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

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

CAMPUS LOCATIONS

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

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

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

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

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banner Access</td>
<td>5</td>
</tr>
<tr>
<td>Calendar</td>
<td>6</td>
</tr>
<tr>
<td>Board of Regents and Administrative Officers</td>
<td>8</td>
</tr>
<tr>
<td>Faculty</td>
<td>9</td>
</tr>
<tr>
<td>History of Institution</td>
<td>11</td>
</tr>
<tr>
<td>Accreditation</td>
<td>12</td>
</tr>
<tr>
<td>Vision Statement</td>
<td>12</td>
</tr>
<tr>
<td>Mission Statement</td>
<td>12</td>
</tr>
<tr>
<td>Admission Policies</td>
<td>13</td>
</tr>
<tr>
<td>Regular</td>
<td>13</td>
</tr>
<tr>
<td>Non-Degree</td>
<td>14</td>
</tr>
<tr>
<td>Transfer Students</td>
<td>14</td>
</tr>
<tr>
<td>International Students</td>
<td>14</td>
</tr>
<tr>
<td>Re-Admission</td>
<td>15</td>
</tr>
<tr>
<td>Early Admission of HS Students</td>
<td>15</td>
</tr>
<tr>
<td>Concurrent Admission</td>
<td>16</td>
</tr>
<tr>
<td>Baccalaureate Programs</td>
<td>16</td>
</tr>
<tr>
<td>Classification of Students</td>
<td>16</td>
</tr>
<tr>
<td>Enrollment in Credit Courses</td>
<td>16</td>
</tr>
<tr>
<td>Transfer of Credit</td>
<td>17</td>
</tr>
<tr>
<td>Advanced Placement (AP)</td>
<td>17</td>
</tr>
<tr>
<td>CLEP</td>
<td>17</td>
</tr>
<tr>
<td>DSS/TANES</td>
<td>18</td>
</tr>
<tr>
<td>Complaint Procedure for Transfer Students</td>
<td>18</td>
</tr>
<tr>
<td>Payment Policy</td>
<td>19</td>
</tr>
<tr>
<td>Residency Regulations</td>
<td>19</td>
</tr>
<tr>
<td>Schedule of Tuition and Fees</td>
<td>19</td>
</tr>
<tr>
<td>Student Fees</td>
<td>19</td>
</tr>
<tr>
<td>Senior Citizens, tuition</td>
<td>19</td>
</tr>
<tr>
<td>Other Fees</td>
<td>20</td>
</tr>
<tr>
<td>Colorado Reciprocity</td>
<td>20</td>
</tr>
<tr>
<td>Western Undergraduate Exchange</td>
<td>20</td>
</tr>
<tr>
<td>Estimated Expenses</td>
<td>20</td>
</tr>
<tr>
<td>Refunds</td>
<td>21</td>
</tr>
<tr>
<td>Tuition and Fees</td>
<td>21</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>22</td>
</tr>
<tr>
<td>Room and Meal Plans</td>
<td>22</td>
</tr>
<tr>
<td>Transportation Fees</td>
<td>22</td>
</tr>
<tr>
<td>Course Cancellations</td>
<td>22</td>
</tr>
<tr>
<td>Bookstore</td>
<td>22</td>
</tr>
<tr>
<td>Graduation Fee</td>
<td>22</td>
</tr>
<tr>
<td>Dropping Courses</td>
<td>21</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>23</td>
</tr>
<tr>
<td>General Eligibility</td>
<td>23</td>
</tr>
<tr>
<td>Types of Aid</td>
<td>23</td>
</tr>
<tr>
<td>Scholarships</td>
<td>24</td>
</tr>
<tr>
<td>Other Types of Assistance</td>
<td>24</td>
</tr>
<tr>
<td>Satisfactory Progress</td>
<td>25</td>
</tr>
<tr>
<td>General Policies</td>
<td>25</td>
</tr>
<tr>
<td>Enrollment Services</td>
<td>26</td>
</tr>
<tr>
<td>Student Advisement</td>
<td>26</td>
</tr>
<tr>
<td>Course Placement</td>
<td>26</td>
</tr>
<tr>
<td>Advanced Placement</td>
<td>26</td>
</tr>
<tr>
<td>ACT Scores</td>
<td>26</td>
</tr>
<tr>
<td>English Requirements</td>
<td>26</td>
</tr>
<tr>
<td>Vertical Transfer</td>
<td>26</td>
</tr>
<tr>
<td>Enrollment Limitations</td>
<td>27</td>
</tr>
<tr>
<td>Registration</td>
<td>27</td>
</tr>
<tr>
<td>Support Services</td>
<td>27</td>
</tr>
<tr>
<td>Changes in Enrollment</td>
<td>27</td>
</tr>
<tr>
<td>Math Center</td>
<td>27</td>
</tr>
<tr>
<td>Personal and Career Development</td>
<td>28</td>
</tr>
<tr>
<td>Writing Center</td>
<td>28</td>
</tr>
<tr>
<td>Tutorial Program</td>
<td>28</td>
</tr>
<tr>
<td>Student Activities</td>
<td>25</td>
</tr>
<tr>
<td>Photo ID</td>
<td>25</td>
</tr>
<tr>
<td>Children on Campus</td>
<td>25</td>
</tr>
<tr>
<td>Insurance</td>
<td>25</td>
</tr>
<tr>
<td>Auxiliary Services</td>
<td>29</td>
</tr>
<tr>
<td>Residence Halls</td>
<td>29</td>
</tr>
<tr>
<td>Transportation Services</td>
<td>29</td>
</tr>
<tr>
<td>Food Services</td>
<td>29</td>
</tr>
<tr>
<td>Bookstore Services</td>
<td>29</td>
</tr>
<tr>
<td>Library Services</td>
<td>29</td>
</tr>
<tr>
<td>Parking</td>
<td>30</td>
</tr>
<tr>
<td>Speed Limits</td>
<td>30</td>
</tr>
<tr>
<td>Adult Basic Education (ABE)</td>
<td>30</td>
</tr>
<tr>
<td>High School Equivalency Program (HEP)</td>
<td>30</td>
</tr>
<tr>
<td>GED Testing</td>
<td>30</td>
</tr>
<tr>
<td>Educational Opportunity Center (EOC)</td>
<td>30</td>
</tr>
<tr>
<td>Service Learning</td>
<td>30</td>
</tr>
<tr>
<td>Success, Opportunity, and Learning (SOL)</td>
<td>30</td>
</tr>
<tr>
<td>Community Services / Continuing Education</td>
<td>31</td>
</tr>
<tr>
<td>Student Records</td>
<td>31</td>
</tr>
<tr>
<td>Access to Records</td>
<td>31</td>
</tr>
<tr>
<td>Directory Information</td>
<td>32</td>
</tr>
<tr>
<td>Solomon Amendment</td>
<td>32</td>
</tr>
<tr>
<td>Restriction of Access</td>
<td>33</td>
</tr>
<tr>
<td>Transcripts</td>
<td>33</td>
</tr>
<tr>
<td>Obtaining/Sending Transcripts</td>
<td>33</td>
</tr>
<tr>
<td>Change of Name</td>
<td>33</td>
</tr>
<tr>
<td>Academic Information</td>
<td>33</td>
</tr>
<tr>
<td>Grading System</td>
<td>33</td>
</tr>
<tr>
<td>Administrative Withdrawals</td>
<td>34</td>
</tr>
<tr>
<td>Grade Changes</td>
<td>35</td>
</tr>
<tr>
<td>Grade Point Average (GPA)</td>
<td>35</td>
</tr>
<tr>
<td>Issuance of Grades</td>
<td>35</td>
</tr>
<tr>
<td>Repeating Courses</td>
<td>35</td>
</tr>
<tr>
<td>Attendance</td>
<td>35</td>
</tr>
<tr>
<td>Scholastic Standards</td>
<td>35</td>
</tr>
<tr>
<td>Good Standing</td>
<td>36</td>
</tr>
<tr>
<td>Dean’s List</td>
<td>36</td>
</tr>
<tr>
<td>Plagiarism</td>
<td>36</td>
</tr>
<tr>
<td>Academic Probation</td>
<td>36</td>
</tr>
<tr>
<td>Academic Suspension</td>
<td>36</td>
</tr>
<tr>
<td>Student Appellate Process</td>
<td>36</td>
</tr>
<tr>
<td>Admission/Re-Admission</td>
<td>36</td>
</tr>
<tr>
<td>Residency Classification</td>
<td>37</td>
</tr>
<tr>
<td>Academic Forgiveness</td>
<td>37</td>
</tr>
<tr>
<td>Suspension</td>
<td>37</td>
</tr>
<tr>
<td>Financial Aid</td>
<td>37</td>
</tr>
</tbody>
</table>
ACADEMIC DEPARTMENTS

