming course selected from the following three options:

CS	211	Intro to Obj Orient COBOL for Bus Data Proc(3)
CS	318	Bus Appl Prog (3)
CS	463	Web Programming (3)

Electives: 9

Choose nine credits from the following:

CS	331	Decision Sup Sys (3)
CS	458	Network Mgmt (3)

CS	471	Art Intelligence (3)
MIS	371	Obj Ori Program (3)
MIS	376	Integr Bus Apps (3)
MIS	378	Enterprise Apps (3)
MIS	480	Project Mgmt (3)
MIS	486	Web Site Auth & Mgmt (3)
Mktg	445	Electr Commerce (3)
Minor Total: 24		

Minor in Management Information Systems for Business Majors

Required courses: 15

MIS	236	Intro to Bus & Info Sys (3)
MIS	370	Sys Des & Analysis (3)
MIS	380	Info Modeling & Databases (3)
MIS	480	Project Mgmt (3)
MIS	485	Sys & Software Architecture (3)

Electives: 6

Choose six credits from the following:

CS	458	Network Mgmt (3)
CS	471	Art Intelligence (3)
MIS	331	Decision Sup Sys (3)
MIS	376	Integ Bus Apps (3)
MIS	378	Enterprise Apps (3)
MIS	480	Project Mgmt (3)
MIS	486	Web Site Auth & Mgmt (3)
Mktg	445	Electr Commerce (3)
		/MIS

Minor Total: 21

Concentration in Marketing (B.B.A.)

Required courses: 15

Mktg	320	Professional Sales (3)
Mktg	373	Advertising (3)
Mktg	415	Consumer Behav (3)
Mktg	474	Int'l Marketing (3)
Mktg	484	Mktg Management (3)

Electives: 15

Choose five courses (at least two must be marketing courses) from the upper- division courses offered in consultation with an

advisor.

Major Total: 30

Minor in Marketing for Non-Business Majors

Students must take Bus 110 and Mktg 302 before enrolling in this minor.

Required courses: 12

Mktg	320	Professional Sales (3)
Mktg	415	Consumer Behav (3)
Mktg	373	Advertising (3)
Mktg	484	Marketing Mgmt (3)

Electives: 9

Choose three courses (at least two must be marketing courses) from the upper division courses in consultation with an advisor.

Minor Total: 21

Minor in Marketing for Business Majors

Required courses: 15

Mktg	320	Professional Sales (3)
Mktg	415	Consumer Behav (3)
Mktg	373	Advertising (3)
Mktg	474	Int'l Marketing (3)
Mktg	484	Marketing Mgmt (3)

Electives: 6

Choose two courses (at least one must be a marketing course) from the upper division courses or other courses in consultation with an advisor.

Minor Total: 21

Concentration in General Business (B.B.A)

Part One: Courses completed at a Community College Associate of Applied Science
Minimum Requirements: 88

A. Open to students with an Associate's Degree with a concentration in a functional business area.

B. Completion of Gen. Education core including Statistics and Economics (20)

Part Two: Business courses to be completed at NMHU

Required courses: 51

Econ	408	Intermed Econ (3)
Fin	341	Fin Mgmt I (3)

Fin	342	Fin Mgmt II (3)
Mgmt	325	Oper Research I (3)
Mgmt	364	Org Behavior (3)
Mgmt	372	Mgmt Comm (3)
Mgmt	489	Strategic Mgmt (3)
Mktg	302	Prin of Marketing (3)
Mktg	411	Marketing Rsch (3)
Social Sciences 300/400 (9)		
Upper division business electives (15)		
Total: 139		

Courses in Accounting (Acct)

287. Principles of Financial Accounting (3)

A study of the fundamentals of financial record-keeping and basic accounting principles. Prerequisite: Math 140, Bus 110 or permission of instructor.

288. Principles of Managerial Accounting (3)

An introduction to management accounting and application of accounting to business decisions. Prerequisite: Acct 287, MIS 233, or permission of instructor.

290 – 390. Independent Study (1 – 4 VC)

Independent study arranged with an instructor. Prerequisite: Permission of instructor.

301. Cost Accounting (3)

A study of the job order, process, and standard cost system. Prerequisite: Acct 288 or permission of instructor.

321. Individual Taxation (3)

Study of federal tax legislation as applied to individual incomes, with some study of taxation on business. Recommended for non-business majors. Prerequisite: Acct 287 or permission of instructor.

387. Intermediate Accounting I (3)

Critical study of standards for asset valuation and income determination. Prerequisite: Acct 287 or Acct 288 or permission of instructor.

388. Intermediate Accounting II (3)

A continuation of Acct 387. Study of liabilities recognition and measurement and stockholder's equity. Prerequisite: Acct 387 or

permission of instructor.

392. Intermediate Accounting III (3)

A continuation of Acct 388. Preparation and analysis of financial statements and issues related to income measurement. Prerequisite: Acct 388 or permission of instructor.

401. Budgeting (3)

A study of comprehensive profit planning and control. Prerequisite: Acct 288, Acct 301, MIS 233, or permission of instructor.

410. Accounting Technology (3)

A study of computerized financial accounting technology using integrated accounting systems.

422. Corporate, Partnership, and Estate Taxation (3)

A continuation of Acct 321, with emphasis on corporation tax, estate tax, and partnership and gift tax. Prerequisite: Acct 321 or permission of instructor.

481. Accounting Systems (3)

The formal accounting-information system with emphasis on the application of general theory of information to the problem of efficient economic operations. Prerequisite: Acct 392 or permission of instructor.

482. International Accounting (3)

A study of differences between the United States' and other countries' accounting and reporting procedures and their importance to business.

483. Not-for-Profit Accounting (3)

This course provides a foundation of Not-for-Profit accounting. Student will compare and contrast not-for-profit enterprises with for-profit businesses, apply basic accounting concepts to not-for-profit organizations, and understand and construct basic financial statements.

487. Advanced Accounting Topics (3)

Advanced topics in accounting, with emphasis on consolidated financial statements.

Prerequisite: Acct 301, Acct 392, or permission of the instructor.

488. Current Topics in Accounting (3)

Selected topics in accounting for special study related to accounting functions, processes or issues. Prerequisite: Acct 301, Acct 392 or permission of instructor.

489. Governmental Accounting (3)

Principles and procedures in governmental and institutional units and fiduciaries. Prerequisite: Acct 287 or permission of the instructor.

490. Independent Study (1-4 VC)

Individual directed study arranged with an instructor. Prerequisite: Permission of instructor.

492. Auditing (3)

Techniques of auditing procedures. Prerequisite: Acct 392 and Acct 481 or permission of instructor.

Courses in Business Law (BLaw)

360. Business Law I (3)

Introduction to legal institutions; nature and sources of law; in-depth study of the law of contracts.

361. Business Law II (3)

Overview of the history and nature of laws with specific regard to the business community. Specific areas of concentration will be the Uniform Commercial Code, commercial paper, warranties, governmental regulations, personal property and real property.

Courses in General Business (Bus)

110. Business Analysis Methods (3)

Review and/or introduction to the principles of algebra, along with an introduction to the use of functions as mathematical representation of practical business situations. Create an understanding on the application of mathematics to business economic and

finance solutions. Prerequisite: Math 140 or permission of instructor.

210. Statistical Analysis for Business (3)

An introduction to statistics that will create an understanding of the basic principles of statistics along with the application of probability theory to the resolution of business problems. Create skill in the application of statistics and the use of calculator tools to practical business problems and situations. Prerequisite: Math 140 or permission of instructor.

235 – 335. Selected Topics in Business (1 – 4 VC)

Course in a topic or topics in business. May be repeated with a change in content.

434. Practicum (1 - 4 VC)

Work placement with specific responsibilities over a sustained period of time. Prerequisite: Permission of instructor.

Courses in Economics (Econ)

216. Principles of Macroeconomics (3)

The fundamental principles underlying the operation of a market economy, national income accounting, national income determination, and monetary and fiscal policy. Prerequisite: Math 140, Bus 110, or permission of instructor.

217. Principles of Microeconomics (3)

The fundamental principles underlying the decision-making process with respect to pricing and resource usage in a market economy. Prerequisite: Math 140, Bus 110 or permission of instructor.

305. Public Economics (3)

The study of government's effect on the economy. The course explains why government behaves as it does, how government behavior influences the behavior of private firms and households, and the welfare effects of government intervention on the allocation and distribution of an economy's resources.

Prerequisite: Econ 216 and Econ 217.

405. Financial Markets and Public Institutions (3)

Focuses on the use of financial markets by the private and public sectors, and the facilitating role played by intermediary agents. The course relies on the basic tools of micro- and macroeconomic theory in the study of private and public financial behavior, and the problems posed for public policy. Prerequisite: Econ 216 and Econ 217.

408. Intermediate Microeconomics (3)

Applied theory of the firm, with emphasis on marginalism, cost price, policy, executive decision, and allocation of resources. Prerequisite: Econ 216, Econ 217.

Courses in Finance (Fin)

309. Investments (3)

An introduction to security markets, including valuation techniques and the tax and regulatory environment, with special emphasis on stocks, bonds, and related investments.

332. Money and Banking (3)

Monetary theory, the role of financial intermediaries, and the mechanics of central banking. Prerequisite: Fin 341 or permission of instructor.

340. Personal Finance (3)

The course will introduce students to the personal financial environment, the U.S. economy, budgeting, and financing an automobile or home. Topics also covered include renting, selling your home, financial institutions, credit, investment opportunities, insurance, financial and estate planning, and personal taxation. Prerequisite: Bus 110.

341. Financial Management 1 (3)

Concepts and theories applicable to the financial administration of a firm. Prerequisite: Acct 287.

342. Financial Management 2 (3)

Theories and concepts of valuation. The

course analyzes the investment decision, the financing decision, and the dividend decision. Prerequisite: Fin 341.

410. Real Estate Investments (3)

An examination of the real estate investment process. Techniques of market analysis, assessment of risk, and legal constraints will be explored. Forecasting relevant income, expenses, and cash flows in order to make optimal investment decisions will be discussed. Prerequisite: Fin 341 or permission of instructor.

452. Mutual Fund Investing (3)

This course introduces the student to mutual funds in the context of today's financial environment. Students will generate their own portfolio of mutual funds that best meet their current needs.

460. Portfolio Analysis (3)

This course introduces the student to the financial analysis of common stock in the context of today's financial environment. Student will generate their own portfolio of stocks that best meet their current needs.

475. International Financial Management (3)

An overview of the workings of trade and finance in an international setting. Particular attention is given to handling problems associated with exchange rate movements, sources of funds for overseas operations and investments, and criteria to judge foreign investment opportunities. Prerequisite: Fin 341.

490. Independent Study (1 – 4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of the instructor.

Courses in International Business (IntB)

420. International Economics (3)

The main goal is to offer the student a panoramic view of the economic fundamentals that sustain the commercial relationships

among the different countries, covering both the actual aspects and the theoretical aspects of the international trade. During the course the student will understand both the classical and neoclassical model of the international trade and the aspects of distribution and welfare of trade. The student will recognize empirical proof of theories and will compare against alternative theories of trade. Also the student will review tariff and nontariff barriers, arguments in favor and against international trade, the impact of trade on economic growth and on country development, and the regional integration and actual trends on integration. Furthermore, the student will understand the functioning of the exchange markets, how the exchange rate is settled, and the balance of payments.

430. International Law (3)

The goal of this course is to show how firms doing business between the countries, of the world are governed and regulated. No single legal system is emphasized; rather cases and materials from many countries are reviewed to show both the diversity and the similarity of businesses and of the law. International organizations play a large role in regulating international business, and they too are examined, along with the treaties, conventions, and agreements that created them and the treaties, body of rules and norms that regulates activities carries on outside the legal boundaries of states. In particular, it regulates three international relationships: (1) those between states and states, (2) those between states and persons, and (3) those between persons and persons.

440. International Competitiveness (3)

The main goal is to provide the student with the understanding of the factors that determine the competitiveness of a country, of its industries, and its corporations based on the both classical theories and new paradigms. The student will be able to recognize

the origin of competitive advantage and as consequences, identify business opportunities in today's global world. Additionally, the student will incorporate into his or her everyday knowledge the terminology regarding strategic management (core competencies, SWOT analysis, ect.):

454. Residency in Hispano America (6)

The goal of this course is to allow the student to have an international experience. The student will register in two courses offered at a participating institution. Supervision from the Major Advisor is required. The courses are most likely to be taught in Spanish reinforcing the language component for the student. Additionally, visits to local firms and living in a different cultural environment will provide first hand knowledge and experience.

Courses in Management (Mgmt)

303. Principles of Management (3)

A fundamental orientation to management with major emphasis on current management trends and issues through extensive reading and case studies.

321. Business Ethics (3)

Moral reasoning and issues in business with an emphasis on the application of ethical theories to practical business decision making.

325. Operations Research I (3)

This course prepares the student to apply analytical approaches to formulating and solving business and technical management problems including the use of linear programming for resource allocation, transportation problems, and forecasting. Prerequisite: Bus 110, Bus 210.

330. Small Business Management (3)

A study of the problems encountered and special knowledge needed for successful operation of the small business enterprise, including forming and financing the busi-

ness, marketing, management, and governmental relationships. Prerequisite: Acct 287, Acct 288, Mktg 302, and Mgmt 364.

345. Principles of Quality Management (3)

This course will cover the history of the quality movement, the paradigmatic shift to quality, and the concepts, principles, and basic tools needed to successfully implement and manage quality. Prerequisite: Mgmt 364.

364. Organizational Behavior (3)

Analysis of formal organizations and informal relationships among individuals and small groups. The course stresses the study of business organization as a system of authority and status, control and communication, decision-making centers, and leadership positions. Use is made of cases and research studies. Prerequisite: Engl 367.

372. Management Communications (3)

A study of basic human relations through effective communication, in business and commercial contexts.

386. Human Resource Management (3)

Theories, policies, practices, and problems underlying public and private programs for the development of human resources. New methods of management such as TQM will be introduced. Prerequisite: Mgmt 364.

435. Selected Topics (1 - 4 VC)

Course in a topic or topics in management. May be repeated with a change of content.

440. International Human Resource Management (3)

The goal of this course is to sensitize students to the complex issues that exist in the international business environment. The topics of HR planning, selection, appraisal, training, cross-cultural adaptation, motivation, and empowerment, and management will be studied. Prerequisite: Mgmt 364.

466. Performance Evaluation and Compensation (3)

This class will focus in the concepts and theories applicable to the design, development,

implementation and maintenance of a pay system that treats all employees fairly and recognizes differences in benefits and work life issues will be discussed. Special attention will be given to measuring and rewarding performance and contribution at the individual, group and organizational level.

452. Technological Entrepreneurship (3)

This course explores the problems and issues facing a new firm (or a new product in an existing firm) based on an invention or technological advancement, the excitement of being an entrepreneur, and the knowledge and elementary skills of appraising and developing a significant new technology-based firm. Prerequisite: Mgmt 364 or permission of instructor.

453. Organizational Leadership (3)

This course addresses the fundamental aspects of leading and motivating people. Includes understanding and working with people on an individual basis as well as leading groups. Studies high-performing organizations and the challenges of leading change in organizations. Prerequisite: Mgmt 364.

455. Management History (3)

This course examines the evolution of management theory from its earliest days to the present. The emphasis is on various significant contributors to the body of management knowledge and their ideas. The history of great ideas in management on motivations, job design, human resource management, ethics, social responsibility, leadership, production/operations management, business policy/strategy, and the management process are explored through the writings of various individuals. Prerequisite: Mgmt 364.

460. Training and Development of Human Resources (3)

This course covers the cycle training and development of human resources: needs assessment, training approaches and techniques, and evaluation of training effective-

ness. Prerequisite: Mgmt 364.

465. Personnel Practices and the Law (3)

This course addresses the increasing intrusion of the law into personnel functions by familiarizing students with the EEO and personnel law. Such topics as the Family Medical Leave Act and the Americans with Disabilities Act will be discussed as they relate to personnel practices. Prerequisite: Mgmt 364.

487. Operations Research II (3)

This course is a continuation of the introductory course, Mgmt 325. Linear programming will be extended to include multiple decision criteria and goal programming instead of just a single objective. The course also includes non-linear programming, the application of probability distributions to business decision analysis, queuing analysis, and simulation. Students will be expected to solve a variety of business problems using a PC with Excel and add-ins. Prerequisite: Mgmt 325.

489. Strategic Management (3)

Designed as the capstone business course. The study of the strategic management and business policy of successful and unsuccessful organizations through case analysis. The outcome assessment test will be given to all students enrolled in this class. The test may be scheduled for a time other than the class meeting. Prerequisite: Completion of business core and senior standing, or permission of instructor.

490. Independent Study (1 – 4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of the instructor.

Courses in Management Information Systems (MIS)

101. The Essentials of Living with Computers (3); 2, 2

Introductory computer literacy course covering the essentials and applications of com-

puters. Besides learning the fundamental concepts of computer components, students will study the use of computers as a means of solving user application problems and to obtain information. This course will also look at the impact of computers on society.

233. Microcomputer Applications in Business (3)

This course is designed to introduce the student to the practical application and use of Microsoft Office applications, such as the Windows environment, MS Word, Power-Point, Excel, and Access. Students will study the use of computers as a tool in solving problems and obtaining information for data analysis. Prerequisite: CS 101 or Bus 110.