FINE ARTS ................................................................. 48
Art (AA) ................................................................. 49
Film Technician (Cert.) ................................................. 51
Flamenco Dance (AA) .................................................. 52
Flamenco Music (AA) .................................................. 54
Music (AA) ................................................................. 56
Classical Guitar (BA) .................................................. 58
Jazz (BA) ................................................................. 61
Southwest Folk Art (AA) ................................................ 64
Theatre (AA) ............................................................... 66
Technical Theatre (AA) ................................................ 68

BUSINESS AND OFFICE ADMINISTRATION .................. 70
Accounting (AAS) ...................................................... 71
Bookkeeper (Cert.) ..................................................... 72
Business Administration (BA) ...................................... 73
Business Administration (AA) ...................................... 77
Property Management (Cert.) ...................................... 79
General Business (AAS) ............................................. 80
Management Information Systems (BBA) ....................... 81
Management Information Systems (AA) ......................... 84
Office Administration (AAS) ........................................ 86
Administrative Assistant (Cert.) ................................... 87
Clerk Receptionist (Cert.) ........................................... 88
Legal Office Professional (Cert.) ................................ 89
Medical Office Professional (Cert.) .............................. 90
Hospitality, Tourism and Restaurant Management (Cert.) 91
Cosmetology (AAS) .................................................... 93
Barbering (AAS) ....................................................... 94
Barbering (Cert.) ....................................................... 95
Cosmetology (Cert.) ................................................... 96
Cosmetology Instructor (Cert.) ................................... 96
Esthetician (Cert.) ..................................................... 97
Manicurist/Pedicurist (Cert.) ....................................... 97
Manicurist/Esthetician (Cert.) ..................................... 98

CAREER AND TECHNICAL EDUCATION (ER) .............. 100
Adobe Construction (Cert.) ....................................... 100
Auto Body Repair (AAS) .......................................... 101
ABR - Refinishing (Cert.) .......................................... 102
ABR - Non-Structural Analysis and Damage (Cert.) ...... 103
ABR - Estimation of ABR (Cert.) ............................... 104
Automotive Technology (AAS) ................................... 105
Automotive Service Fundamentals (Cert.) ..................... 106
Automotive Mechanical Repair (Cert.) ......................... 107
Construction Trades Technology (AAS) ....................... 108
Construction Trades Management (AAS) ..................... 109
Electrical Technology (AAS) ....................................... 110
Electrical Technology (Cert.) ..................................... 111
Fiber Arts/Weaving (AAS) ........................................... 112
Fiber Arts/Weaving (Cert.) ......................................... 113
Machining Technology ............................................. 114
Plumbing Technology (AAS) ....................................... 115
Plumbing Technology (Cert.) ..................................... 116
Renewable Energy (AAS) ......................................... 117
Renewable Energy (Cert.) ......................................... 118
Spanish Colonial Furniture Making (AAS) ................... 119
Spanish Colonial Furniture Making (Cert.) ................. 120
Visual Communications (AAS) ................................... 121
Welding Technology (AAS) ....................................... 122
Welding (Cert.) ....................................................... 123
Wildland Fire Science (AAS) ..................................... 124
Computer-Aided Drafting (AAS) ................................. 126
Computer-Aided Drafting (Cert.) ............................... 127

COMMUNICATIONS, HUMANITIES & SOCIAL SCIENCES ... 128
Criminal Justice (AA) ............................................... 129
General Studies (AA) .............................................. 131
Human Services in the Social Sciences (AA) ................. 133
Human Services (AA) .............................................. 135
Library Technology (AAS) ........................................ 136
Library Technology (Cert.) ........................................ 137
Police Science (AAS) ............................................... 138
Pueblo Indian Studies (AA) ......................................... 139
Residential Assistant (Cert.) ..................................... 141
Southwest Studies (AA) ............................................ 142
Substance Abuse Counselor (AA) ............................... 144
Substance Abuse Counselor (AAS) ............................ 146

COLLEGE OF ENGINEERING ........................................ 147
Information Engineering Technology (AEng) ................. 148
Software Engineering (AEng) .................................... 149
Pre-Engineering (AEng) .......................................... 150
Information Engineering Technology (BEng) ............... 151
Software Engineering (BEng) ................................... 153
Mechanical Engineering (BEng) Solar Energy .............. 155
EDUCATION ................................................................................. 157
EARLY CHILDHOOD EDUCATION (AA) .............................................. 157
ELEMENTARY EDUCATION (AA) ...................................................... 160
ELEMENTARY EDUCATION (BA) ....................................................... 161
ALTERNATIVE LICENSURE PROGRAM ........................................ 164
Elementary (K-8) (Cert.) .......................................................... 164
Secondary (7-12) (Cert.) .......................................................... 164
Special Education (Cert.) .......................................................... 165

HEALTH OCCUPATIONS .............................................................. 166
ALLIED HEALTH (AAS) ................................................................... 167
INTEGRATIVE HEALTH STUDIES (BS) ........................................... 168
MASSAGE THERAPY (CERT.) ......................................................... 171
MASSAGE THERAPY (AAS) .......................................................... 173
RADIOPHIC TECHNOLOGY (AAS) ................................................. 175
NURSING .............................................................................. 177
Practical Nurse (Cert.) ............................................................. 180
NURSELING (AAS) .................................................................... 181
NURSELING (AS) .................................................................... 183
Nursing Completion Program RN to BSN ................................ 185

COLLEGE OF MATH AND SCIENCE ............................................. 188
Biology (AS) ........................................................................ 188
Biology (BS) ........................................................................ 191
Chemical Technician (AAS) ....................................................... 195
ENVIRONMENTAL SCIENCE (AAS) ............................................. 196
ENVIROMENTAL MONITORING (CERT.) ..................................... 197
ENVIRONMENTAL SCIENCE (BS) ............................................... 198
LABORATORY BIOTECHNOLOGY (AAS) .................................... 201
MATHEMATICS (BS) ................................................................. 202
NATURAL RESOURCES - RANGE ECOLOGY MANAGEMENT (AAS) ...... 205
Pre-Forestry (AAS) ................................................................. 206
RADIATION PROTECTION (AAS) ............................................... 207
SCIENCE (AS) .................................................................... 208