236. Introduction to Business and Information Systems (3)

An introduction to business systems and the information technology that supports them. Topics include system theory, organization structure and culture, role of information systems and convergent engineering to model and re-engineer business systems.

331. Decision Support Systems (3)

Study of the theory and several practical techniques of computer based support systems including linear programming, simulation, and decision theory. Prerequisite: CS 245, Bus 210, and knowledge of spreadsheets or permission of instructor. Cross-listed as: CS 331.

333. Personal Productivity with IS Technology (3)

A course to improve skill and knowledge workers through effective and efficient use of packaged software. It covers both individual and group work. The emphasis is on productivity concepts and how to achieve them through functions and features in computer software. Design and development focuses on small systems. Prerequisite: MIS 233 or permission of instructor.

335. Selected Topics in Information

Systems (1 - 4 VC)

Course in a topic or topics in Information Systems. May be repeated with a change of content.

370. System Design and Analysis (3)

Analysis and design of information systems emphasizing the object approach but including elements of traditional analysis and design modeling. Software development lifecycles, requirements gathering, decomposition, and formal modeling will be covered. Cross-listed as: CS 351.

371. Object Oriented Programming (3)

Object programming is fundamentally different from procedural programming. This course will teach good object design, cover programming idioms, investigate the use of design patterns, and look at the strengths and limitations of various languages for object oriented programming.

374. Information Systems Environments (3)

This course will cover the role of operating systems as support environments for business automation and stress the planning and design issues (security, user management, etc.) that precede selection and implementation of a modern multi-user operating system like Windows 2000 or Linux.

376. Integrated Business Applications (3)

A course designed to familiarize students with standard business application software, especially integrated software suites. Sharing of data among applications and extended the capability of standard applications with macros is covered.

378. Enterprise Applications (3)

An overview of corporate packaged applications for human resource management. Materials for resource planning and similar tools will be provided. Evaluation of such systems, the business rationale for purchasing them and the effective management of installing and operating these systems will be covered.

380. Information Modeling and Databases (3)

This course will focus on how to identify and model information and knowledge requirements for a business organization. Additional topics include the formal modeling and specifications of data and the selection and use of appropriate database management systems.

420. Networking in the Business Environment (3)

An introduction into the use and role of LAN's in the business environment. The course discusses the function of file servers in the LAN environment and provides hands-on experience. Prerequisite: MIS 233. Cross-listed as: CS 457.

425. Information Systems: Management Issues and Techniques (3)

A capstone course addressing the management, education, and control issues associated with information systems. The course addresses the problem of staying technically current, TQM issues, and systems selection processes. Prerequisite: MIS 370.

426. Managing the Information Systems Organization (3)

This course covers management of multiple concurrent projects including: assembling development teams, planning, scheduling, monitoring, metrics, and quality issues. One emphasis will be placed on technical projects including software development. Another emphasis will be placed on managing IS departments or organizations.

445. Electronic Commerce (3)

This course provides an introduction to electronic commerce for business students. This course will focus on the impact of electronic commerce on business, its current state of development, successful electronic business strategies and the future of electronic commerce. Prerequisite: Computer literacy and the ability to use the internet. Cross-listed as: Mktg 445.

451. Internet Marketing Strategies (3)

The course focuses on the place of internet marketing in an internet marketing strategy, consumer behavior on the internet, current internet marketing practices, and the future of internet marketing. Prerequisite: Computer literacy and the ability to use the internet. Cross-listed as: Mktg 451.

480. Project Management (3)

This course illustrates important aspects of Project Management, an essential function in both for-profit and not-for-profit organizations. Students will work in teams to study the importance of planning, resource allocation, metrics, tracking, and reporting project costs and schedules. Stat-of-the-art software will be used for an extensive project during the course of the semester.

485. Systems and Software Architecture (3)

A capstone course. Students will extend their understanding of the design of comprehensive systems that integrate business requirements, work flow, organization structure, and information processing. Students will also demonstrate with a practical application design, their understanding of MIS principles.

486. Web-Site Authoring and Management (3)

This course covers the basics of web-page design, including interactive and dynamic pages. Use of basic technology like HTML, XML, CGI programming and page creation tools is covered. Also stressed are site management and maintenance using dedicated web-tools.

490. Independent Study (1-4 VC)

Individual directed study arranged with an instructor. Prerequisite: Permission of instructor.

Courses in Marketing (Mktg)

302. Principles of Marketing (3)

A study of the principles of marketing goods and services. Prerequisite: Bus 110 or permis-

sion of instructor.

320. Professional Sales (3)

The business to business sales function is examined from the viewpoint of the sales professional and the viewpoint of the buyer. This course stresses application through the use of role-play situations, analyzing customer needs and social styles. It focuses heavily on professional sales ethics.

373. Advertising (3)

Management of advertising including background, roles, planning, media strategy, message testing, research, evaluation, and administration of advertising. Prerequisite: Mktg 302.

375. Retail Management (3)

Analysis of decisions in the areas of store location and layout, retail personnel management, merchandising policies and control, and marketing strategies. Prerequisite: Mktg 302.

411. Marketing Research (3)

Gathering, recording, and analyzing data about problems relating to the marketing of goods and services. Prerequisite: Mktg 302, Bus 110, Bus 210, and Engl 367.

415. Consumer Behavior (3)

Introduction of the study of how and why consumers buy products and services. Study of the psychological, sociological, behavioral, and cultural aspects of the buying decision, and how firms can use this information to sell more effectively in the marketplace. Prerequisite: Mktg 302.

420. Sales Management (3)

Analysis of the sales management process from a decision-making perspective. Includes defining the strategic role of the sales function, designing the sales organization, sales force development and direction, and sales force performance evaluation. Prerequisite: Mktg 302.

425. Direct Marketing (3)

An introduction to the study of how business

uses direct marketing methods to attract and retain customers. Prerequisite: Mktg 302.

430. International Negotiations (3)

The main goal is to study the fundamentals of international negotiations and the effect of cultural differences among regions of the world in communication processes. We will review also the importance of cross-cultural communication for international negotiation processes and for the development of human resources inside multinational companies.

435. Selected Topics in Marketing (1 – 4 VC)

Course in a topic or topics in marketing. May be repeated with a change of content.

440. Marketing Channels and Marketing Logistics (3)

Principles, methods, and problems relating to wholesaling, retailing, and physical distribution. Prerequisite: Mktg 302 and Engl 367.

445. Electronic Commerce (3)

This course provides an introduction to electronic commerce for business students. The course will focus on the impact of electronic commerce on business, its current state of development, successful electronic business strategies, and the future of electronic commerce. Prerequisite: MIS 233 and Mktg 302.

451. Internet Marketing Strategies (3)

The course focuses on the place of Internet marketing in an integrated marketing strategy, consumer behavior on the Internet, current Internet marketing practices, and the future of Internet marketing. Prerequisite: MIS 233 and Mktg 302.

474. International Marketing (3)

Objectives, problems, and challenges facing those who engage in marketing operations in foreign countries. Foreign marketing organizations, cultural dynamics, trade channels, the legal environment, and political considerations are examined. Prerequisite: Mktg 302.

484. Marketing Management (3)

The approaches and problems of marketing

School of Education

Dr. J. Francisco Hidalgo, Dean
Victoria D. de Sanchez
Teacher Education Center,
Room 114B
505 454-3357
FAX: 505 454-3509

Accreditation

The School of Education is accredited by the National Council for Accreditation of Teacher Education (NCATE).

Mission of the School of Education

The School of Education at NMHU carries forward a long-standing tradition of teacher education that dates back to 1893. The School of Education is committed to providing experiences and knowledge to students seeking a degree or licensure in education. The School of Education also promotes continuous personal and professional scholarly development activities and graduate work to achieve lifelong learning. The School of Education subscribes to the philosophy that views optimal living as a function of the personal ability to pursue a meaningful life in work, leisure, and home, while respecting, tolerating, and valuing all people.

Faculty

James M. Alarid (Special Education)
Joan Gallini (General Education)
J. Francisco Hidalgo (Education)
Jose Hurtado (Special Education)
Michael Immerman (Clinical Supervisor)
George Leone (Counseling)
Merryl Kravitz (Secondary Education)
Belinda Laumbach (Elementary/ Secondary Education)
Patricia Manzanares-Gonzales (Educational Leadership)
Alice E. Menzor (Elementary/ Reading/ Curriculum Education)
Chris Nelson (Special Education)
Carolyn Newman (Early Childhood Multicultural Education)

Joseph Sabutis (General Education)
Clarence Sanchez (Education)
Nicolas Sanchez (General Education)
Leah Wolff (Education Technology)

Resources and Facilities

The regional collaboration between New Mexico Highlands University and the Northeastern Region's Northern New Mexico Network for Rural Educators serves as a great resource for the School of Education. This collaborative effort identifies professional development needs, seeks to match resources to needs, and provides a forum for school districts to discuss staff development issues.

The School of Education offers a micro-teaching laboratory where students in Secondary Education are videotaped conducting instructional sessions. An after-school reading program utilizes the School Reading Laboratory for local school children; both the program and lab provide practical experiences for students in elementary education, reading, and curriculum and instruction programs. In addition, the School of Education has an on-site Child Development Center with educational programs for infants, toddlers and preschool age children. The Child Development Center provides practicum and field work experience for students in early childhood education, as well as for other university programs.

Established by the School of Education, the Center for the Education and Study of Diverse Populations studies diverse populations whose needs are unmet and who encounter barriers to services and opportunities, and develops strategies for removing those barriers. The cornerstone for the center is NMHU's Southwest Comprehensive Center for Region IX. This center provides technical assistance to all federal programs under the Improving America's Schools Act.

The School of Education also has a regional Instructional Materials Evaluation Center that contains publisher-supplied samples of state-approved texts and materials for review by school district administrators, teachers, parents, and education faculty and students. The center also functions as an institutional curriculum library, providing selected samples of resources for short-term loan.

Finally, the School of Education offers programs to prepare teachers, physical education specialists, school athletic administrators, business sports administrators, coaches, and administrators in the fields of education, exercise and sport sciences. Degree programs and courses are arranged within this publication by education, exercise and sport sciences.

The School of Education "STURDY" Model

Student-centered Teaching for Understanding, with Reflection and Diversity for Youth

This model is the foundation for the conceptual framework of the NMHU School of Education.

Teaching for Understanding

Teaching for understanding means taking students as they arrive in our classroom, building on knowledge, skills, and experience to reach the desired understanding. Teaching for understanding has been expanded to include the notion of "backwards curriculum development." It is necessary to identify the desired outcomes before developing a curriculum (and in our case, syllabus for a course). We ask ourselves, "What evidence would demonstrate that the student has achieved the desired outcome?" Given that information, the instructor develops a series of lessons, activities, and learning experiences to reach those goals. A student

who has achieved true understanding can explain, predict, apply or adapt, justify, critique, judge, make connections, and avoid common misconceptions.

Teaching for Reflection

Reflective teaching assumes an active role for the instructor – that of a reflective practitioner. The reflective teacher focuses not only on content, but on the interaction of the learner with that content, on the teaching environment and classroom culture, the teacher's own behavior and the student's reactions to it, and on the class in the larger context of the school, community, etc. The ultimate goal is continual renewal of the teaching practice.

Teaching for Diversity

The faculty of the Teacher Preparation Program at NMHU recognizes that in order to prepare pre-service teachers for successful and effective instruction in our nation's public schools, the issue of equity in education should be addressed. A well-prepared teacher should be able to deliver quality instruction in any diverse setting. Preparation for quality instruction begins with culturally responsive teaching through a comprehensive approach, rather than a particular method to be added to other techniques. The faculty also extend the traditional definition of "culture" to a broader scope so as to include a great number of characteristics in an individual which may result in bias from others. Such characteristics include, but are not limited to, race, ethnicity, religion, socioeconomic status, educational level, sexual orientation, age, area of origin, varying ability, gender, or language. The ultimate goal of education for diversity is to provide equity among students through the practice of presenting and giving voice to diverse perspectives in the classroom.

Associate of Arts Two-Year Degree Program
 The two-year associate of arts degree in elementary education prepares skilled professionals for work as educational para-professionals. A broad selection of courses from the general education curriculum of the university includes requirements in writing and mathematics. A core of courses in the foundations of education enhances knowledge of educational theory and professional practices. All students complete a practicum course that involves a work placement in an actual school setting.

The associate of arts degree students are prepared in the competencies that are mandated by the State of New Mexico Public Education Department. They receive the opportunity to specialize in emphases such as bilingual education, early childhood education, language arts, social studies, science, or special education. In addition, there is an opportunity to expand into a bachelor's degree in elementary or secondary education.

Associate of Arts in Elementary Education (A.A.)

This associate of arts degree includes courses in the major field, supplementary courses that may reflect an area of specialization and courses in general education, constituting a total two-year curriculum. The intent of this program is to provide a foundation that allows for the completion of a bachelor of arts degree in approximately two years.

Proficiency requirements:

Satisfy the university's proficiency requirements of English and math before undertaking 100- or higher level courses in English and math.

Required courses: 18

GnEd	201	Intro to Teaching (3)
Elem	251	Field-Base I (1)
Psy	340	Dev Psy (3)
Engl	111	Freshman Comp I (3)
Engl	112	Freshman Comp II (3)

Math 115 Math for Elem Teachers I (3)

Supplemental courses in this program: 36

In consultation with the program advisor, select 36 credits in course work. The courses may be selected so as to reflect some specialization, such as early childhood, special education, bilingual education, mathematics, language arts, science, or social studies teaching.

Elective courses: 11

Choose at least 11 additional credits in courses from the university's core curriculum, in consultation with the program advisor, to include exposure to science, social science, math, and communication arts.

Program Total: 64

Elementary and Secondary Teacher Preparation and licensure Programs

Entrance to undergraduate elementary and secondary teacher preparation programs at NMHU is evaluated through advisement and assessment of the students skills and motivation to enter the teaching profession. Preparation for the profession requires an academic course of study through a major in elementary education or a minor in secondary education together with an academic minor or major in an appropriate content field. A Teacher Education Program (TEP) application is required and initiates an advisor and in-school file (data-base).

Both elementary and secondary teaching candidates are assessed for appropriate basic skills prior to entering teacher training. Students then plan their academic programs in careful consideration of the subjects they wish to teach. They receive support and guidance from faculty advisors throughout the period of their studies and also in seeking their first jobs.

Of special note for both elementary and

secondary candidates is the university's practicum-based program for teacher training. At three different points in their advanced studies, elementary, early childhood, special education, and secondary teaching candidates gain on-the-job experience through field placements in actual school settings. The final placement is a full student teaching assignment undertaken in the student's final semester of studies. The school makes arrangements for student teaching with school systems at some distance from campus, as well as in the nearby region. Advanced planning and a formal application are required at least one semester in advance of student teaching.

Requirements for Entrance to Teacher Preparation and Licensure Programs

The following conditions must be met for entrance into the Teacher Preparation Program (TEP). Students should contact the School of Education early in their freshman year to receive guidance in the process. Early advisement is essential to avoid delays in meeting all requirements.

1. Complete the following courses with a grade of "C" or better:

GnEd	201	Intro to Teaching (3)
GnEd	251	Field-Base I Teacher Prep Experience (1)
SpEd	214	Intro to Special Ed (3)

(Required in Elem and Secondary Programs)

2. Complete and submit a TEP application. Complete the appropriate freshman and sophomore courses in the university's core curriculum together with additional "extended core" courses required for education majors and minors by the State of New Mexico Public Education Department. The choices to be made will reflect the requirements for licensing that have been set by the State of New Mexico Public Education Department(SNMPED). These courses

include:

- 12 hours in English
- 12 hours in Science
- 12 hours in History
- 6 hours in Fine Arts
- 6 hours in Mathematics
- 6 hours in Social Science

Consultation with an education advisor is essential to establish this program of courses. An overall grade point average of at least 2.5 is required. In addition, "C" or better grades are required in Engl 111 and Engl 112.

3. Take the New Mexico Teacher Assessment (NMTA) exam in order to be eligible for student teaching. Students must have passed the "Basic Skills" component of the NMTA in order to be approved for student teaching. Students have no more than two opportunities to complete successfully any of the field-based experiences.

Details of this process, and the minimum required scores, are available from the School of Education. Students seeking a bilingual endorsement are required to take the Prueba de Español para la Certificacion Bilingües exam. Students must maintain close communication with Academic Support Services and the School of Education regarding these important examinations.

Requirements for Admission/ Retention in the Teacher Training Program and for Placement in Student Teaching (Field-base teacher preparation or internship in teaching)

Students must submit a formal application for admission to the Teacher Training Program and receive a positive review from the program. The application form is available in the education office and the NMHU website (www.nmhu.edu). Adverse decisions can be appealed first to the program's admission committee, then to the school dean.

For retention in teacher training, a 2.5 overall

grade point average is required. Students must meet periodically with their education advisors for a check on academic progress and verification of completion of the NMTA exam. Prospective candidates should discuss this requirement with their education advisors.

Candidates for placement in student teaching will file a formal application prior to mid-term of the preceding semester (available in the education office and the NMHU website (www.nmhu.edu). Prerequisites for advancement to student teaching (Field-Base III) will be the following:

- 1) a 2.5 overall grade point average;
- 2) completion of required education courses up to those for the final semester; and 3) completion of at least 24 credits in the academic major, with at least a 2.5 GPA, and 20 credits in the academic minor. To avoid any unnecessary delays in obtaining an educational license, all PED core courses must be taken prior to Field-Base III approval and placement. Candidates will also present a certificate stating that you have been tested for tuberculosis (TB), and three recommendation letters from professors in the major/minor fields.