COURSE DESCRIPTIONS .............................................................. 209
Adobe Construction (ADOB) ...................................................... 209
ANTHROPOLOGY (ANTH) .......................................................... 210
Art (ART) ............................................................................. 210
Astronomy (ASTR) ................................................................. 212
Auto Body Repair (ABR) ......................................................... 212
Automotive Technology (ATEC) ............................................... 213
Biology (Biol) ..................................................................... 214
BUSINESS ADMINISTRATION (BA) ......................................... 217
Carpentry (CARP) ................................................................ 217
Chemistry (CHEM) ................................................................. 220
Civil Engineering (CE) .............................................................. 221
COMMUNICATIONS (COMM) .................................................. 221
Computer Science (CS) ........................................................... 222
Construction Trades (CONS) .................................................... 223
Cosmetology (COSM) .............................................................. 223
CRIMINAL JUSTICE (CJ) ............................................................ 224
DANCE (DANC) ................................................................. 225
DRAFTING (DRFT) ................................................................. 225
EARLY CHILDHOOD EDUCATION (ECE) .................................. 226
ECONOMICS (ECON) ............................................................... 227
EDUCATION (ED) ................................................................. 227
ELECTRICITY (ELEC) ............................................................ 231
ELECTRICAL, ELECTRONIC & COMPUTER ENGINEERING (EECE) . 231
ENGINEERING (ENG) ............................................................. 232
ENGLISH (ENG) ................................................................. 232
ENVIRONMENTAL SCIENCE (ES) .............................................. 233
FIBER ARTS (FA) ................................................................. 237
FIT (FIT) ............................................................................ 239
FORESTRY (FOR) ................................................................. 239
GEOGRAPHY (GEOG) ............................................................. 239
GEOLGY (GEOL) ................................................................. 240
HEALTH, PHYSICAL EDUCATION, AND RECREATION (HPER) .... 240
HEALTH SCIENCE (HSCI) ......................................................... 241
HISTORY (HIST) ................................................................. 243
HOSPITALITY, TOURISM, & RESTAURANT MANAGEMENT (HTRM) . 243
HUMANITIES (HUM) .............................................................. 244
HUMANITIES AND SOCIAL SCIENCES (HSS) ............................ 244
INFORMATION TECHNOLOGY (IT) ......................................... 245
INTEGRATIVE HEALTH STUDIES (IHS) ................................ 246
LAW ENFORCEMENT (LE) ....................................................... 249
LIBRARY TECHNOLOGY (LT) .................................................... 249
MACHINING TECHNOLOGY (MT) ............................................... 249
MASSAGE THERAPY (MAS) ....................................................... 250
MATERIALS SCIENCE (MATE) .................................................. 251
MATHEMATICS (MATH) ........................................................ 251
MECHANICAL ENGINEERING (ME) .......................................... 253
MUSIC (MUS) ................................................................... 253
NATURAL RESOURCES (NR) ..................................................... 257
NURSING (NURS) ................................................................. 257
OFFICE ADMINISTRATION (OA) .............................................. 259
PERSONAL DEVELOPMENT (PD) ............................................ 260
PHILOSOPHY (PHIL) ............................................................ 260
PHYSICS (PHYS) ................................................................ 261
PLUMBING (PLB) ................................................................. 261
POLITICAL SCIENCE (PSCI) ..................................................... 262
PSYCHOLOGY (PSY) .............................................................. 262
PUEBLO INDIAN STUDIES (PIS) ............................................... 263
RADIATION PROTECTION (RAD) ............................................ 264
RADIOTECNICAL (RAD) .......................................................... 265
READING IMPROVEMENT (RDG) ........................................... 266
RENEWABLE ENERGY (RE) .................................................... 266
SCIENCE, MATHEMATICS AND ENGINEERING TECHNOLOGY (SMET) . 267
SOCIOLOGY (SOC) ............................................................... 268
SPANISH (SPAN) ................................................................. 268
SPANISH COLONIAL FURNITURE MAKING (SCFM) .......... 269
SPECIAL EDUCATION (SPED) .................................................. 270
SPEECH (SPCH) ................................................................. 270
THEATRE (THE) ................................................................ 270
VISUAL COMMUNICATION (VC) ............................................ 271
WELDING (WELD) ............................................................... 272
WILDLAND FIRE SCIENCE (WFS) ............................................ 272
SPECIAL COURSES (TOPICS AND INDEPENDENT STUDY) .... 274
FULL-TIME STAFF ..................................................................... 275
CALENDAR FOR 2009-2010 ....................................................... 276
BANNER ACCESS

The following information is designed to assist both students and faculty in accessing the records they need from our Website

Students!
You can obtain your schedule, invoice, grades, transcripts, and more

Faculty!
You can enter your grades electronically, see your course rosters, class counts, student information, and more

www.nnmc.edu

Instructions (also on each page in Banner)

When you are in Northern’s homepage,
1. Click Banner Access
2. Click “Enter Secure Area”
3. Create your account beginning with this page. FOLLOW INSTRUCTIONS CAREFULLY
   1. In User ID, enter your student ID number with the 4 zeros
   2. In PIN, enter your birthday (mmddyy). This is temporary.
   3. Click Login
   4. On “Login Verification Change PIN” page,
   5. Re-enter old PIN (your birthday)
   6. New PIN (enter 6 numbers that are NOT your birthday)
   7. On the next page, create a security question and answer
   8. Click on the menu item of your choice and continue.

Remember both your ID and PIN numbers!

Printing out your course schedule and invoice:

For your schedule
1. In the Main Menu, select Student & Financial Aid
2. Click Registration
3. Click Student Detail Schedule
4. Select the term of the course schedule you want
5. Click Submit
6. Print using the printer icon at the top

For your invoice
1. In the Main Menu, select Student & Financial Aid
2. Click Student Records
3. Click Account Summary by Term
4. Print using the printer icon at the top

Explore the other student records this website provides!

Notes about using Banner:
Only students who are currently enrolled at Northern can access their records online.
For security reasons, if you attempt to go into Banner a few times incorrectly, you will get an authorization failure message. You will need to visit Admissions and Records to reset your account.
Academic Calendar
2008-2009

Fall 2008

Suggested deadline to submit an Application for Fall 2008 ...................................... Friday, 25 Jul
Deadline to submit an Application for Fall 2008 ....................................................... Thursday, 21 Aug

Online Registration * ............................................ Monday, 14 Apr through Thursday, 21 Aug
Registration (Faculty Advisors Available) ........................................................... Saturday, 16 Aug
Convocation ......................................................................................................... Tuesday, 19 Aug
Registration (Faculty Advisors Available) ......................................................... Wednesday-Thursday, 20-21 Aug
Deadline to complete the payment process for Fall 2008 .................................. Thursday, 21 Aug
Last Day to Take Placement Tests Prior to Fall 2008 .............................................. Thursday, 21 Aug

Classes Begin ..................................................................................................... Monday, 25 Aug
Last Day to Change Schedule (Drops/Adds only) .................................................. Friday, 29 Aug
Holiday (Labor Day) ...................................................................................... Monday, 1 Sep
Last Day to Drop from a Full-Term Course with a Refund .................................... Friday, 5 Sep
Last Day to Change from CR-AU/AU-CR ......................................................... Friday, 5 Sep
Last Day to Receive a Refund for Texts in the Bookstore ....................................... Tuesday, 9 Sep
Last Day to Drop from a Full-Term Course without Record ................................... Friday, 12 Sep
Mid-Term Exams .......................................................................................... Saturday-Thursday, 11-16 Oct
Fall Break (no classes) .................................................................................. Monday-Tuesday, 20-21 Oct
Professional Development for Faculty and Staff (no classes) ......................... Wednesday, 22 Oct
Mid-Term Grades Due .................................................................................. Wednesday, 22 Oct
Last Day for Instructors to Initiate a Withdrawal ............................................... Friday, 31 Oct
Registration for Spring 2009 Begins * ............................................................. Monday, 10 Nov
Holiday (Veterans Day). no classes ................................................................ Tuesday, 11 Nov
Last Day to Withdraw from a Full-Term Course ............................................... Friday, 14 Nov
Deadline to Submit a Petition to Graduate for Fall 2008 ..................................... Friday, 14 Nov
Thanksgiving Break ....................................................................................... Thursday-Sunday, 27-30 Nov
Final Exams .................................................................................................... Saturday-Thursday, 13-18 Dec
Last Day of Term ............................................................................................ Friday, 19 Dec
Final Grades Due ............................................................................................ Monday, 22 Dec

* Faculty are available for advisement throughout each regular Fall and Spring semester, from the beginning of the term until final exams are scheduled. When faculty are unavailable, academic advisement is taken over by professional staff from the Student Advisement Center. Students are encouraged to meet with their advisors and to register online.

Those registering on the final day of registration pay an additional late fee of $5.00
Academic Calendar
2008-2009

Spring 2009

Suggested deadline to submit an Application for Spring 2009............................... Friday, 2 Jan
Convocation...................................................................................................... Tuesday, 13 Jan
Deadline to submit an Application for Spring 2009.......................................... Thursday, 15 Jan
**Online Registration** * ................................Monday, 10 Nov 2008 through Thursday, 15 Jan
Last Day to Take Placement Tests Prior to Spring 2009 ................................. Thursday, 15 Jan
Holiday (Martin Luther King Jr. Birthday)....................................................... Monday, 19 Jan
**Classes Begin**.......................................................................................... Tuesday, 20 Jan
Last Day to Change Schedule (Drops/Adds only).............................................. Friday, 23 Jan
Last Day to Drop a Full-Term Course with a Refund......................................... Friday, 30 Jan
Last Day to Change from CR-AU/AU-CR......................................................... Friday, 30 Jan
Last Day to Receive a Refund for Texts in the Bookstore ................................ Tuesday, 3 Feb
Last Day to Drop a Full-Term Course without Record ...................................... Friday, 6 Feb
**Mid-Term Exams**.................................................................................... Saturday-Thursday, 7-12 Mar
Mid-Term Grades Due....................................................................................... Tuesday, 17 Mar
Deadline to Submit a Petition to Graduate for Spring 2009 ............................... Friday, 23 Mar
**Spring Break**............................................................................................. Saturday-Friday, 14-20 Mar
Last Day for Instructors to Initiate a Withdrawal ............................................... Friday, 27 Mar
Last Day to Withdraw from a Full-Term Course................................................ Thursday, 9 Apr
Holiday (Good Friday).................................................................................... Friday, 10 Apr
**Registration for Summer and Fall 2009 Begins** * ...................................... Monday, 13 Apr
Final Exams................................................................................................. Saturday-Thursday, 18-23 Jul
Commencement Rehearsal............................................................................ Thursday, 14 May
**Last Day of Term** ..................................................................................... Friday, 15 May
Commencement Ceremony............................................................................. Saturday, 16 May
**Final Grades Due** ..................................................................................... Tuesday, 19 May