The education program's field base coordinator and each teaching discipline's program committee review the applications for approval, and those students whose applications are denied may appear before the committee for an interview.

Student teaching is a full-time assignment during the period of the placement and requires the candidate to participate fully in the life and work of the school. The student teacher follows the daily schedule of the school, assumes regular faculty and out-of-classroom duties, and participates in faculty meetings, PTA/PTO meetings, school plays, and other school-related activities as ap-

propriate. Because this constitutes a full-time commitment, no additional course work may be taken without special permission from the field-base coordinator. In all cases, the school's cooperating teacher and principal, in consultation with the university supervisor, make the determination of the student teacher's involvement, duties, and course loads.

Final placement of a student teacher in a school is decided by the School of Education, contingent upon the student being acceptable to the school.

Majors and Minors

A major and minor in general science for teachers is available. See College of Arts and Sciences for information.

Major in Early Childhood Multicultural Education (B.A.)

The early childhood multicultural education program in the School of Education at New Mexico Highlands University is a four-year bachelor of arts degree. The program prepares classroom teachers and other professionals to work with children from birth to age eight. The program fulfills the New Mexico State competency requirements which include child growth, development and learning; developmentally appropriate content; and learning environments and curriculum implementation. The program meets the state requirements of teacher certification/licensure for teaching K-3 in the public schools and the early childhood special education (developmentally delayed) preschool classroom. Students majoring in early childhood education are not required to take a minor.

Complete and submit a TEP application.

Professional Education (45 hours)

ECME	300	Professionalism (2)
ECME	301	Health, Safety & Nutr (2)
ECME	302	Child Growth, Develop-

		ment and Learning (3)
ECME	303	Family & Community Collaboration (3)
ECME	304	Curriculum Development & Implementation I (3)
ECME	305	Guiding Yng Children (3)
ECME	306	Curriculum Development & Implementation II (3)
ECME	315	Intro to Reading & Literacy Development (3)
ECME	328	Assessment of Children & Evaluation of Prog (3)
ECME	403	Family & Community Collaboration II (2)
ECME	411	Teaching Reading & Writing (3)
ECME	420	Research in Child Growth & Development (3)
ECME	424	Integrated Early Childhood Curriculum (3)
ECME	426	Methods & Materials for the Early Primary Grades (3)
ECME	428	Assessment & Eval II (3)
GnEd	455	Knowledge of the Profession (3)
Total:		45

Field Experience and Practicums (21 hours)

ECME	332	Curriculum Develop & Implementation Lab I (2)
ECME	334	Curriculum Develop & Implementation Lab II (2)
ECME	412	Teaching Reading & Writing Practicum (1)
ECME	425	Integrated Early Childhood Curriculum Lab (2)
ECME	427	Methods & Materials for the Primary Care Practicum (2)
ECME	452	Early Childhood Educ Student Teaching (12)

Major Total: 66

In addition to the above requirements,

licensing for early childhood education teaching in the State of New Mexico requires passing the New Mexico Teacher Assessment (NMTA) examination mandated by the State of New Mexico Public Education Department. Students must have passed both "Basic Skills" and "General Knowledge" or equivalent components of the NMTA in order to be approved for student teaching.

Minor in Early Childhood Multicultural Education

Early childhood multicultural education offers an undergraduate minor field which may be selected by students majoring in elementary education or special education. Early childhood multicultural education is a valuable specialization field for those intending to work with newborns to eight-year old children. Additional courses beyond the minor in early childhood multicultural education are required for a teaching license.

Required courses: 24

ECME	300	Professionalism (2)
ECME	302	Child Develop (3)
ECME	303	Family & Comm Involvement in School Settings (3)
ECME	304	Learning Envir (3)
ECME	306	Expressive Arts (3)
ECME	332	Theory & Pract in Infant/Toddler Settings (2)
ECME	334	Theory & Pract in Preschool Set (2)
ECME	420	Oral Lang Dev (3)
ECME	424	Curr in Early Child Ed Prog (3)

Minor Total: 24

Major in Elementary Education (B.A.)

Elementary education is offered at NMHU as an academic major field. Elementary education majors study such topics as cognitive, physi-

cal, emotional, and social development; human relations, instructional planing and implementation, classroom management, assessment and evaluation, and they receive training in skills and competencies for elementary subject matter in mathematics, reading and languages arts, social studies, science, and other foundational fields. The program complies with the instructional competencies established by the State of New Mexico Public Education Department for entry-level elementary teachers. Before registering for the required major courses, students must complete the requirements for entrance to the Teacher Preparation Program which include GnEd 201, taken in conjunction with GnEd 251, and SpEd 214. Students must have passed the "Basic Skills" component of the NMTA in order to be approved for student teaching.

Required courses: 36

Elem	312	Tch Elem School Math (3)
Elem	317	Multicultural Ed (3)
Elem	361	Assessment and Eval of Students (3)
Elem	417	Teaching Engl as Second Lang (3)
Elem	442	Tch Elem School Sci & Soc Studies (3)
Elem	451	Field-Base III Teacher Prep Exp: Elem (6)
GnEd	251	Field-Base I Teacher Prep Exp (1)
GnEd	351	Field-Base II Teacher Prep Exp (2)
GnEd	444	Comp App in Ed (3)
GnEd	445	Know of the Prof (3)*
RdEd	315	Rdg & Child Lit (3)
RdEd	411	Tch/Diag of Rdg (3)

* GnEd 445 must be taken in conjunction with Elem 451.

Major Total: 36

Minor in Bilingual Education/TESOL (Teaching of English to Speakers of Other Languages)

The minor in Bilingual Education/TESOL

offers an undergraduate preparation to instruct pupils bilingually so as to improve their ability to succeed in the public school. Span 101, 102 (or 103, 104, or 111, 112) and 201 are prerequisites for the Spanish courses and for GnEd 437. Students who are proficient in Spanish have the option of testing out of lower division Spanish course work by contacting the Spanish department. This is a dual endorsement program, Bilingual Education/TESOL.

Required courses: 24

Anth	461	Comm & Cult (3)
OR		
Engl	443	Sociolinguistics (3)
Elem	417	Teaching Engl as Second Lang (3)
GnEd	412	Theories & Prin of Biling Ed (3)
GnEd	437	Instr Meth for Use in Span-Biling Class (3)*
Span	325	Span for Written Comm (3)*
Span	430	Ling & Phon for Educators (3)*
Span	433	NM & SW: Civil & Culture (3)*
Span	441	Span for the Biling Classroom (3)*

* Prerequisites

Minor Total: 24

Minor in English as a Second Language (ESL)

The ESL program meets the requirements of the Public Education Department for an endorsement in English as a Second Language The program includes courses offered in the departments of Educaton English and Anthropology

Required courses: 21

Prerequisite/Corequisite: Minimum of 2 semesters of a second language or

demonstrated proficiency		
Engl	317	Intro to Modern Grammar (3)
GnEd	320	Language Acquisition & Ling for Teachers (3)
GnEd	412	Theories & Principles of Bilingual Educ (3)
Engl	443	Sociolinguistics (3)
Or		
Anth	461	Communication and Culture (3)
Elem	417	Teaching English as a Second Language (3)
GnEd	420	Sheltered English for Content Area Inst (3)
RdEd	4XX	Early Literacy (3)
OR		
GnEd	427	Reading in the Content Area (3)
Minor Totals:		21

Minor in Secondary Education
(Teacher Preparation in Secondary Education)

Students who are preparing to become secondary-level teachers complete a major from the many academic fields offered at the university; some will also select a content-area minor field. In addition, they must undertake a secondary education minor in the university's School of Education to prepare them for their chosen profession. The selection of courses in the university's major field and in the general education curriculum combine to provide the necessary subject-matter competencies for secondary teaching. This is best done through early advisement from the School of Education.

Additional considerations for professional placement in secondary teaching: In addition to the above requirements, licensing for secondary teaching in the State of New Mexico requires the following:

1. Completion of the general education core as well as the university core. Students must have passed the "Basic Skills" component

of the NMTA in order to be approved for student teaching.

2. The completion of an appropriate content field or fields. This is accomplished through an academic major. (Secondary education minors may add a content-field minor as well.) The advisor may assist the student in selecting the content field(s). To plan the selected major (or additional minor), students will meet with their major and minor advisor. Before registering for required minor courses, students must complete the requirements for entrance to the Teacher Preparation Program, which include GnEd 201, GnEd 251, and SpEd 214 with a minimum grade of "C."

Required courses: 28

GnEd	251	Field-Base I Tch Prep Exp (1)
GnEd	302	Ed Psych (3)
GnEd	318	Instruct Media (3)
OR		
GnEd	427	Rdg in the Content Area (3)
GnEd	351	Field-Base II Tch Prep Exp (2)
GnEd	410	Art & Sci of Tch in Sec Schools (4)
GnEd	444	Comp Appl in Ed (3)
GnEd	445	Know of the Prof (3)*
GnEd	451	Field-Base III Tch Prep Exp: Sec (6)
GnEd	455	Classroom Mgmt (3)*

*Taken in conjunction with GnEd 451 as a Field Base III block.

Minor Total: 28

Major in Special Education (B.A.)
Education students may select a major in special education and elementary or secondary education students may select a major or a minor in special education. The major program meets requirements for special education licensure set by the State of New Mexico Public Education Department.

Special education students receive instruction through a cross-categorical and inclusion approach in behavior disorders, communication disorders, gifted, intellectually disabled, learning disabled, multi-impaired, hearing impaired, visually impaired, physically impaired, and developmentally disabled. Field-based experiences are integrated into the instructional program.

Prerequisite:

Complete the requirements for entrance to Teacher Preparation Program.

GnEd 201 Intro to Tch (3)

SpEd 214 Intro to Sp Ed (3)

Required courses: 30

GnEd 251 Field Based I Tchr
Prep Exp (1)

GnEd 351 Field Based II Tchr
Prep Exp (2)

GnEd 444 Comp Appl in Ed (3)

GnEd 455 Classroom Mgmt (3)

SpEd 401 Diag of the
Exceptional Child (3)

SpEd 440 Meth & Matls in
Sp Ed (3)

SpEd 451 Field Based III Tchr
Prep Exp: Sp Ed (6)*

SpEd 483 Nat & Needs of
Mental Handicap (3)

SpEd 484 Curr Dev in Sp Ed (3)

SpEd 485 Nat and Needs of Lrng
Handicapped (3)

*Gn Ed is taken in conjunction with SpEd 451 as Field base III block.

Major Total: 30

Minor in Special Education

The minor in special education is available to students completing a teacher preparation program (i.e. majoring in elementary education** or minoring in secondary education*). This minor satisfies university requirements; however, it does not satisfy licensure because 30 hours in special education are required for

a teaching license.

Prerequisite:

SpEd 214 Intro to Spec Educ (3)

Required courses: 24

SpEd 234-434 Pract in Sp Ed (1-6)**

SpEd 401 Diag of the Except Child
(3)

SpEd 440 Meth & Matls in
Sp Ed (3)

SpEd 451 Field-Base III Tchr
Prep Exp: Sp Ed (6)*

SpEd 483 Nat & Needs of
Ment Handicapped (3)

SpEd 484 Curr Dev Sp Ed (3)

SpEd 485 Nat & Needs of
Lrng Handicapped (3)

GnEd 455 Classroom Mgmt (3)

Minor Total: 24

Major in General Science for Secondary School Teachers (Grades 7 – 12)

The purpose of the major is to provide science teachers in training with a fundamentally strong background in the basic sciences. Therefore, a greater pool of talent in the field of science education will be created from which surrounding middle schools and high schools can draw. The program has been designed to emphasize fundamental understandings of both physical and life science. Courses will be selected from such areas as 1) environmental sciences, 2) biology, 3) geology, 4) chemistry, 5) physics, 6) mathematics, and 7) engineering.

The objectives of the General Science Major are as follows:

To provide science teachers in training with a multi disciplinary program that will adequately prepare them to teach expected science courses in middle and high school science programs.

To train science teachers to develop each of the competencies required by the State

Board of Education for licensure in science education.

To provide specialized/advanced training in specific science subject areas of interest to the science teacher in training.

Refer to Interdepartmental Programs for further details regarding this major.

Minor in General Sciences for Elementary School Teachers (Grades K – 8)

The purpose of the minor is to provide elementary school teachers in training with a fundamentally strong background in a variety of basic science concepts of both physical and life sciences. Courses that provide the needed basic understanding of the sciences will be selected from those listed in the major.

The objectives of the General Science Minor are as follows:

To provide elementary teachers in training with a program that will adequately prepare and encourage them to teach the most fundamental science concepts at the elementary level.

To broaden the scope of science to elementary school teachers in training, so they will be well versed in all aspects of science; this will allow them to develop methods by which to relay the content material to their students so that the students can fully understand what is being taught.

Refer to Interdepartmental Programs for further details regarding this major.

Courses in Early Childhood Multicultural Education (ECME)

300. Professionalism (2)

This course provides a broad-based orienta-

tion to the field of early care and education. Early childhood history, philosophy, ethics and advocacy are introduced. Basic principles or early childhood systems are explored. Multiple perspectives on early care and education are introduced. Profession responsibilities such as cultural responsiveness and reflective practice are examined.

301. Health, Safety, and Nutrition (2)

This course provides information related to standards and practices that promote children's physical and mental well being, sound nutritional practices, and maintenance of safe learning environments. It includes information for developing sound health and safety management procedures for the prevention of childhood illnesses and communicable diseases. The course examines the many nutritional factors that are important for children's total development, healthy, physical activity, and rest. Students gain knowledge necessary for creating safe learning environments for decreasing risk and preventing childhood injury.

302. Child Growth Development and Learning(3)

This basic course in the growth, development, and learning of young children, prebirth through age eight, provides students with the foundation for becoming competent early childhood professionals and knowledge of how young children grow, develop and learn. Major theories of child development are integrated with all aspects of development, including biological-physical, social, cultural, emotional, cognition, and language domains. The adult's role in supporting each child's growth, development and learning will be emphasized.

303. Family and Community Collaboration (3)

This course examines the involvement of families from diverse cultural and linguistic backgrounds in early childhood programs.

Ways to establish collaborative relationships with parents and others involved with children in early childhood settings are discussed. Strategies for communicating with parents and guardians about their children and incorporating families' goals and desires for their children into the early childhood program will be included.

304. Curriculum Development and Implementation I (3)

This beginning curriculum course focuses on developmentally appropriate content in early childhood programs. It addresses content that is relevant for children birth through age eight and developmentally appropriate 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 and IEPs are included. Curriculum development in all areas, including literacy, numeracy, the arts, health, science, social skills, and adaptive learning for children, birth through age eight, is emphasized. Co-requisite: ECME 332.

305. Guiding Young Children (3)

This course explores various theories of child guidance and the practical application of each. It provides developmentally appropriate methods for guiding children and effective strategies and suggestions for facilitating positive social interactions. Appropriate strategies for preventing and dealing with violence, aggression, anger, and stress will be explored. Emphasis is placed on helping children become self-responsible, competent, independent, and cooperative learners.

306. Curriculum Development and Implementation II(3)

This basic course focuses on the learning environment of curriculum in early childhood programs. Students will use their knowledge of content, developmentally appropriate practices, and language and culture to

design and implement experiences and environments that promote optimal development and learning for children from birth through age eight, including children with special needs. Various curriculum models and teaching and learning strategies will be included.

315. Introduction to Reading & Literacy Development (3)

This course is designed to prepare early childhood professionals for promoting children's emergent literacy and reading development. Through a development approach, the course addresses ways in which early childhood professionals can foster young children's phonemic awareness, literacy problem solving skills, fluency, vocabulary, comprehension, and language development. This course provides the foundation for early childhood professionals to become knowledgeable about literacy development in young children. An integrated language arts perspective and an interdisciplinary approach as it addresses developing writing, reading, and oral language in the home and school contexts will be addressed. Major instructional approaches and strategies to support children's emergent literacy and reading skills will be presented.

328. Assessment of Children and Evaluation of Programs I (3)

This basic course familiarizes students with a variety of culturally appropriate assessment methods and instruments, including systematic observation. The course addresses the development and use of formative and summative program evaluation to ensure comprehensive quality of the total environment for children, families, and the community. Student will develop skills for evaluating the assessment process and involving other teachers, professionals and families in the process.

332. Curriculum Development and

Implementation Practicum I (2)

This course provides opportunities for students to apply knowledge gained from Curriculum Development and Implementation I and develop skills in planning developmentally appropriate learning experiences for young children from birth through age eight, including young children with special needs. Learning experiences will cover all content areas, including literacy, math, science, social studies, health/wellness, the arts and adaptive skills for children, birth through age eight.

334. Curriculum Development and Implementation Practicum II (2)

This course provides opportunities for students to apply knowledge gained from Curriculum Development and Implementation II and develop skills in planning learning environments and implementing curriculum in programs serving young children, birth through age eight, including those with special needs.

403. Family and Community Collaboration I (2)

This advanced course prepares prospective teachers for working effectively as partners with family and community members to facilitate the development and learning of children birth through age eight, including lifestyles, and linguistic, cultural and ethnic groups. The complexity and dynamics of families as systems will be included, and community resources to support families will be identified. The course builds upon indicators of competence established at the lower division (AA) level. For each course objective (core competency) students will demonstrate the indicators established for the bachelor's level. Prerequisite: ECME 303.