Summer 2009

Suggested deadline to submit an Application for Summer 2009.......................... Friday, 15 May
Deadline to submit an Application for Summer 2009........................................ Thursday, 28 May
**Online Registration** * ................................Monday, 13 Apr through Thursday, 28 May
Last Day to Take Placement Tests Prior to Summer 2009................................. Thursday, 28 May
Classes Begin............................................................................................... Monday, 1 Jun
Last Day to Change Schedule (Drops/Adds only).............................................. Wednesday, 3 Jun
Last Day to Change From CR-AU/AU-CR....................................................... Friday, 5 Jun
Last Day to Drop a Full-Term Course with 100% Refund................................. Friday, 5 Jun
Last Day to Receive a Refund for Texts in the Bookstore ................................ Monday, 8 Jun
Last Day to drop a Full-Term Course with 50% Refund .................................... Friday, 12 Jun
Deadline to Submit a Petition to Graduate for Summer 2009.............................. Friday, 12 Jun
Holiday (Independence Day)......................................................................... Friday, 3 Jul
Last Day to Withdraw from a Full-Term Course............................................... Friday, 10 Jul
**Final Exams**............................................................................................. Saturday-Thursday 18-23 Jul
**Last Day of Term** ..................................................................................... Friday, 24 Jul
**Final Grades Due** ..................................................................................... Tuesday, 28 Jul
BOARD OF REGENTS
Michael P. Branch .............................................................Chair
Dennis Salazar ......................................................... Vice-Chair
Theresa M. Martinez .................................. Secretary/Treasurer
Filiberto Martinez ........................................................ Member
Cecille Martinez-Wechsler......................... Member

CHIEF EXECUTIVE OFFICERS
Jose Griego, PhD ........................................................President
Thomas Garcia, MBA ............................... Executive Vice-President

ADMINISTRATIVE OFFICERS
Loretto Garcia, MA .........................Vice-President for Finance
Alfredo Montoya, MSW ....................... Dean of Student Services
Anthony Sena, PhD ........................................ Provost
David Trujillo, MA ....................... Dean of Grants Development

ADMINISTRATIVE DIRECTORS
Julia Abeyta, MS ....................... Native American Program
Linda Atencio, BA ............................. Purchasing
Julianna Barbee, MA ........ Small Business Development Center
Patricia Borrego, AAS .... Management Information Systems
Thomas Alvarez, BA ................. Public Information
Ida Carrillo, AA ... Asst. Dir. Small Business Development Ctr
Lorie Chapman .................... Facilities and Capital Projects
Mike Costello, MATE ... Admissions/Registrar
Jan Dawson, PhD ........ Assistant Director of Admissions/
                      Assistant Registrar
Kim Dickman, MA ................ Special Needs
Annette Garcia, MA .... High School Equivalency Program
Cecilia Garcia, MS .......... Food Science Technology
H. Guido Gellis, MA .......... Success, Opportunity & Learning
Connie Manzanares, AAS ... Assistant Dir. Financial Aid
Carlos Martinez, MA ........ El Rito Heritage Retreat Ctr
Daniel McLaughlin, PhD .......... Assessment
Enzley Mitchell IV, MA ........ Athletic Director
Frank Orona, MA ................. Recruitment
Nancy O’Rourke, MPA .......... Human Resources
Mateo Pumphrey, BA .......... CE/CS & Center for Arts
Carmella Sanchez, MS .......... Institutional Effectiveness
Alfredo Montoya, MSW .......... Financial Aid
Isabel Rodarte, MLS .......... Library
Hilario Romero, MA .......... Educational Opportunity Center
                          and Upward Bound Program
Paul Romero, BS ......................... ENLACE
Nancy Sharp, BA ...................... Development

ACADEMIC CHAIRPERSONS
Drucilla Duran, MA .......... Business and Office Administration
Alejandro Gonzales-Aller, PhD ....... Dean, College of Math
                           and Science
Catherine Berryhill, PhD .......... Dean, College of Education
Mellis Schmidt, PhD ........ Communications, Humanities, and
                           Social Sciences
Andres Salazar, PhD ............. Dean, College of Engineering
Ellen Trabka, MS .................... Health Occupations
Donna Winchell, MEd .......... Fine Arts

ACADEMIC PROGRAM DIRECTORS /
COORDINATORS
Robert Behrendt, PhD ....................... BBA
Camilla Bustamante, PhD .......... BS in Environmental Science
Bernadette Chavira-Merriman, JD Developmental Studies
Mike Costello, MATE .......... Off-Campus Instruction
Michael Frain, MS .............. Radiographic Technology
Meredith Garcia, PhD .......... BS in Biology
Rik Gonzales, Cert ................. CTE at El Rito
Jeffrey Hawkins, PhD .......... BS in Integrative Health Studies
Theresa Lopez, BSN ................. Nursing
Gilbert Sena, BS ..................... CTE at Espanola
### FULL-TIME FACULTY

<table>
<thead>
<tr>
<th>Name</th>
<th>University/Institute 1</th>
<th>Degree 1</th>
<th>Year 1</th>
<th>University/Institute 2</th>
<th>Degree 2</th>
<th>Year 2</th>
<th>University/Institute 3</th>
<th>Degree 3</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albert Amador</td>
<td>New Mexico Highlands University</td>
<td>PhD</td>
<td>1964</td>
<td>University of New Mexico</td>
<td>BS</td>
<td>1958</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walter Archuleta</td>
<td>University of New Mexico</td>
<td>BS, 1974; MA, 1981; PhD, 2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ray Auckermann</td>
<td>St. Louis University</td>
<td>BS</td>
<td>1971</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lori Baca</td>
<td>University of Phoenix</td>
<td>MBA</td>
<td>1992</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of New Mexico</td>
<td>BS</td>
<td>1989</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>David Barton</td>
<td>Pacifica Graduate Institute</td>
<td>MA, 2003; PhD, 2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Texas</td>
<td>BA</td>
<td>1995</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Robert Behrendt</td>
<td>University of New Mexico</td>
<td>BS</td>
<td>1970; MA, 1986; PhD, 1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barbara Benzaquen</td>
<td>University of New Mexico</td>
<td>BSN</td>
<td>1993; MSN</td>
<td>State University of New York</td>
<td>BS</td>
<td>1970</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catherine Berryhill</td>
<td>New Mexico State University</td>
<td>BS</td>
<td>1972; PhD, 2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of New Mexico</td>
<td>MA</td>
<td>1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camillla Bustamante</td>
<td>University of New Mexico</td>
<td>MA</td>
<td>1992; PhD, 2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Arizona University</td>
<td>BS</td>
<td>1986</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marcos Cavalcante</td>
<td>Indiana University</td>
<td>BM</td>
<td>1987; MM 1993; DM 1999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose Cavalcante</td>
<td>Indiana University</td>
<td>BA</td>
<td>1992; MA</td>
<td>PhD, 1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kalaiappan Chidambaram</td>
<td>Madurai Kamaraj University</td>
<td>PhD, 1992</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annamalai Univdrsity</td>
<td>BS</td>
<td>1984; MS</td>
<td>1986</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. Timothy Crone</td>
<td>Texas Tech University</td>
<td>BA</td>
<td>1969; MA</td>
<td>1971</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drucilla Duran</td>
<td>University of New Mexico</td>
<td>MA</td>
<td>1978</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern New Mexico University</td>
<td>BS</td>
<td>1969</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Betty Espinoza</td>
<td>Northern New Mexico Community College</td>
<td>AAS, 1995</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christina Esquivel</td>
<td>New Mexico Highlands University</td>
<td>BA</td>
<td>1987; MA</td>
<td>1994</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michael Frain</td>
<td>University of Phoenix</td>
<td>MS</td>
<td>2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Valley State College</td>
<td>BS</td>
<td>1986</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>George Washington University</td>
<td>AAS, 1982</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lori Franklin</td>
<td>California State University</td>
<td>BA</td>
<td>1986; MA</td>
<td>1989</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leonel Gallegos</td>
<td>New Mexico State University</td>
<td>BBA</td>
<td>1968; MBA</td>
<td>1970</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meredith Garcia-Mason, President-Faculty Senate</td>
<td>Tulane University School of Medicine: PhD 1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Mary’s Dominican College</td>
<td>BS</td>
<td>1984</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eric Gidney</td>
<td>Northern New Mexico Community College</td>
<td>AAS, 2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alejandro Gonzales-Aller</td>
<td>University of New Mexico</td>
<td>BS, 1986; MA, 1992; MS, 1994; PhD, 2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lucas Gonzales</td>
<td>University of New Mexico</td>
<td>BSN</td>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richard Gonzales</td>
<td>Northern New Mexico Community College</td>
<td>Cert, 1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richard Harlan</td>
<td>University of California</td>
<td>PhD</td>
<td>1977</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Illinois</td>
<td>BS</td>
<td>1973</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northwestern University</td>
<td>BA</td>
<td>1971</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cappie Hausman</td>
<td>University of New Mexico</td>
<td>BSN, 1997</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Angeles Pierce College</td>
<td>ADN, 1979</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeffrey Hawkins</td>
<td>Louisiana State University</td>
<td>PhD, 1972</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Chicago</td>
<td>MA</td>
<td>1968</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ajit Hira</td>
<td>University of Texas</td>
<td>BS</td>
<td>1985; MS</td>
<td>1987; PhD</td>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sat Kirpal Khalsa</td>
<td>University of California</td>
<td>BA</td>
<td>1962; PhD</td>
<td>1970</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siri Guru Nam Kaur Khalsa</td>
<td>University of New Mexico</td>
<td>BSN, 1999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pamela Lapcevic</td>
<td>Bard College</td>
<td>BA</td>
<td>1978</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivan Lopez</td>
<td>Instituto Tecnologico Y de Estudios Superiores de Monterrey</td>
<td>BA, 1997; MS</td>
<td>2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of New Mexico</td>
<td>PhD</td>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theresa Lopez</td>
<td>University of New Mexico</td>
<td>BSN, 1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karen Martinez</td>
<td>Northern New Mexico Community College</td>
<td>Cert, 1978</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denise Michel</td>
<td>National College of Chiropractic</td>
<td>DC, 1995</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Illinois University</td>
<td>BS</td>
<td>1991</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Marina Popova  
St. Petersburg State University: BS, 1995; MS, 1997; PhD, 2002