411. Teaching Reading and Writing (3)

This advanced course is designed to prepare early childhood professionals for teaching reading and writing in the early primary

grades. The course focuses on reading as a complex, interactive, constructive process. Through a developmental approach, the course addresses: 1.) the integration of theory and research with the practice of teaching children to read and write, including children with special needs, 2.) the organization of effective reading and writing instructions, 3.) the sociocultural contexts in which children learn to read and write, 4.) culturally, linguistically and developmentally appropriate literacy curricula, and 5.) assessment and evaluation. This course builds upon indicators of competence established at the lower division (AA) level. For each course objective (core competency) students will demonstrate the indicators established for the bachelor's level. Prerequisite: ECME 315.

412. Teaching Rdg & Writing Pract (1)

This advanced practicum provides opportunities for students to apply knowledge gained from the course Teaching Reading and Writing. In kindergarten through 3rd classrooms, students will develop skills in organizing a literature rich environment, planning effective reading and writing instruction and assessment, and implementing culturally, linguistically and developmentally appropriate literacy curricula. The course builds upon indicators of competence established at the lower division (AA) level. For each course objective (core competency) students will demonstrate the indicators established for the bachelor's level. Prerequisite: ECME 315.

420. Research in Child Growth, Development, and Learning (3)

This advanced course in child growth, development, and learning builds upon the foundational material covered in the basic course in child growth, development, and learning. 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, language-cultural, and 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. This advanced course builds upon indicators of competence established at the lower division (AA) level. For each course objective (core competency) students will demonstrate the indicators established for the bachelor's level. Prerequisite: ECME 302.

424. Integrated Early Childhood Curriculum (3)

This advanced course focuses on developmentally appropriate content, learning environments, and curriculum implementation for children birth to age five. It emphasizes integration of content areas (the arts, literacy, math, health, science, social studies, adaptive learning) and the development of rich learning environments for infants, toddlers, and preschool children. The course builds upon indicators of competency established at the lower division (AA) level. For each course objective (core competency), students will demonstrate the indicators of competence established for the bachelor's level. Prerequisite: ECME 300, 301, 305, 332 and 334.

425. Integrated Early Childhood Curriculum Practicum (2)

This advanced course provides opportunities for students to apply knowledge gained from Integrated Early Childhood Curriculum and develop skills in planning and implementing developmentally appropriate learning experiences, integrated curriculum, and learning environments for children from birth to age five. Curriculum will include all content areas: the arts, health/wellness, literacy, math, social studies, science, and adaptive living skills for children with special needs. The

practicum will be divided equally between a classroom serving 0-3 and a classroom serving 3-5 year old children. Prerequisites: ECME 300, 301, 304, 305, 306, 332, and 334.

426. Methods and Materials for the Early Primary Grades (3)

This advanced course focuses on developmentally appropriate content, learning environments, and curriculum implementation for children in K-3rd grade. It emphasizes integration of content areas (the arts, literacy, math, health, science, and social studies) and the development of rich learning environments for the early primary grades. The course builds upon indicators of competence established at the lower division (AA) level. For each objective (core competency), student will demonstrate the indicators established for the bachelor's level. Prerequisites: ECME 424, and 425. Prerequisites or

427. Methods & Materials for the Primary Grades Practicum (2)

This advanced practicum provides opportunities for students to develop, implement, and evaluate developmentally appropriate and integrated learning experiences for children in K-3rd grade. Students will gain experience creating learning environments that are developmentally appropriate and culturally responsive for children in the early primary grades. The practicum builds upon indicators of competence established at the lower division (AA) level. For each course objective (core competency), students will demonstrate the indicators established for the bachelor's level. Prerequisites: ECME 424 and 425.

428. Assessment of Children and Evaluation of Programs II

This advanced course builds upon student understanding of the connections among learning, teaching, and assessment and strategies for evaluation programs. Assessment, identification, and monitoring of typical

and atypical development in the cognitive, motor, affective and social domains will be explored. Multiple and diverse assessment approaches, including, responsiveness to cultural and linguistic differences, will be emphasized. The course builds upon indicators of competence established at the lower division (AA) level. For each course objective (core competency) students will demonstrate the indicators established for the bachelor's level. Prerequisite: ECME 328.

435–535. Selected Topic in Early Childhood Education (1 – 4 VC)
Course in topics in early childhood education: may be repeated with change of content.

452. Early Childhood Education Student Teaching (12)
The student teaching experience in early childhood education has two components: 1.) placement and assigned tasks in an early childhood classroom with a mento teacher, and 2.) a weekly seminar in which students review and reflect on their own teaching practice, make connections between theory and practice, study particular topics of interest, conduct self-evaluations, and contribute to group discussions. Students will demonstrate the indicators of competence established for the bachelor's level. Prerequisite: Completion of core and major requirements with a grade of "C" or better. Co-requisite: GnEd 455.

482. Early Childhood Special Education (3)
Early childhood educators will acquire skills to develop and adapt curriculum to work with families and to collaborate with professionals in meeting the needs of children with developmental variations. Prerequisite: ECME 302, 304. Cross-listed as: SpEd 482.

490. Independent Study (1 – 4 VC)
Individual, directed study arranged with an instructor. Prerequisite: Permission of instruc-

tor.

Courses in Elementary Education (Elem)

234. Field-Based Paraprofessional Education Experience (2 – 3 VC)
Observations of classroom environments for the future teacher aide; determining what classroom teachers and aides do. This course may be offered in sections with special emphasis for bilingual aides.

235–435. Selected Topic in Elementary Education (1 – 4 VC)
Course in topic or topics in elementary education: may be repeated with change of content.

312. Teaching Elementary School Mathematics (3)
Methods, materials, and curriculum of modern mathematics in the elementary school. Observation and laboratory periods are required. Prerequisite: Math 115 with a minimum grade of "C."

317. Multicultural Education (3)
A study of educational trends, issues, and problems of students and the teaching methods and strategies necessary to teach respect and tolerance among people.

361. Assessment and Evaluation of Students (3)
Problems in the construction and use of teacher-made and standardized tests. The course also emphasizes the gathering and interpreting of data, reporting of test information, and development of a district-wide testing program.

417. English as a Second Language (3)
A study of English as a second language, conveying methods and procedures of teaching English to children and adults for whom English is not the native tongue. Students will be introduced to second language acquisition theories and basic elements of the sound system. Prerequisite: RdEd 315.

434. Practicum in Elementary Education (1 – 4 VC)
Field and/or lab experiences with specific responsibilities over a sustained period of time. Prerequisite: Permission of instructor.

442. Teaching Elementary School Science and Social Studies (3)
Development of teaching strategies appropriate to recent innovations in science and social science teaching for multicultural classrooms. Laboratories will be offered in both English and Spanish, when possible, to provide opportunities for Spanish/English bilingual majors and other interested students to develop skills for teaching science and social science in Spanish.

451. Field-Based III Teacher Preparation Experience: Elementary (6)
Analysis and evaluation of the student's own performance in student teaching, based on knowledge of the profession and reflective observation. A special fee is charged. Prerequisite: Admission to student teaching. Co-requisite: GnEd 445.

490. Independent Study (1 – 4 VC)
Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

Courses in General and Secondary Education (GnEd)

201. Introduction to Teaching (3)
Introduction to the historical, philosophical, and sociological foundations of education, especially as it relates to a multicultural environment. Students will use those foundations to develop strategies related to problems, issues, and responsibilities in the broad and specific educational arenas. Co-requisite: GnEd 251.

210. NMTA Preparation (2)
This two credit course is designed to assist candidates, for teaching licensure in the state of New Mexico, prepare for the New Mexico Teacher Assessment series of examinations. The primary intent of the course is to acquaint candidates with the structure, tone and format of the assessments with specific attention to content and accompanying competencies.

235 – 435. Selected Topic in General Education (1 – 4 VC)
Course in topic or topics in general education: may be repeated with change of content.

251. Field-Based I Teacher Preparation Experience (I)
Initial observations of classroom environments; determining what classroom teachers do. The class combines field observations (28 clock hours) with an on-campus seminar. Co-requisite: GnEd 201.

302. Educational Psychology (3)
Theories and research in learning and their implications for curriculum and instruction.

318. Instructional Media (3); 2,2
Principles and methods of utilizing instructional media and materials to enhance the classroom delivery in the school curriculum. Labs include simulated purchasing, operation and use of equipment in both media center and classroom settings.

320. Language Acquisition and Linguistics for Teacher (3)
This course provides for in-depth study of first and second language acquisition and a broad background in linguistics.

351. Field-Based II Teacher Preparation Experience (2); 1,2
The development of analytical and reflective reports based on field observation (42 clock hours) of different methods and teaching strategies used in the classroom. These reports form the basis for class discussions.

Students will also have the opportunity to implement classroom lessons.

410. The Art and Science of Teaching in Secondary Schools (4); 3,2

Designed to provide an overview of curriculum and organization in the secondary school and to offer actual teaching experience in a "micro-teaching" situation, applying basic teaching strategies and techniques for the purpose of developing teacher competency. A special fee is charged.

412. Theories and Principles of Bilingual Education (3)

Fundamental theories and principles of bilingual education, preparing the prospective teacher to address the issues and concerns intelligently in the classroom.

420. Sheltered English for Content Area Instruction (3)

This course provides a set of linguistic, instructional, assessment, and classroom-management practices that allows English Language Learners (ELLs) from the advanced-beginner level on the develop content-area knowledge, operational skills and increased language proficiency. Prerequisite: Engl 317.

425. Reasoning Skills for the Schools (3)

A general introduction to the basic skills involved in reasoning and critical thinking and how they may be incorporated into the curricula of the schools.

427. Reading in the Content Area (3)

Survey of techniques for the development of reading/study skills needed at the secondary level as students employ reading as a tool for learning.

434. Practicum in Secondary Education (1 – 4 VC)

Secondary campus work placement with specific responsibilities over a sustained period of time. Prerequisite: Permission of instructor.

437. Instructional Methodologies for Use

in Spanish-Bilingual Classrooms (3)

Demonstrate knowledge of and use theories, approaches, methods and techniques for teaching literacy, biliteracy and other academic skills in English and the native language. Spanish is the language of instruction and student participation/presentations. Prerequisite: Span 201 or Span 202.

444. Computer Applications in Education (3)

Provides teachers a working knowledge of the PC and its applications in education. A special fee is charged.

445. Knowledge of the Profession (0)

Legal, ethical, professional and organizational issues related to education. Developing skills in collaborating and communicating effectively with colleagues, administrators and other professionals. Prerequisites: Completion of core and major requirements. Co-requisite: Student teaching.

450. Seminar in General or Secondary Education (1 – 4 VC)

Seminar course in a topic or topics in general or secondary education.

451. Field Base III Teacher Preparation Experience: Secondary (6)

Analysis and evaluation of the student's own performance in student teaching, based on knowledge of the profession and reflective observation. A special fee is charged. Prerequisite: NMTA exam, 2.5 GPA, admission to student teaching. Co-requisites: GnEd 445 and GnEd 455.

452. Field Base III Teacher Preparation Experience: K – 12 (6)

Analysis and evaluation of the student's own performance in student teaching, based on knowledge of the profession and reflective observation. Both elementary and secondary settings are utilized. A special fee is charged. Prerequisite: NMTA exam, 2.5 GPA, admission to student teaching. Co-requisite: GnEd 445 and GnEd 455.

453. Field Base III Internship (6 – 12 VC)

The internship program in the School of Education is a New Mexico State Department of Education approved equivalent to the Field-Base III block. Internships are ONLY considered at the request of a school district. A special fee is charged. Prerequisite: Admission to student teaching, passed all three parts of the New Mexico Teachers Exam (NMTE), completed all required coursework, and permission of the instructor.

455. Classroom Management (3)

Introduces the student to a variety of techniques for managing behavior in the classroom. Major areas and specific techniques within each will be presented and practiced both in the class and in the student's own teaching situation. Prerequisite: Admission to student teaching. Co-requisite: Appropriate major Field-Based III Experience and GnEd 445.

490. Independent Study (1 – 4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

Courses in Reading (RdEd)

315. Reading and Children's Literature (3); 2,2
Structure, genres, and style in children's literature, authors, classics, and contemporary developments in literature for elementary grades. Emphasis is placed on knowing books and authors for the elementary classroom. A 2-hour lab is also required. Prerequisite: GnEd 201.

335–435. Selected Topic in Reading (1 – 4 VC)
Course in topic or topics in reading. May be repeated with change of content.

411. Teaching/Diagnosis of Reading (3); 2,2
An overview of teaching reading in the primary and intermediate grades and diagnostic tools and corrective instructional techniques in the classroom. Emphasis is placed on developing competencies in the teaching of reading and adopting reading instruction based on knowledge of reading processes,

methods, and materials. Prerequisite: Field Base I and II.

416. Teaching Reading and the Language Arts in the Bilingual Classroom (3)
Methods and materials in the Spanish-English bilingual classroom, with emphasis upon the development of reading and language arts skills of bilingual children.

426. Reading and Literature for Children and Young Adults (3)
Exploration and evaluation of the artistic qualities of folk and fairy tales, myths, legends, fables epics, hero tales, and realistic stories for children (pre-school to grade 8) and young adults (grades 9 to 12), with a view toward helping teachers to motivate youngsters to develop reading skills while reading relevant literature.

434. Practicum (3 – 6 VC)

Tutorial experience in classroom reading techniques and/or practice in diagnosis and remediation. Prerequisite: RdEd 411 and permission of the instructor.

490. Independent Study (1 – 4 VC)

Individual, directed study arranged with the instructor. Prerequisite: Permission of the instructor.

499. Independent Research (1 – 4 VC)

Individual, directed study arranged with the instructor. Prerequisite: Permission of the instructor.

Courses in Special Education (SpEd)

214. Introduction to Special Education (3)
Identification of exceptional children with respect to educational opportunities; current concepts and goals of special education; specific consideration of educational programs; and a survey of trends and professional opportunities. Prerequisite to special education courses.

234–434. Practicum in Special Education (1 – 6 VC)

Supervised work in a special education program setting. Special fee. Prerequisite: Permission of instructor.

235 – 435. Selected Topic in Special Education (1 – 4 VC)
Course in topic or topics in special education. May be repeated with change of content.

401. Diagnosis of the Exceptional Child (3)
Practice in the use of a variety of data-collection instruments and techniques, as well as procedures for writing up the data collected, making referrals, and developing an instructional program.

440. Methods and Materials in Special Education (3)
Individualized instruction and selection of appropriate methods and materials to meet educational programming needs for the students with mild to moderate disabilities.

450. Seminar in Special Education (3)
A seminar course in a topic or topics in special education.

451. Field-Based III Teacher Preparation Experience: Special Education (6)
Analysis and evaluation of the student's own performance in student teaching, based on knowledge of the profession and reflective observation. A special fee is charged. Prerequisite: Admission to student teaching. Co-requisite: GnEd 455.

482. Early Childhood/Special Educ (3)
Developing an awareness in educators concerning an understanding of children with or without special needs. Cross-listed as: EcEd 434.

483. Nature and Needs of the Mentally Handicapped (3)
A comprehensive view of the people with intellectual disabilities, with emphasis on their needs and services available for them; history of the field and current trends; the problems caused by intellectual disabilities

in a family and society. The course also introduces teaching techniques and methods.

484. Curriculum Development in Special Education (3)
A study of curriculum practices in special education settings.

485. Nature and Needs of the Learning Handicapped (3)
Needs and services for children and youth with mild learning disabilities and behavior disorders; teaching techniques and methods.

490. Independent Study (1 – 4 VC)
Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

499. Independent Research (1 – 4 VC)
Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

Department of Exercise and Sport Sciences

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Mission of the Department of Exercise and Sport Sciences

The mission of the New Mexico Highlands University's Department of Exercise and Sport Sciences (ESS) is to develop and strengthen an educational program for a diverse student population with a distinct identity. ESS, therefore, provides undergraduate students with a broad understanding of liberal arts and science as it pertains to health, physical education, exercise science, sport, and leisure.

Faculty

Kathy Jenkins (HPS/Exercise Science)
Dan Houtchens (Health)
Lynn Kennedy (HPS)
Liz Sedillo (Athletic Training)

Resources and Facilities

Two undergraduate majors are available for NMHU students to pursue in the Department of ESS: Human Performance and Sport (HPS) and Health. The HPS major offers a choice of four concentration areas: Exercise Science, Teaching, Leisure Services, and Athletic Training. Additionally, three minors are available: HPS, Health, and Coaching.

The ESS faculty offers courses for the community as well as university personnel. The New Mexico Highlands University Wellness Program (HU-Wellness) provides a variety of health promotion activities including classes, consultations, seminars and workshops. Fitness and health assessments with consultation and exercise prescriptions are available to employees, students, and com-

munity members. The Cardiovascular Health Enhancement and Exercise Rehabilitation (CHEER) Program provides supervised exercise classes for patients with heart disease.

In addition, the ESS department cooperates with other academic areas within the university by providing opportunities for students to take a variety of academic classes. There are numerous activity classes for students, faculty, and community members to take, such as skiing, swimming, golf, fitness activity, racquetball, and weightlifting. As part of their core requirements, students from across the university have an opportunity to take at least two physical education courses of the Fit for Life class (Wellness course). The Fit for Life course is a prerequisite for all ESS majors.