Emily Romero  
University of Denver: PhD, 2002  
Adams State College: BA, 1980; MA, 1987

Andres Salazar  
Michigan State University: PhD, 1967  
Herriot-Watt University: MBA, 1998  
University of New Mexico: BA, 1964; BSEE, 1964; MSEE, 1965

Louis Schiano  
Marquette University: PhD, 2001  
Villanova University: MA, 1990  
George Mason University: BA, 1988

Mellis Schmidt  
North Texas State University: MEd, 1976; PhD, 1986  
Texas Tech University, BS, 1969

Gilbert Sena  
University of New Mexico: BA, 1997

Karen Simpson  
University of Pittsburgh: MBA, 1989  
DePaul University College of Commerce: BS, 1983

Fangyang Shen  
Auburn University: PhD, 2008

Feng Shi  
University of Toledo: PhD, 2008  
University of Rochester: PhD, 2002  
Yunun Normal University: MS, 1991  
North West Normal University, BA, 1985

Daniel Tafoya  
Northern New Mexico Community College: Cert, 1995

Ernest L. Tafoya  
Albuquerque Technical Vocational institute: Cert, 1978

Jeffrey Toomey  
Hobart College: BS, 1974  
Pima Community College: AA, 1983

Ellen Trabka  
University of New Mexico: MS, 1995  
University of Michigan: BSN, 1985

Elaine Valdez  
Northern New Mexico Community College: Cert, 1988

Judith Vejvoda  
University of New Mexico: MA, 1998; MA, 1991  
University of Massachusetts: BA, 1980

Quentin Wilson  
University of New Mexico: BS, 1970

Donna Winchell  
University of Hawaii: BEd, 1972; BFA, 1972; MEd, 1973
HISTORY

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

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

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

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

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

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

Operating under its new name, the Technical-Vocational School expanded its curriculum and faculty and, in 1969, developed a campus in Espanola, approximately 30 miles from El Rito. In 1972, the school assumed the Practical Nurse program from St. Vincent’s Hospital in Santa Fe. Then, as educational needs in northern New Mexico evolved, educators and legislators began to feel a need for a more comprehensive delivery of educational services, in 1976 a task force was created to assess the feasibility of establishing a community college. The task force membership included representatives from the New Mexico Technical-Vocational School, the University of New Mexico, local school boards, and citizens. The recommendation of the task force was that the University of New Mexico-Northern Branch (at Santa Cruz) be dissolved and the delivery of academic course offerings be combined with those of the New Mexico Technical-Vocational School. The Legislature accepted the recommendations of the task force and provided for the expansion of the institution’s mission.

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

The new institution, the first community college in the state, was headed by a president appointed by the Board of Regents. The programs to be offered by the new institution included associate degrees in various academic and occupational disciplines, certificate-granting programs in occupational studies, special interest courses granting continuing education units (CEU’s), and other courses offered for no credit.
In 2004, legislative approval and accreditation was extended to Northern, permitting it to be the first community college in the state of New Mexico to offer a four-year degree, a BA in Elementary Education.

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

**ACCREDITATION**

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

In August 2004, our regional accrediting association (NCA) accredited Northern’s Bachelor of Arts in Elementary Education, as well as pre-accrediting whatever other undergraduate teaching degrees Northern would develop.

The 2005 change in name and return to the original mission of a teaching college caused Northern to seek and obtain (in 2006) a change in its scope of accreditation to cover all four-year degrees as they are developed to meet the needs of its communities.

In addition to regional accreditation, Northern’s educational offerings are accredited or approved by other agencies. The College’s occupational courses are approved by the New Mexico State Department of Public Education; the barbering, cosmetology, massage therapy, and nursing programs are approved by their respective state licensing boards; the Radiographic Technology program is accredited by the Joint Review Committee on Education and Radiographic Technology; and the associate-level business programs are accredited by the Association of Collegiate Business Schools and Programs.

State approval for benefits under Title 38 USC for veterans and other eligible persons has been granted by the New Mexico Veterans Service Commission.

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

**Vision