The career choices for students receiving a major in the ESS are numerous: activity director/instructor, aquatic manager, adapted physical education instructor, athletic director, athletic trainer, personal fitness trainer, cardiac rehabilitation specialist, community health consultant, corporate wellness director, employee wellness consultant, health promotion and wellness leader/director, exercise laboratory technician, physical education teacher, health education teacher, recreation director, senior citizen recreation director, therapeutic recreation specialist, travel and tourism director, and many more.

The John A. Wilson Physical Education Complex is the pride of the program. The building offers modern facilities for physical and health education instruction, student and faculty research, as well as complete facilities for athletic training. The HU Wellness Program and Exercise Science Laboratory enable students to obtain practical experience in fitness testing and exercise programming.

Major in Human Performance and Sport (B.A.)

The HPS Teaching concentration and HPS minor prepare elementary and secondary Physical Education Teachers. This area offers a broad technical foundation in scientific principles and relevant technology, including kinesiology, exercise physiology, sports techniques, and pedagogical methodology. Students in the HPS Teaching concentration should minor in Secondary Education in order to obtain the K-12 teaching licensure in New Mexico.

The HPS Exercise Science concentration is designed to prepare students who wish to become personal trainers and/or work in the area of corporate fitness. This concentration offers a more scientifically focused curriculum, including kinesiology, exercise physiology, fitness program design, and fitness and wellness program leadership. Additionally, all students complete a practical experience in the NMHU Wellness Program. Students in this concentration are encouraged to minor in either Health or Business.

The HPS Leisure Services concentration is designed to prepare students in the area of fitness, leisure, recreation, and tourism. Students desiring careers in youth recreation, city recreation, resort or health spa management, national and state parks, theme parks, convention centers and resorts will be prepared by the very broad leisure services curriculum. At the end of the program, students complete a full-time internship in their area of internship. Students in this concentration are encouraged to minor in Business.

The HPS Athletic Training concentration is designed to teach students the competencies for national certification as an athletic trainer (ATC). Students in this concentration are encouraged to minor in Secondary Edu-

cation to obtain the K-12 teaching licensure in New Mexico.

Prerequisite:

PE 100 Fit for Life (2)

Required Courses: 12

HPS 260 Hist & Prin of Phys Ed (3)

HPS 370 Anat Kinesiology (3)

HPS 376 Exercise Physiology (3)

HPS 410 Meas & Eval in Phys Ed (3)

Students must also choose an area of concentration and complete all courses in the concentration area.

A. Concentration in Exercise Science

Required courses: 24

Hlth 213 Nutr for Exer & Sport (3)

HPS 223 First Aid & CPR (3)

HPS 227 Water Safety Instructor Course (2)

HPS 334/434 Practicum (3)

HPS 372 Appl Kinesiology (3)

HPS 421 Designs for Fitness (3)

HPS 476 Theory & Tech in Exer Stress Testing (3)

Hlth 489 Fitness/Wellness Prog Ldrshp (3)

and one of the following:

HPS 243 Tech of Weight Train/ Golf (1)

OR

HPS 245 Tech of Tennis/ Volleyball (1)

OR

HPS 247 Tech of Racquetball/ Aerobics (1)

Major Total: 36

B. Concentration in Teaching

Required courses: 24

HPS 223 First Aid & CPR (3)

HPS 350 Meth of Tch Phys Ed (3)

HPS 387 PE for Elem Teach (3)

HPS	421	Designs for Fitness (3)
HPS	442	Org & Admin of Phys Ed & Athletics (3)
HPS	468	PE for Special Pop (3)
and six of the following:		
HPS	237	Tech of Soccer/ Basketball (1)
HPS	238	Tech of Baseball/ Softball (1)
HPS	241	Tech of Archery/ Badminton (1)
HPS	243	Tech of Weight Train/ Golf (1)
HPS	245	Tech of Tennis/ Volleyball (1)
HPS	247	Tech of Racquetball/ Aerobics (1)
HPS	249	Tech of Dance (1)
HPS	227	Water Safety Instructor Course (2)

Major Total: 36

C. Concentration in Leisure Services

Required courses: 33

LSvc	230	Intro to Tour, Leisure, & Sport (3)
LSvc	250	Aquatic Mgmt (2)
LSvc	310	Tour, Plan, & Dev (3)
LSvc	320	Tour & Commercial Recreation (3)
LSvc	340	Issues in Tour & Travel (3)
LSvc	379	Rec Prog & Res (3)
HPS	334	Practicum (1)
HPS	465	Plan Areas & Facil (3)
HPS	476	Theory & Tech in Exer Stress Testing (3)

At the successful completion of the 24 credits each candidate must also complete:

LSvc	444	Internship (9)
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Major Total: 45

D. Concentration in Athletic Training

Before admittance into the athletic training concentration, students must complete the following prerequisites:

Prerequisite Courses: 25

Chem	211	Gen Chem I (3)
Chem	212	Gen Chem II (3)
Chem	215	Chem Lab I (2)
Chem	216	Chem Lab II (2)
Hlth	213	Nutr for Exer & Sport (3)
HPS	223	First Aid & CPR (3)
HPS	270	Intro to Athletic Training (4)
HPS	273	Medical Term (2)
HPS	372	Appl Kinesiology (3)

Required courses: 24

HPS	334	Practicum (3)
HPS	391	Assess & Eval of Upper Extremities (3)
HPS	393	Assess & Eval of Lower Extremities (3)
HPS	420	Adv Athletic Train (4)
HPS	446	Admin of Athletic Train (3)
HPS	481	Therapeutic Modal (4)
HPS	482	Therapeutic Exer (4)

Major Total: 61

NOTE: To be certified as an Athletic Trainer by the NATA, students must take an additional five credits of practicum.

Minor in Human Performance and Sport

This minor is available to all students

Required courses: 24

HPS	223	First Aid & CPR (3)
HPS	238	Tech of Baseball/ Softball (1)
HPS	249	Tech of Dance (1)
HPS	260	Hist & Prin of Phys Ed (3)
HPS	350	Meth of Tch Phys Ed (3)
HPS	372	Appl Kinesiology (3)
HPS	376	Exercise Physiology (3)
HPS	410	Meas & Eval in Phys Ed (3)
HPS	442	Org & Admin of Phys Ed & Athletics (3)

Electives: 1

Choose one HPS techniques course of an individual activity sport in consultation with an advisor

Minor Total: 24

Minor in Coaching

This minor is available to students with any major.

Required courses: 22

Hlth	213	Nutr for Exer & Sport (3)
HPS	223	First Aid & CPR (3)
HPS	334-434	Practicum (1-4)
HPS	370	Anatom Kinesiology (3)
HPS	376	Exercise Physiology (3)
HPS	381	Injury Assess & Mgmt (3)
HPS	408	Prin, Ethics, & Prob of Ath Coaching (3)
HPS	478	Psy of Coaching (3)

Electives: 4

Choose two courses from the following:

HPS	365	Coaching/Officiating Baseball/Softball (2)
HPS	366	Coaching/Officiating Basketball (2)
HPS	367	Coaching/Officiating Football (2)
HPS	368	Coaching/Officiating Volleyball (2)
HPS	369	Coaching/Officiating Track & Field (2)

Minor Total: 26

Major in Health (B.A.)

The health major has three tracks. The health education track is designed to prepare the health science teacher. The health promotion and wellness track is designed to prepare students interested in health careers with commercial, corporate, community, or government health/fitness/wellness programs. The pre-professional health track is designed to prepare students for professional school

in allopathic, osteopathic, chiropractic, podiatric, naturopathic, veterinary medicine, dentistry, optometry, pharmacy, nursing, physical therapy, or similar health related areas. All tracks prepare the student for advanced training in graduate school.

Student must take:

Math 120, Math 140, Math 150, or the equivalent of algebra and trigonometry in high school and PE 100 (Fit for Life) to qualify for the major in health.

The Health Education Track

Human anatomy and physiology (Biol 131 and Biol 132) should be taken as part of the students' science requirement. Students who intend to teach health in the public schools must consult with an advisor in the School of Education for licensure requirements.

Required courses: 33

Hlth	151	Pers Hlth & Well (3)
Hlth	213	Nutr for Exer & Sport (3)
Hlth	321	Found of Comm Hlth (3)
Hlth	351	Hlth Sci Curr & Instruc(3)
Hlth	380	Hlth Prob in Sch (3)
Hlth	489	Fitness/Wellness Prog Ldrshp (3)
HPS	223	First Aid & CPR (3)
HPS	370	Anat Kinesiology (3)
HPS	410	Meas & Eval in Phys Ed (3)
Psy	408	Drugs & Behavior (3)
Psy	422	Human Sexuality (3)

Electives: 3

Choose three credits in English, Spanish, sociology, history, or psychology.

Major Total: 36

The Health Promotion and Wellness Track

Human anatomy and physiology (Biol 131 and Biol 132) should be taken as part of the student's science requirement.

Required courses: 33

Hlth	151	Pers Hlth & Well (3)
Hlth	213	Nutr for Exer &

		Sport (3)
Hlth	321	Found of Comm Hlth (3)
Hlth	489	Fitness/Well Prog Ldrshp (3)
HPS	223	First Aid & CPR (3)
HPS	234-434	Practicum (1-4)
HPS	370	Anat Kinesiology (3)
HPS	376	Exercise Physiology (3)
HPS	410	Meas & Eval in Phys Ed (3)
HPS	476	Theory & Tech in Exer Stress Testing (3)
LSvc	379	Rec Prog & Res (3)

Electives: 3

Choose three credits in English, Spanish, sociology, history, or psychology.

Major Total: 36

The Pre-Professional Health Track

Required courses: 56

Biol	110	Biol Perspectives (4)
Biol	211	Gen Biology I (4)*
Biol	212	Gen Biology II (4)*
Chem	211	Gen Chem I (3)*
Chem	212	Gen Chem II (3)*
Chem	215	Chem Lab I (2)*
Chem	216	Chem Lab II (2)*
Chem	341	Org Chem I (4)*
Chem	342	Org Chem II (4)*
Hlth	151	Pers Hlth & Well (3)
Hlth	213	Nutr for Exer & Sport (3)
Hlth	321	Found of Comm Hlth (3)
Hlth	489	Fit/Well Prog Ldrshp (3)
HPS	370	Anat Kinesiology (3)
HPS	376	Exercise Physiology (3)
Phys	151	Algebra Physics I (4)*
Phys	152	Algebra Physics II (4)*

Students are encouraged to take electives in: English, Spanish, sociology, history, and psychology. Courses in biochemistry and calculus are strongly recommended, as well.

* This block of coursework is required of pre-professional applicants by most medical schools. Other professional schools may

require less laboratory preparation, in which case electives may be taken instead to structure a program according to individual needs and goals.

Major Total: 56

Minor in Health

This minor is available to students in any major. The health minor is designed to give student teachers a strong endorsement in personal and community health. It will prepare those interested in other health-related careers with a foundation in wellness and public health. The student will learn how to be effectively involved with health promotion through reinforcement of self-responsibility and disease prevention.

Required courses:

Hlth	151	Pers Hlth & Well (3)
Hlth	213	Nutr for Exer & Sport (3)
Hlth	321	Found of Comm Hlth (3)
Hlth	351	Hlth Sci Curr & Instr (3)
Hlth	380	Hlth Prob in Sch (3)
Hlth	489	Fitness/Wellness Prog Ldrshp (3)
Psy	408	Drugs & Behavior (3)
AND		
Psy	422	Human Sexuality (3)
OR		
Hlth	353	Hlth & Drug Ed (3)
AND		
Hlth	352	Hlth & Sex Ed (3)

Minor Total: 24

Courses in General Physical Education (PE)

100. Fit for Life (2)

The purpose of this course is to help students develop an understanding and appreciation for personal wellness as a healthy lifestyle. Problem solving and decision making skills on numerous topics such as design of a

personal physical activity program, prudent nutrition strategy, and stress management is included. Participation in this class enables students to take advantage of the opportunities to maximize prevention of disease and improve quality of life. Fit for Life is a prerequisite for all students who plan to major in HPLS. Special lab fee.

101. Beginning Swimming (1); 0,2
Physical education activity course.

102. Intermediate Swimming (1); 0,2
Physical education activity course.

103. Advanced Swimming (1)
This course is designed to polish strokes which students already know so students can swim with more ease, efficiency, power, and smoothness over great distances. It is also an opportunity to learn the advanced strokes which are mostly taught only to swimming instructors.

106. Folk Dance (1); 0,2
Physical education activity course.

107. Square Dance (1); 0,2
Physical education activity course.

108. Modern Dance (1); 0,2
Physical education activity course.

109. Riflery (1); 0,2
Physical education activity course.

110. Tumbling (1); 0,2
Physical education activity course.

112. Self Defense (1); 0,2
Physical education activity course.

113. Weight Training (1); 0,2
Physical education activity course. May be offered in separate sections for men and women.

114. Conditioning Exercise (1); 0,2
Physical education activity course. May be offered in separate sections for men and women.

115. Aerobic Dance (1); 0,2
Physical education activity course. May be

offered in separate sections for men and women.

116. Advanced Aerobic Dance (1); 0,2
Physical education activity course.

117. Water Aerobics (1); 0,2
Physical education activity course. May be offered in separate sections for senior citizens.

118. Lifetime Fitness for Senior Citizens (1 – 2 VC); 0,4
Non-medical supervision of physical activity and fitness/wellness information specifically designed for senior citizens (over 50 years of age). Seniors must have a physician's clearance prior to admission. This is an HU-Well Program activity.

119. Walk-Jog for Fitness (1); 0,2
Walking or jogging as a lifetime fitness exercise.

120. Basketball (1); 0,2
Physical education activity course.

122. Soccer (1); 0,2
Physical education activity course.

123. Softball (1); 0,2
Physical education activity course.

124. Volleyball (1); 0,2
Physical education activity course.

130. Archery (1); 0,2
Physical education activity course.

131. Badminton (1); 0,2
Physical education activity course.

132. Bowling (1); 0,2
Physical education activity course. Special fee charged.

133. Golf (1)
Physical education activity course. Special fee charged. Course meets for extended hours during a half-semester.

135. Selected Topic: Activity Course (1)
Course in topic or topics in Activity Course: may be repeated with change of content.

137. Beginning Tennis (1); 0,2
Physical education activity course.

138. Intermediate Tennis (1); 0,2
Physical education activity course.
140. Backpacking (1); 0,2
Physical education activity course. Course meets for extended hours during a half-semester.
141. Canoeing (1); 0,2
Physical education activity course.
142. Cross-Country Skiing (1); 0,2
Physical education activity course. Special fee charged. Course meets for extended hours during a half-semester.
144. Fitness Activity (1 – 2 VC); 0,4
Non-medical supervision of physical activity and fitness/wellness information exclusively for University employees. An HU-Wellness Program activity.
147. Beginning Skiing (1); 0,2
Physical education activity course. Special fee charged. Course meets for extended hours during a half-semester.
148. Beginning Racquetball (1); 0,2
Physical education activity course.
149. Intermediate Racquetball (1); 0,2
Physical education activity course.
150. Cardiovascular Exercise Therapy (1 – 3 VC); 0,2-4
Supervised exercise for patients enrolled in the Cardiovascular Health Enhancement and Exercise Rehabilitation (CHEER) Program. Prerequisite: Physician referred.
151. Bicycling (1)
Physical education activity course.
152. Line Dancing (1)
Physical education activity course.
153. Step Aerobics (1)
Motivational course in which the healthy student, through active participation, will develop knowledge and skills sufficiently adequate to provide enjoyment for this cardiovascular and respiratory activity.

Courses in Health (Hlth)

151. Personal Health and Wellness (3)
Introduction and overview of health and wellness principles, concepts, and strategies known today as health promotion. Identification and discussion of how habits, attitudes, judgments, and choices relate to quality of life and disease prevention.
213. Nutrition for Exercise and Sport (3)
Nutrition strategy for optimal health, including disease prevention and human performance. Topics include selecting healthy foods, nutrient metabolism, energy use, ergogenic aids, herbal supplements, and holistic health science philosophy.
- 235 - 435. Selected Topic in Health (3)
Course in topic or topics in health. May be repeated with change of content.
321. Foundations of Community Health (3)
Introduction and overview of the philosophical and practical foundations of public and community health, including expectations of the profession. Topics include historical survey, service organization, epidemiology, societal behavior, life-span health promotion, government administration, recreation, disease control, environmental protection, information resources, and new job opportunities developing in the health profession. Prerequisite: Hlth 151 or the equivalent.
351. Health Science Curriculum and Instruction (3)
Students will develop a health promotion or wellness philosophy and practical skills for teaching health science. Practical skills include curriculum construction, writing behavioral objectives, writing lesson plans, and carrying out effective health instruction, such as use of methods, materials, resources, and evaluation techniques. Much class time is spent in hands-on planning and teaching of lessons. Prerequisite: Hlth 151 or the

equivalent.

352. Health and Sex Education (3)

Healthy sexuality and sexual abuse prevention strategies for student teachers. Health promotion, wellness, self-responsibility, and lifestyle choices and consequences are emphasized in techniques of early intervention and preventive techniques for school children. Prerequisite: Hlth 151 or the equivalent.

353. Health and Drug Education (3)

Drug and alcohol abuse prevention concepts and strategies for student teachers. Health promotion, wellness, self-responsibility, and lifestyle choices and consequences are emphasized in techniques of early intervention and preventive techniques for school children. Prerequisite: Hlth 151 or the equivalent.

380. Health Problems in the Schools (3)

A practical survey of deviations from normal health commonly found in school-age children. The student will learn to make presumptive diagnoses. Procedures and screening techniques for evaluation of health status in school children are taught, including medical, emotional/behavioral problems, physical/sexual abuse, drug/alcohol abuse, and disintegration of wellness. Roles and responsibilities of school personnel in effectively dealing with these problems are discussed. The major objective is to help students develop skills in identification of problem children and referral to the appropriate authorities/therapists. Prerequisite: Hlth 151 or the equivalent.

421. Epidemiology (3)

Epidemiology, the study of "all around," is the science behind public health statistics. Epidemiological concepts and skills involving interpretation and use of health related data in populations or groups are studied. The course enables the understanding of causes and transmission of disease, tracking community health problems, and identifying trends related to public health prob-

lems. Critical judgement in assessing health related data is developed. Prerequisite: Hlth 321 or the equivalent.

469. Public Health and Wellness (3)

This course includes advanced public health concepts and development of critical thinking about the role of public health in the community. With interactive discussions, the course reviews community health promotion objectives and epidemiologically derived statistical information. Comprehensive focus is on three major areas: Community Health Promotion, Environmental Health Promotion, and Health Resources and Services. Prerequisite: Hlth 321 or the equivalent.

489. Fitness/Wellness Program Leadership (3)

Practical field experience and supportive lecture in the fitness and wellness program management aspects of health promotion. Leadership skills include administration, health education, nutrition strategy, and applied exercise science/technology. Students assist in the operation of the New Mexico Highlands University Wellness Program (HU-Wellness Program). Students may choose another work site to gain valuable field experience upon approval from the professor.

490. Independent Study (1 – 4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of instructor.

Courses in Human Performance and Sport (HPS)

135 – 435. Selected Topic in Human Performance and Sport (1 – 4 VC)

Course in topic or topics in human performance and sport. May be repeated with change of content.

223. First Aid and CPR (3)

Instruction in appropriate procedures for rendering emergency care for the victim of an accident or sudden illness; prevention techniques. American National Red Cross

certification is available.

224. Emergency Medical Training (EMT) (6)

The purpose of this course is for students to understand the theory of emergency care and first aid and to be able to demonstrate the skills needed to give emergency care. This course is designed specifically for ambulance personnel who have access to specialized vehicles equipped with specialized items of equipment. The course content trains ambulance attendants to recognize and stabilize patients with life-threatening emergencies at the scene and in transport, utilizing the specialized items of equipment. Students across campus are invited to enroll to supplement their education. In addition to ambulance attendants, community members such as fire fighters, police officers, and search and rescue personnel would benefit from this class. Upon successful completion of the course, the student will receive certificates from New Mexico Highlands University, the Emergency Medical Service Academy, and the School of Medicine at The University of New Mexico.

225. Lifeguard Training (2)

Provides student with knowledge and skills to save own or another's life in an aquatic emergency. Life guarding procedures, the management and maintenance of aquatic facilities, and safety policies in and around those facilities are included in this course. American Red Cross certification is available. Prerequisite: PE 102 or equivalent.

227. Water Safety Instructor Course (2); 0,4

Training for water safety instructors. Students will be trained to teach and/or certify swimmers in the following aquatic courses: Basic and Emergency Water Safety, Infant and Pre-school Aquatic Program, Progressive Swimming Courses (Beginning Swimming to Advanced Swimmer). Theoretical and practical knowledge of aquatic instruction is covered in depth. Prerequisite: Current

lifeguard certificate or equivalent.

231. Adapted Aquatics (2); 0,4

Students will be trained to teach the physically and mentally challenged to swim. It is preferred, but not required, that students have a background in swimming.

234 – 434. Practicum (1 – 4 VC)

Hands on experience of various intensity and time in HPLS.

237. Techniques of Soccer/Basketball (1); 0,2

Development of knowledge and skill competencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors or minors in HPLS only.

238. Techniques of Baseball/Softball (1); 0,2

Development of knowledge and skill competencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors or minors in HPLS only.

240. Techniques of Football (1); 0,2

Development of knowledge and skill competencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors or minors in HPLS only.

241. Techniques of Archery/
Badminton (1); 0,2

Development of knowledge and skill competencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors or minors in HPLS only.

243. Techniques of Weight
Training/Golf (1); 0,2

Development of knowledge and skill competencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors or minors in HPLS only.

245. Techniques of Tennis/Volleyball (1); 0,2

Development of knowledge and skill com-

petencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors and minors in HPLS only.

247. Techniques of Racquetball/
Aerobic Dance (1); 0,2

Development of knowledge and skill competencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors or minors in HPLS only.

249. Techniques of Dance (1); 0,2

Development of knowledge and skill competencies necessary for teaching; emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Open to majors or minors in HPLS only.

260. History and Principles of
Physical Education (3)

Origins and development of physical education as a profession; foundation of physical education, together with interpretation and objectives.

270. Introduction to Athletic Training (4); 3,2

An introduction to clinical athletic training for entry-level athletic training majors. Emphasis will be on clinical education components, policies and procedures as used in the clinical/ athletic training room, and beginning taping skills. The study of principles in the prevention, recognition, and immediate care and treatment of athletic injuries. Prerequisites: Chem 211, Chem 212, Chem 215, Chem 216, Hlth 213, HPS 223, and HPS 273.

273. Medical Terminology (2); 2,0

This course is strictly lecture in nature and designed to assist the student in developing his/her recognition of medical and physiologic terminology. Prerequisites: Chem 211, Chem 212, Chem 215, Chem 216, and Hlth 213.

290 – 490. Independent Study (1 – 4 VC)

Individual, directed study arranged with an instructor. Prerequisite: Permission of instruc-

tor.

334 – 434. Practicum (1 – 4 VC)

Field experience work placement with specific responsibility over a sustained period of time. All practicum courses will include on-campus seminars with the supervisors. Credit hours for each experience are approved separately by program area. May be repeated for a maximum of four credit hours. Practicum areas may be offered in aquatics, adapted physical education, athletic coaching, athletic training, health education, and physical education. Prerequisite: permission of instructor.

350. Methods of Teaching
Physical Education (3)

A comprehensive course in physical education methods and curriculum.

365. Coaching/Officiating
Baseball/Softball (2)

Philosophy, strategy, leadership, team, and practice organization and coaching methods for baseball/softball; lecture and laboratory experience in the rules and mechanics of officiating baseball/softball. This course prepares students for the New Mexico Activities Association Officials' Examination. Prerequisite: HPS 238 or equivalent.

366. Coaching/Officiating Basketball (2)

Strategy, leadership, team organization, and coaching methods for basketball, with lecture and laboratory experience in the rules and mechanics of officiating basketball. Prerequisite: HPS 237 or equivalent.

367. Coaching/Officiating Football (2)

Development of knowledge regarding offensive football, defensive football, and the kicking game, for coaching football; special phases such as scouting, film work, organization, coaching assignment, and public relations. The course prepares students for the New Mexico Activities Association Officials' Examination. Prerequisite: HPS 240 or equivalent.

368. Coaching/Officiating Volleyball (2)

Coaching and officiating techniques in the sport of volleyball, including strategy, leadership, team organization, and budgeting.

Prerequisite: HPS 245, or equivalent.

369. Coaching/Officiating Track and Field (2)

Strategy, leadership, team organization, budgeting, and methods of coaching and officiating track and field.

370. Anatomical Kinesiology (3); 2,2

An examination of body structure as it relates to human movement, with particular emphasis on the musculoskeletal system and the biomechanics that govern movement.

372. Applied Kinesiology (3); 2,2

Integration of skeletal and neuromuscular anatomy with mechanical principles of human motion, and analysis of sport techniques. Prerequisite: HPS 370.

376. Exercise Physiology (3); 2,2

Physiological basis of exercise and fitness, including muscle strength, cardiorespiratory endurance, environmental factors affecting performance, and conditioning programs.

Prerequisite: HPS 370.

381. Injury Assessment and Management (3)

Recognition techniques and guidelines for initial care of common athletic injuries, and prevention of injuries through conditioning, flexibility, equipment fitting, and taping techniques.

387. Physical Education for**Elementary Teachers (3)**

Preparation for teaching physical education activities to elementary school children; methods and materials.

391. Assessment and Evaluation**of Upper Extremities (3); 2,2**

Study of the upper extremities, head, neck, and face as they relate to the prevention, recognition, evaluation and assessment, and immediate care and treatment of injuries

sustained in sport. Prerequisite: Chem 211, Chem 212, Chem 215, Chem 216, Hlth 213, HPS 223, HPS 270, HPS 273, and HPS 372.

393. Assessment and Evaluation**of Lower Extremities (3); 2,2**

Study of the lower extremities, spine, thorax, and abdomen as they relate to the prevention, recognition, evaluation and assessment, and immediate care and treatment of injuries sustained in sport. Prerequisite: Chem 211, Chem 212, Chem 215, Chem 216, Hlth 213, HPS 223, HPS 270, HPS 273, and HPS 372.

408. Principles, Ethics, and Problems**of Athletic Coaching (3)**

Seminar approach to non-technical, "off-field" aspects of athletic coaching, including education implications, equipment, financing, liability, and coach-athlete rapport.

Prerequisite: HPS major/minor, Coaching minor, Athletic Training minor, or consent of instructor.

410. Measurement and Evaluation in Physical Education (3)

Measurement and evaluation principles and techniques applied to the learner and to programs in physical education.

420. Advanced Athletic Training (4); 3,2

This one semester course is designed for student athletic trainers in their last semester/year of athletic training. It will include topics of interest on the most recent developments in the area of injury assessment, evaluation treatment and rehabilitation. Also included will be topics on nutrition and conditioning of the athlete for optimal performance. Prerequisites: Chem 211, Chem 212, Chem 215, Chem 216, Hlth 213, HPS 223, HPS 273, and HPS 372.

421. Designs for Fitness (3); 3,0

This course teaches the fundamentals of writing exercise prescriptions for cardiorespiratory and muscular fitness, and weight management programs.

440. Experiential Activities (3)

Developing a repertoire of activities useful in promoting self esteem, improving communication skills, promoting group cohesion and trust among individuals and developing problem-solving skills.

442. Organization and Administration of Physical Education and Athletics (3)

Organization and administration of the total program of physical education and Athletics. Included will be classes, intramurals, interscholastic/intercollegiate athletics, and private or commercial recreational programming.

446. Administration of Athletic Training (3); 3,0

Discussion of issues in the organization and administration of athletic training programs to include the knowledge to develop, administer, and manage an athletic training room. Professional responsibilities and avenues of professional development as well as legal implications of misconduct will be addressed. Prerequisites: Chem 211, Chem 212, Chem 215, Chem 216, Hlth 213, HPS 223, HPS 270, HPS 273 and HPS 372.

450. Seminar in Human Performance and Sport (1-4VC)

Seminar investigations in physical education and/or the related areas of health education, recreation, and athletics.

452. Sport Marketing (30)

Course will cover elements and salient issues in management of sport marketing which include segmentation and targeting, marketing mix, research, and analysis.

462. Sport Promotion (3)

Study and application of sport promotion and promotion planning. Utilization of promotional mix and public relations in the field of sport. Application of the channel of communication. Development of a promotional plan for a sport special event or fundraiser.

465. Planning Areas and Facilities (3)

Planning, financing, and managing physical education and athletic grounds and facilities, health

and fitness centers, private and commercial facilities, and campsites for professional personnel.

468. Physical Education for Special Populations (3)

Investigations of the historical aspects and current issues of providing adapted/special education programs for special populations. The course covers implications of federal legislation, practice in preparing Individual Education Programs (IEPs), and program assessment, planning, and evaluation.

476. Theory and Techniques in Exercise Stress Teaching (3); 2, 2

Theory and practice of graded exercise testing for analysis of safe functional capacity and for prescription of exercise training programs. Special lab fee. Prerequisite: HPS 370 and HPS 376.

478. Psychology of Coaching (3)

A practical survey of sport psychology that is grounded in science. Attitudes, feelings, and behaviors that affect athletic performance and coaching effectiveness are dealt with from the standpoint of description, explanation, and prediction. Students develop the ability to interpret research results. Major topical areas include the psychological needs of athletes and coaches and development of mental skills and control with applied techniques.

481. Therapeutic Modalities (4); 3, 2

Basic physiological responses of the human body to the application of therapeutic heat, therapeutic cold, therapeutic electricity, iontophoreses, ultrasound, and other basic therapeutic modalities used in sports medicine and orthopedic physical therapy. Discussion of pharmacologic agents on athletes and other engaged in physical activity is also an integral part of the lecture. Prerequisites: Chem 211, Chem 212, Chem 215, Chem 216, Hlth 213, HPS 223, HPS 270, HPS 273, and HPS 372.

482. Therapeutic Exercise (4); 3, 2

A systematic response of the human body to the application of therapeutic heat, therapeutic cold, therapeutic electricity, iontophoresis, ultrasound, and other basic therapeutic modalities used

in sports medicine and orthopedic physical therapy. Discussion of pharmacologic agents on athletes and others engaged in physical activity is also an integral part of the lecture. Prerequisites: Chem 211, Chem 212, Chem 215, Chem 216, Hlth 213, HPS 223, HPS 270, HPS 273, and HPS 372. 499. Independent Research (1-4VC) Individual, directed research arranged with an instructor. Prerequisite: Permission on instructor.

Courses in Leisure Services (LSvc)

101. Crossing (1)

At a camp in the foothills of the Sangre de Cristo Mountains, students engage in ropes-challenge initiatives, hiking group discussions with faculty and student leaders, team building activities, and other experiences that assist in a supportive transition into the academic and personal challenges of college. There are also evening campfires and entertainment programs. A \$25 fee is required for this course.

201. Introduction to Wilderness Pursuits (3)

An introduction to the safety, technical environment, facilitation, and leadership skills of extended back-country travel. Students help plan and will participate in a seven-day backpacking trip, and students will need to supply their own approved clothing, rain gear, and hiking boots. Prerequisite: Permission of instructor 202.

202. Winter back-country Travel (2)

Techniques of extended back-country travel on snowshoes and back-country/telemark skis. Special techniques for cold weather camping on snow. There will be a fee to cover group gear, transportation to course sites, and supplies. Prerequisite: LSvc 201 or extensive backpacking experience, and permission of instructor.

203. Top Rope Climbing (2)

An introduction to the skills and safety

systems associated with beginning rock climbing, including rope handling, knots, equipment, anchor systems, belaying, rappelling, bouldering, crack climbing, and climbing. There will be a fee to cover gear, transportation to the course sites, and supplies. Prerequisite: LSvc 201 or permission of instructor.

204. Lead Rock Climbing (2)

Advanced rock climbing course focusing on lead climbing skills, including placing of protection, special rope handling techniques, handling belays, and multiple pitch climbs. There will be a fee to cover group gear, transportation to course sites, and supplies. Prerequisite: LSvc 201 and LSvc 203.

205. Apline Mountaineering (2)

Knowledge, skills, and attitudes of high altitude mountaineering with an emphasis on glacier travel, crevasse rescue systems, avalanche awareness and rescue. There will be a fee to cover group gear, transportation to course sites, and supplies. Prerequisite: LSvc 201 or extensive backpacking experience, and permission of instructor.

206. Whitewater Rafting and Canoeing (2)

Equipment, techniques, and safety procedures to conduct canoeing and rafting activities on flatwater and whitewater environments. An emphasis is on paddling and steering, reading river currents, and canoe and raft group management. There will be a fee to cover group gear, transportation to course sites, canoe and raft rental, and supplies. Prerequisite: LSvc 201 and demonstrated swimming ability.

207. Sea Kayaking (2)

Techniques for loading and paddling single and double sea kayaks; water rescue techniques; knowledge of tides, winds and currents. Includes a multi-day sea kayak trip. There will be a fee to cover group gear, transportation to course sites, sea kayak

rental, and supplies. Prerequisite: LSvc 201 and permission of instructor.

230. Introduction to Tourism, Leisure and Sport (3); 2,2

Introduction to the leisure services field, emphasizing fitness, sport, and tourism. Students are required to work in an approved setting for 30 hours during the semester, to be arranged with an academic advisor. In addition, field trips to selected work setting may be a part of the course and may involve afternoon or Saturday sessions.

235-435. Selected Topics in Leisure Service (1-4VC)

Course in topic or topics in leisure services. May be repeated with change of content.

250. Aquatic Management (2)

Provides guidelines for safe operation efficient management of swimming pools and related aquatic facilities, and prepares the student to take the Certified Pool Operator Test for national certification by the National Swimming Pool Foundation. Prerequisite: LSvc 230.

310. Tourism Planning and Development (3)

Planning of marketing strategy in travel and tourism. Topics include marketing research, analysis, and strategy.

320. Tourism and Commercial Recreation (3)

An overview of tour planning, with emphasis on preparation for the NTA Certified Leisure Professional exam.

334. Practicum in Tourism, Leisure, and Fitness (2)

Work in a n approved setting for a minimum of eight hours each week for an entire semester. Prerequisite: Leisure Services major, and recommendation of the coordinator of the program based on a formal request made during the prior semester.

340. Issues in Tourism and Travel (3)

Issues in the tourism industry including, but not limited to , environmental, economic, and cultural sociological considerations.

342. Leadership in Leisure Services (3)

Leadership principles and group dynamics in leisure and recreation settings. Problem-solving techniques utilized to resolve leadership issues in leisure services are presented. Prerequisite: LSvc 230.

345. Challenge Course Fundamentals (2)

The use and sequencing of a variety of low and high rope-challenge initiatives for learning problems solving, trust, team building, and communication. Fundamental processing skills related to challenge course. This course include visitations to several rope challenge course in northern New Mexico. There will be a fee to cover transportation to course sites. Prerequisite: LSvc 201 and LSvc 203.

346. Wilderness First Responder (3)

The knowledge needed to handle medical emergencies requiring extended care in remote setting. Emphasis is on prevention, decision making, and treatment. Students receive nationally recognized certification in Wilderness First Responder. Prerequisite: LSvc 201.

347. Fundamentals of Search and Rescue (2)

Wilderness search techniques, evacuation from a variety of environments, preventing and preparing for survival situations, coordination of searches. Prerequisite: LSvc 201.

356. Foundations and Philosophy of Adventure Education (3)

A survey of how and why the outdoors is used as a medium of learning, along with the origin, setting, and clients (i.e. your at risk, chemical dependency clients, businesses, and university students) of adventure education. Description of the philosophical, historical, psychological, and social foundations of adventure education. Ethical issues of adventure leadership and education. Includes visits to area adventure education programs. Prerequisite: LSvc 201.

358. Theory and Methods of

Adventure Leadership (3)

Models and methods of outdoor leadership and experimental education (i.e. conditional outdoor leadership theory, transfer of learning, framing experiences). Group process and facilitation, including metaphors, processing, and debriefing. Risk management concepts and strategies. Prerequisite: LSvc 201 plus at least one additional course taken from LSvc 202 through LSvc 207.

360/362. Leadership for Adventure Education (6) (Two semesters for three credit hours per semester)

The knowledge and application of outdoor leadership (i.e. program design, trip planning, group facilitation, judgement and decision making, instructional methodologies, leadership styles, ect.). Student co-lead trips offered in the foundational skills courses. (Taken twice in connection with co-leading two different foundational skills course trips). Prerequisite: LSvc 201, LSvc 346, LSvc 356, LSvc 358, plus at least two additional courses taken from LSvc 202 through LSvc 207.

365. Challenge Course Facilitation and Management (2)

Advanced processing skills related to low and high challenge course initiatives. Design principles, inspection, maintenance, supervision and rescue procedures for challenge course. This course includes visits to several rope challenge courses in northern New Mexico. There will be a fee to cover transportation to course sites. Prerequisite: LSvc 345. Co-requisite: LSvc 358.

379. Recreational Programs and Resources (3)

Acquaints students with the variety of recreational programs available and the types of resources that are necessary to provide such programs. Field trips to existing recreational setting may be a part of the course.

440. Travel and Tourism Research (4); 3,2

An introduction to tourism research, includ-

ing travel trends, sources of information, elementary statistics in travel/tourism, research techniques, and formal writing procedures. Special fee. Prerequisite: MIS 233 and LSvc 310 or permission of instructor.

444. Internship in Adventure Leadership and Education, Tourism, Leisure, and Fitness (6)
External work placement with substantial independent responsibilities. Prerequisite: Leisure Services major and two practicum experiences (minimum four semester credits for Adventure Leadership).

446. Internship in Adventure Education (3)
External placement in an adventure education program with substantial independent responsibilities. Prerequisite: All previous coursework in adventure leadership and education through 300-level courses.

450. Organization and Administration of Adventure Education (3)

Processes involved in operating an outdoor adventure program including management and leadership, educational and environmental issues, legal liability, leadership training, standards and accreditation, fiscal management. Trends and issues in adventure education. Prerequisite: Senior standing plus completion of at least twenty-four credit hours in adventure leadership and education coursework.

460. Travel and Tourism Certification (3)

An overview of travel and tourism industry relations, operations, marketing, and issues. Includes written exam. Special fee.

490. Independent Study (1-4VC)

Individual directed study arranged with an instructor. Prerequisite: Permission of instructor.

499. Independent Research (1-4VC)

Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

SCHOOL OF SOCIAL WORK

Alfredo Garcia, Ph.D, Dean
 Mortimer Hall
 505 454-3310 or 505 454-3563
 FAX: 505 454-3290
 E-MAIL: laromero@nmhu.edu
WebAddress: www.nmhu.edu/socialwork

Accreditation

The School of Social Work is accredited by the Council on Social Work Education.

Mission of the School of Social Work

The Mission of the School of Social Work is to educate students to practice social work sensitively and competently with the diverse, multi-cultural populations of New Mexico and the Southwest. The school has a primary commitment to Hispanic and American Indian peoples. Its curriculum grounds students in social work skills, values, ethical principles and awareness of and respect for cultural and gender differences. The school prepares undergraduate students for entry-level generalist practice and graduate students for advanced practice through the integration of classroom and field practicum instruction.

Faculty (NMHU - Las Vegas)

David Arguello, Ph.D.
 Jill Baker, Ph.D.
 Evelyn Estrada, MSW, LISW, Director, Field Education
 Jane Gorman, Ph.D.
 Andrew Israel, J.D., MSW, LMSW
 Rey Martinez, Ph.D.
 Katie McDonough, Ph.D.
 Dolores Ortega, Ph.D.
 Julia Lucero, MSW, LISW, (Visiting Faculty)
 Lou Ann Romero, MSW, Director of Admissions & Recruitment

Adjunct Faculty: Adjunct faculty members complement the full-time faculty at all sites. These faculty offer students the benefit of their professional experience and enhance the

Social Work curriculum by helping students to integrate classroom knowledge with Social Work practice.

NMHU Center @ Rio Rancho
 1700 Grande Court, Suite 204
 Rio Rancho, NM 87124
 505 891-9053
 FAX: 505 891-2905

Social Work Faculty (NMHU - Rio Rancho)
 Alfredo Garcia, Ph.D, Dean, School of Social Work
 Cristina Duran, LISW
 Mark Dyke, Ph.D. (Visiting Faculty)
 Julius Harrington, Ph.D.
 Shirley Hall, Ph.D.
 George Mercer, MSW (Visiting Faculty)
 Mario Rodriguez, Ph.D.
 Jessie "Rocky" Romero, MSW, LMSW, Coordinator, Field Education

NMHU at San Juan College
 4601 College Boulevard
 Farmington, NM 87402
 505 566-3552
 FAX: 505 566-3584

Social Work Faculty (NMHU - San Juan)
 Joan Lucero-Sisneros, MSW, LISW, Social Work Program Coordinator
 Gordon Nielson, MSW, LMSW
 Jennie Russell, MSW, LMSW

NMHU at Eastern New Mexico University-Roswell (ENMU-R)
 P.O. Box 6000
 Roswell, NM 88202-6000
 Roberto Villa, Ph.D., Program Coordinator
 505 624-7458
 FAX: 505 624-7457

Social Work Faculty (NMHU-Roswell)
 Roberto Villa, Ph.D.

NMHU at Northern New Mexico Community College
 Lou Ann Romero, MSW, Director, Admissions & Recruitment
 505 454-3087

In addition to the above program locations, beginning fall 2005, the School of Social Work, in Partnership with Northern New Mexico Community College, will be offering the BSW Program in Espanola, New Mexico. All undergraduate courses will be offered leading toward the BSW degree.

Bachelor of Social Work Program

The Bachelor of Social Work prepares generalist social work practitioners with the knowledge, skills, values and ethical principles necessary to practice with Hispanic, American Indian, and other diverse populations of New Mexico and the Southwest.

The curriculum builds upon a liberal arts perspective and prepares students at a generalist level to understand and evaluate the role of the social work practitioner in the delivery of human services.

The program is a 52 credit unit major, completed in four full-time semesters. Students majoring in social work are not required to complete a minor program of study. Core curriculum and general elective courses may be taken at other two-year or four-year accredited educational institutions and may be accepted for transfer credit with the approval of the students' academic advisor. The BSW program is accredited by the Council on Social Work Education (CSWE). The School of Social work has been recognized by North Central Accreditation as an "Academic School of Excellence."

Please note that course sequencing is subject

to change depending on program needs. For current information concerning course sequencing and major requirements, please contact a Social Work Program Office.

Advisement

A faculty advisor is assigned to students at the time they declare their intent to major in social work. Students may enroll for the major courses following the completion of the university's lower-division course requirements or are within 9 to 12 credit hours from completion of the core requirements. Although most students complete the B.S.W. program within two years of their undergraduate education, it is the responsibility of the student, with the assistance of an academic advisor, to develop a "Program of Study" that details the semesters in which individual courses are to be taken.

Academic and Behavioral Expectations

All social work students are provided with a copy of the School's academic and behavioral policy at the commencement of the academic year. The policy outlines expectations regarding students' professional behavior and academic performance, sets forth grounds for suspension and expulsion from the social work program, and describes the procedures for disciplinary action. As more specifically detailed in the policy, students must demonstrate suitability for the profession of social work via appropriate and adequate classroom and field performance, ability to appropriately relate to colleagues and compliance with all other provisions of the academic/behavioral policy. Students must demonstrate that they have read and understand this policy by signing it and returning it to their academic advisors. The School's policy concerning grade appeals is also provided to students at the commencement of the academic year.

Code of Ethics

All students in social work are required to

have knowledge of and adhere to the National Association of Social Workers (NASW) Code of Ethics.

Transfer of Credit

Transfer of credit for Social Work elective courses will not be considered unless courses have been completed at another School of Social Work accredited by the Council of Social Work Education (CSWE). Courses must have been completed within five years from the date of enrollment.

Associate of Arts or Science Degree

Any student with an Associate of Arts degree may present an academic transcript to be considered for course credit transfer. Upon verification that the A.A. academic transcript demonstrates completion of course work equivalent to the required university proficiency and core curriculum requirements, the A.A. degree will be accepted for transfer and the student will be given credit toward completion of the BSW degree. A minimum of 128 hours are needed to complete a bachelor's degree; this includes completion of the university core and 52 credits of social work courses.

The transfer courses will be evaluated on a course-by-course basis to determine whether they meet the general core requirements. Students transferring from a regionally accredited institution of higher education, with an earned associate degree will have New Mexico Highlands University proficiency, extended core, and minor requirements waived. Students are encouraged to complete the AA or AS degree and the 35-hour common core and program prerequisites during their freshman and sophomore years to assure completion of the bachelors degree within two additional years.

Field Practicum

All students are required to complete 448

hours of Field Practicum during their senior year. Students enrolled in a concurrent field practicum placement, are placed with a community agency for two days (16) hours per week. Students must remain at the same agency for both semesters. Students may also request a summer block placement which requires 40 hours per week for approximately 12 weeks. A total of eight credit units of field practicum are required. Students must also enroll in a field practicum seminar (SW 451, SW 452) course during their senior year. The seminar is taken concurrently with the field practicum. Students in field practicum must have completed all university core requirements and all 300 level (junior standing) courses prior to enrolling in field practicum.

Concurrent Field Practicum placement is completed only during the fall and spring semesters and consists of sixteen (16) hours a week of placement. BSW Students must complete a total of 448 hours during their senior year. Students are required to remain at the same agency both semesters. Concurrent placement requires the approval of the Field Education Director or Coordinator,

Block Field Practicum placement is offered during the summer semester. Students must complete all required social work courses prior to beginning block placement. Block placement requires the approval of the Field Education Director or Coordinator. Block placement requires forty (40) hours per week for approximately 12 weeks. BSW students must complete a total of 448 hours during their senior year. Students must complete the required social work practice courses with a grade of "B" or better. BSW students must enroll in two field seminar course and two field practicum courses in the summer they are in block practicum. Student with Incomplete grades in any course will not be allowed to begin block placement if the incompletes are

not successfully completed prior to commencing with practicum.

Student Stipends

The School of Social Work offers stipends to students who wish to pursue a career in child protective services under the Title IV-E stipend program in partnership with the Children Youth and Families Department (CYFD). Some stipends may be available through Indian Tribal Social Services that are part of the Joint Powers Agreement. The stipends can be applied for by all seniors enrolled in field practicum. Students must conduct their field practicum with CYFD office or with an Indian Tribal Social Services office for one full academic year. The average amount awarded to students is \$10,000 per academic year. Upon completion of the BSW program, stipend recipients must work for CYFD or Indian Tribal Social Services (if selected) for a period of 18 months.

Student Association

Students are encouraged to participate in the Undergraduate Social Work Student Association (UGSWSA) and other university student associations.

Student Responsibilities

Students are responsible for knowing and following the correct procedures and for meeting the conditions established for their academic programs. This includes completion of all university and school course requirements.

Grade Point Average

A grade point average of 2.5 is required for admission to the bachelor of social work major program. Additionally, the student must maintain at least a 2.5 GPA to continue in and complete the program.

Application and Admissions Process for Entrance to the Social Work Major

Students majoring in social work must declare their major during their sophomore year. Students interested in pursuing a BSW degree at New Mexico Highlands University must:

- Apply for admission to NMHU (this applies to students who have not previously attended NMHU).
- Have a minimum of a 2.5 GPA.
- Complete lower division course work that meets the university proficiency and liberal arts requirements.
- Complete an "Entrance to the Major" form with the School of Social Work.

A minimum of 128 hours are needed to complete a Bachelors degree. This includes completion of 40 hours of the university core and 52 credit hours of Social Work courses. A student may have to take additional elective courses to meet the 128 hour requirement to complete the required university and school course requirements.

Major in Social Work (BSW)

The social work major, which leads to a Bachelor of Social Work degree is comprised of 52 credit units. Students majoring in social work are not required to have a "minor" program of study. Students must complete all required 300-level courses before proceeding to take 400-level senior courses.

Required courses: 52

SW	330	Research Methods I (3)
SW	333	Aspects of Aging (3)
SW	341	Social Policy & Serv I (3)
SW	342	Social Policy& Services II (3)
SW	365	Generalist Social Work Practice I (3)
SW	366	Generalist SW Practice II (Interviewing & Assessment) (3)
SW	385	HBSE I (Individual & Family Theories) (3)
SW	386	HBSE II (Group, Org, & Com Theories) (3)
SW	400	Children's Services (3)

SW	430	Research Methods II (3)
SW	432	Field Practicum I (4)
SW	433	Law and Ethics in Social Work (3)
SW	434	Field Practicum II (4)
SW	451	Field Practicum Sem I (1)
SW	452	Field Pract Sem II (1)
SW	465	Generalist Social Work Practice III (3)
SW	466	Generalist Social Work Practice IV (Macro Practice) (3)
SW	485	HBSE III, (Human Diversity & Multicultural Theory) (3)

Major Total: 52

COURSES IN SOCIAL WORK (SW)

330. Research Methods I (3) Sp

This is the first course in the undergraduate research sequence. It introduces students to qualitative and quantitative methodologies used in social research and assessment. The course also covers statistical analysis and the use of computer technology in social research. Research on behalf of the diverse populations of New Mexico and the Southwest is emphasized. Prerequisite: SW 341, SW 342.

333. Aspects of Aging (3) Fa, Su.

The course covers the emotional, biological, environmental, mental, and legal aspects of aging that occur in the elderly, with special emphasis on the Hispanic and Native American populations of New Mexico and the Southwest.

335 – 435. Selected Topics in Social Work (1 – 4 VC); Fa, Sp

One or more elective courses relating to selected topics in social work practice.

341. Social Policy and Services I (3) Fa

This first course in the two-part sequence covers the history of social work, the history and current structures of social welfare services, and the knowledge, values, and skills

necessary to understand major social welfare policies. This foundation course introduces analysis of organizational, local and state issues, and policy analysis and advocacy. All course content is oriented to understanding the effects of social policies on Hispanics, Native Americans and other historically oppressed populations.

342. Social Policy and Services II (3); Sp

This second course in the policy sequence builds upon the analytic methods introduced in SW 341, constructs a foundation for social policy planning and implementation processes, and applies analytic methods for social policy evaluation at the agency, community and political levels. An emphasis is placed on methods to advocate for social and economic justice in contemporary social policy and to advance the interests of Hispanic, Native American and other diverse populations of New Mexico and the Southwest. Prerequisite: SW 341.

365. Generalist Social Work Practice I (3); Fa.

This first course in the practice sequence introduces students to multiple theoretical approaches to generalist practice with diverse individuals. The philosophical and ethical foundations of social work are examined as they manifest in each step of the social work process. Practice knowledge and skills necessary for ethical and competent generalist practice with emphasis on the diverse populations of New Mexico and the Southwest are covered.

366. Generalist SW Practice II: Interviewing and Assessment (3); Fa

This second course in the practice sequence focuses on skills and strategies for competent and ethical foundation level interviewing and assessment with diverse clients throughout the life span. Generalist practice interviewing and assessment techniques for children, adolescents and adults will be included. Emphasis is placed upon practice with Hispanic, American

Indian, and other oppressed populations of New Mexico and the Southwest. Prerequisite: SW 365.

385. Individual and Family Theories (HBSE I) (3); Fa

This two-semester course sequence surveys theoretical perspectives of human life course development and the environmental contexts within which development occurs. The sequence explores the interactions among individuals and between individuals and families, groups, organizations, communities, society, and culture. The sequence emphasizes ethno-cultural contexts with special attention being given to the diverse populations of New Mexico and the Southwest.

386. Group, Organization, and Community Theories (HBSE II) (3); Sp

This is the second course of a two-semester sequence described in SW 385. Prerequisite: SW 385.

400. Children's Services (3); Sp

This course provides an overview of services for the protection of children. The intersection of human behavior theory with micro level generalist practice and with macro level program and policy formulation in child welfare is presented within a framework of critical thinking and sound decision-making. Medical and legal aspects of child abuse and neglect are addressed as well as federal, state and community based child welfare policies and programs. Emphasis is placed upon child welfare practice with Hispanic, American Indian, and other oppressed populations of New Mexico and the Southwest. Prerequisites: Completion of all 300 level SW courses.

429. Family Violence (2) Elective

The course surveys major sociological and psychological theories of family violence throughout the life span. Social and interpersonal factors contributing to family violence are explored in an ethno-cultural context, with special emphasis on the Hispanic and Native

American populations of New Mexico and the Southwest.

430. Research Methods II (3); Fa

This second course in the undergraduate research sequence builds on knowledge and skills introduced in SW 330. Additional topics presented include hypothesis development, variables, methods of data collection, research design, instrumentation, and applied research strategies. Research on behalf of the diverse populations of New Mexico and the Southwest is emphasized. Prerequisite: SW 330.

432. Field Practicum I (4); Fa

The purpose of field practicum is to offer students the opportunity to apply classroom knowledge to practice. Toward that end, the field practicum requires students to be placed with a community agency during their senior year. In their agency placement, students are expected to demonstrate social work skills, knowledge, and values in working with individuals, groups, families, and communities. A total of 208 hours of field practicum/place-ment are required. Co-requisite: SW 451 and SW 465.

433. Law and Ethics in Social Work (3); Sp

The course examines areas of the law in which social work and our legal system intertwine. It also surveys ethical principles and related legal concepts that impact professional social work, and introduces a framework for the resolution of practice dilemmas. Finally, the course provides students with basic practice skills necessary to find and interpret the law. Major emphasis is placed on the operation of the legal system in New Mexico and the Southwest.

434. Field Practicum II (4); Sp

Each course is designed to help students develop knowledge of social work skills, values and ethics in practice utilizing supervised assignments and tasks to compliment foundation academic courses. Co-requisite: SW 432 and SW 466.

451. Field Practicum Seminar I (1); Fa

This seminar provides students an opportunity to integrate practice theory with field (practicum) experience. Students are exposed to a wide range of practice situations and will have an opportunity to address pragmatic and procedural aspects of field instruction. Prerequisite or Co-requisite: SW 432.

452. Field Practicum Seminar II (1); Sp

This seminar provides students an opportunity to integrate practice theory with field (practicum) experience. Students are exposed to a wide range of practice situations and will have an opportunity to address pragmatic and procedural aspects of field instruction. Prerequisite or Co-requisite: SW 434.

465. Generalist Social Work

Practice II (3); Fa

This third course in the practice sequence builds upon the knowledge and skills developed previously. The course focuses on practice skills necessary for competent and ethical practice with diverse families and groups. Emphasis is placed upon generalist social work practice with Hispanic, American Indian and other oppressed populations of New Mexico and the Southwest. Prerequisites: Completion of all 300 level SW courses. Co-requisites: SW 432 and SW 451.

466. Generalist Social Work

Practice III (3); Sp

This final course in the undergraduate practice sequence builds upon the knowledge and skills previously developed. This course introduces students to macro-level practice theory and skills necessary for competent and ethical practice. Topics include community organizing, development, and resource-building with a focus on the rural and urban communities of New Mexico and the Southwest. Emphasis is placed upon macro practice with Hispanic, American Indian and other oppressed communities. Prerequisites: Completion of all 300 level SW courses and SW 465. Co-requisites:

SW 434 and SW 452.

485. Human Diversity and Multicultural Theory (HBSE III) (3); Sp

The course surveys relevant theory describing the ethno-cultural context of human behavior. The manner in which culture impacts the social functioning of individuals, families, organizations and communities is addressed. Consistent with the mission of the social work program, primary emphasis is placed upon Hispanic, Native American, and other diverse populations of New Mexico and the Southwest. Prerequisite or Co-requisite: SW 385, SW 386.

492. Independent Research (1 – 4 VC)

Individual, directed research arranged with an instructor. Prerequisite: Permission of instructor.

Interdepartmental Programs

New Mexico Highlands University offers a number of interdepartmental studies. Faculty and administrators from various disciplines work together in offering these courses and programs.

Inquiries may be directed to the dean of the College of Arts and Sciences.

Minor in Cognitive Science

Cognitive science is an interdisciplinary field concerned with the nature of the mind. Drawing on the resources of mathematics, philosophy, psychology, computer science, linguistics, and other disciplines, students of cognitive science study such phenomena as consciousness, the relation of the mind to the body, and the nature and limits of computation. This discipline addresses long-standing questions about the nature of thought, intelligence, perception, emotion, and other aspects of mental life by examining the way information is processed in computers, the nature of language, and the relation of cognition to the brain.

Required courses: 12

CS	471	Art Intelligence (3)
CS	472	Cognitive Science (3)
Phil	305-405	Major Phil Move (3)
Psy	319	Mem & Cog Proc (3)

Electives: 12

Choose four courses from the following list:

Anth	461	Comm & Cult (3)
OR		
Engl	442	Contemp Engl Ling (3)
CS	316	Prog in Lisp & Prolog (3)
CS	431	Database Mgmt (3)
Math	320	Linear Algebra (3)
Math	460	Appl Multivar Stat (3)
Phil	211	Formal Logic (3)
Psy	410	Physiological Psy (3)
Psy	411	Tech in Physiological Psy (1)
Psy	418	Comp Cognition (3)

Soc 438 Soc of Knowledge (3)
 Minor Total: 24

Minor in Combined Science

The combined science minor at NMHU allows students to select courses in two or more of the science fields to include behavioral science, computer science, math, life science and/or physics. Also, students are advised to remember that the university requires that all minors contain at least 12 credit hours of courses at the 300 to 400 level. A minor in combined science may be used to satisfy the university requirements for the bachelor of science degree of a minor in a science field.

Required courses: 28

Complete at least 28 credits in courses from at least two of the science fields (not to include the field of the major) with at least eight credits in two of the fields selected. The science fields are biology, chemistry, environment science, engineering, natural resources management, geology, computer science, mathematics, physics, psychology, and sociology/anthropology. The selection of courses in the combined science minor must be approved by the student's bachelor of science major advisor.

Minor Total: 28

Major in General Science for Secondary School Teachers

(Grades 7 – 12)

The purpose of the major is to provide science teachers in training with a fundamentally strong background in the basic sciences. Therefore, a greater pool of talent in the field of science education will be created, from which surrounding middle schools and high schools can draw. The program has been designed to emphasize the fundamental understanding of both physical and life sciences. Courses will be selected from such areas as environmental science, biology, geology,

naturalresourcesmanagement,chemistry,and physics.

The objectives of the general science major are to:

- Provide science teachers in training with a multi disciplinary program that will adequately prepare them to teach the science courses expected in middle school and high school science programs.

- Train science teachers to develop each of the competencies required by the State Board of Education for licensure in science education

Students must complete the NMHU Core Curriculum requirements, which should include a minimum of Math 140 and eight credits from the lab sciences listed below. Math 211 and Math 150 are required for the BS rather than a BA degree. The BS degree is recommended for students preparing to teach high school.

Required core: 49

Biol	211	Gen Biology I (4)
Biol	212	Gen Biology II (4)
Chem	211-215	Gen Chem/Lab I (5)
Chem	212-216	Gen Chem/Lab II (5)
Geol	101	Survey of Earth Sci (4)
Geol	102	Earth History (4)
Biol	420	Tchng Sci & Math in Sec Sch (3)
Phys	151-152	Algebra Physics I & II (8)
OR		
Phys	291-292	Calculus Phys I & II (10)
Biol	359	Fund Prin of Lab Safety (1)

OR

Chem	359	Fund of Lab Safety (1)
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Total Core: 49

Electives: 20

Select at least one course from at least four of the following five options for a minimum of 20 credits above the 300 level. In addition the student must undertake a minor in secondary education. Student must fulfill requirements for entrance to teacher preparation and

licensure. Please refer to the School of Education for details.

Biology

Biol	300	Genetics (4)
Biol	301	Gen Microbiology (4)
Biol	302	Animal Struct & Funct (4)
Biol	303	Plant Struct & Funct (4)
Biol	385	Biol Molecules (3)
Biol	389-390	Ecol & Lab (4)

Chemistry

Chem	321	Chem & Inst Meth of Analysis I (3) (Requires Chem 315 & Math 211 as co-requisites)
Chem	341	Org Chem I (3)

Geology

Geol	235-435	Sel Topics in Geol (1-4)
Geol	301	Env Geol (4)
Geol	315	Sed & Strat Palen (4)
Geol	320	Mineralogy (4)
Geol	321	Petrology (4)

Physics

Phys	235-435	Sel Topics in Phys (1-4)
Phys	300	Astrophysics (4)
Phys	305	Intro to Comp Phys (4)
Phys	311	Mechanics (3)
Phys	361	Modern Phys & Relativity (3)
Phys	380	Adv Lab I (4)

Major Total: 69

Minor in General Science For Elementary School Teachers

(Grades K – 5)

The purpose of the minor is to provide elementary school teachers in training with a fundamentally strong background in a variety of concepts in life science, physical science, and earth and space science. Courses will be selected from those areas listed below. Stu-

dents should consult with an advisor early in their academic career to select the appropriate courses and avoid possible problems with prerequisites or scheduling. Not all of the 300- or 400- level classes are offered every semester or even every year.

The objectives of the general science minor are to:

- Provide pre-service elementary teachers with a program that will adequately prepare and encourage them to teach the most fundamental science concepts to students at the elementary school level.
- Broaden the scope of science to elementary school teachers in training, so they will be well versed in all aspects of science and allowing them to develop methods in which to relay the content material to their students so that the students can fully understand the concepts.

Common core:

(To be completed in the first three semesters)

Chem	100	Chem for Non-Sci (4)
OR		
Chem	211-215	Gen Chem/Lab I (5)
For	105	Ecosystems & Humans (4)
OR		
Biol	211	General Biology I (4)
Biol	212	Gen Biology II (4)
Biol	491	Life Sci Colloquim (1)
OR		
Chem/Phys	450	Rsrch Sem (1 - 4)
Biol	359	Fund of Lab Safety (1)
OR		
Chem	359	Fund of Lab Safety (1)
Phys	105	Elementary Physics (4)
OR		
Phys	110	Survey of Astron (4)
Geol	101	Survey of Earth Sci (4)

Total Core: 22-23

Required (two courses from the following):

Biol	300	Genetics (4)
Biol	301	Microbiology (4)
Biol	302	Animal Struct & Funct (4)

Biol	303	Plant Struct & Funct (4)
Biol	389-390	Ecology/Lab (3)
Geol	301	Environ Geol (4)
Geol	320	Mineralogy (4)
ES	311	Water Resources & Monitoring (4)
ES	312	Water Supply & Pollution Control (4)

Students must also choose at least two credit hours from the following:

Selected Topics in (335/435) in Biology, Chemistry, Environmental Geology, Natural Resource Management, or Physics

Independent Study in (390/490) in Biology, Chemistry, Geology, Natural Resource Management, or Physics

Independent Research in (399/499) in Biology, Chemistry, Geology, Natural Resource Management, or Physics

Additional Required Credits: 10

Minor Total: 32-33

Note: This minor does not satisfy the Secondary School Endorsement requirements (grades 7-12) for the State of New Mexico.

College Survival Skills

Courses in college survival skills are offered to assist students in developing appropriate university-level skills. These interdepartmental courses focus on topics that provide supplemental instruction in library skills, reading comprehension, and general learning skills. A structured tutorial course is offered to assist individuals with particular academic problems. These developmental courses do not count toward the graduation requirement of 128 credit hours, nor do grades earned compute into a student's grade point average: developmental courses are numbered less than 100.

Interdepartmental Courses (InDp)

070. Academic Reading Enhancement (3)
Computer-aided skill development for academic reading. Includes comprehension,

vocabulary building, opinion vs. fact, critical reading and other reading enhancement skills. Linkages are made to actual college class work with regard to reading.

081. Structured Tutorial (1 – 3 VC)

Individual or small-group work in the tutorial laboratory or in the appropriate school. The course is open to students after the second week of classes each academic semester. Students may contract to complete individually formulated programs in one or more academic disciplines in which deficiencies have been identified. Credits are earned at the rate of 24 contact hours per credit hour. May be repeated with change of discipline emphasis.

101. Freshmen Seminar (3)

The NMHU Leadership Course is designed to ensure success for NMHU students. Freshmen will sharpen their study skills, become familiar with university resources, and improve academic inquiry and electronic access skills. An advanced/challenge section is available for students with strong academic skills.

107. Freshmen Seminar: SMET Section (3)

This freshmen course is intended to provide tools, techniques, hints, ideas, illustrations, examples, methods, procedures, processes, skills, resources, and suggestions in the areas of science, math, engineering, and technology. Prerequisite: Permission of instructor required.

131. Freshmen Seminar: Honors Section (3)

This section of the freshmen, or leadership course is designed for students who have a "B+" (usually 3.5 GPA) in high school, or for non-traditional students who offer other indications of above average ability. In it, students will have to do more of the presenting themselves, and study skills they have clearly already acquired will not be present. On the other hand they will have a few more guest speakers, and will also have to do a more complete life plan and graduation plan than most sections will be doing. Special attention will be paid to future Honors opportunities at

Highlands, in the context of major and career choices. Prerequisite: Permission of instructor required.

Cooperative Education Placement Practicum

234. Coop Educ Practicum (1 – 6 VC)

This course provides hands-on experience in a work assignment related to a student's academic field of study. This experience will give purpose and fulfillment to the learning direction of the student. Arrangements for practicum assignments should be made through the Career Services Office. Prerequisite: Successful completion of 30 semester hours and a 2.2 GPA.

434. Coop Educ Practicum (1 – 6 VC)

Open to upper-division students, this course provides hands-on experience in a work assignment related to a student's academic field of study. This experience will give purpose and fulfillment to the learning direction of the student. Arrangements for practicum assignments should be made through the Career Services Office. Prerequisite: Successful completion of 60 semester hours and a 2.5 GPA.

435. Selected Topics in Coop Educ Placement Practicum (1 – 6 VC)

Open to upper-division students, this course provides topics in interdisciplinary studies. The specific topic is stated when the course is scheduled.

ADMINISTRATION AND FACULTY

Administration

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William Taylor, Ph.D.	Dean, School of Business
J. Francisco Hidalgo, Ph.D.	Dean, School of Education
Alfredo Garcia, Ph. D.	Dean, School of Social Work
Judy Cordova	Dean of Students/Life and Support Services
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Ruben Aragon	Director of Library Services
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Jill Baskerville	Program Administrator/Instructor of Academic Center for Excellence
Geraldine Chavez	Director of Purchasing
Ernestine Clayton	Director, International Education
John Coca	Registrar/Director of Admissions
George DuFour	Director of Facilities Management
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Carlos Lovato	Director, Upward Bound
Stephen Martinez	Director, NMHU Center in Partnership with Santa Fe Community College and Northern New Mexico Community College
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Tino Pestalozzi	Controller
Bazan Romero	Director, Recruitment
Ivy Romero	Director, Institutional Research
Evonne Roybal-Tafoya	Director, Educational Outreach Services
Roland Salas	Director, Support Services
Ben Santistevan.	Director, Athletics
Eillen Sedillo	Director, Financial Assistance/Scholarships
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NOTES:

NOTES:

Academic Year	2005-2006	2006-2007
Fall Semester	2005	2006
**Early Registration	M-April 11-F-Aug 19	M-Apr 10-F-Aug 18
Classes Begin	M Aug 22	M Aug 21
Last Day to Register	F Sept 2	F Sept 1
Convocation		
Labor Day Holiday	M Sept 5	M Sept 4
Census	F Sept 9	F Sept 8
Mid-Term Exams	W-F Oct 12-14	W-F Oct 11-13
Fall Recess	M-T Oct 17-18	M-T Oct 16-17
*Last day to Withdraw	F Oct 28	F Oct 27
Fall Break	W-F Nov 23-25	W-F Nov 22-24
Final Exams	M-F Dec 12-16	M-F Dec 11-15
Semester Ends	M Dec 19	M Dec 18
Spring Semester	2006	2007
**Early Registration	M-F Nov 14-F-Jan 13	M-F Nov 13-F-Jan 12
MLK Holiday	M Jan 16	M Jan 15
Classes Begin	T Jan 17	T Jan 16
Last Day to Register	F Jan 27	F Jan 26
Census	F Feb 3	F Feb 2
Mid-Term Exam	W-S Mar 15-18	W-S Mar 14-17
Spring Break	M-F Mar 20-24	M-F Mar 19-23
*Last Day to Withdraw	F Mar 31	F Mar 30
Spring Recess	F-M Apr 14-17	F-M Apr 13-16
Final Exams	M-F May 8-12	M-F May 7-11
Commencement	S May 13	S May 12
Semester Ends	M May 15	M May 14
Summer Session	2006	2007
**Early Registration	M-Mar 6-F-June 2	M-Mar 5-F-June 1
Classes Begin	M June 5	M June 4
Last Day to Register	F June 9	F June 8
*Last Day to Withdraw	F June 30	F June 29
Independence Day Holiday	T July 4	W July 4
Final Exams	W-Thu-July 26-27	W-Thu-July 25-26
Semester Ends	M July 31	M July 30

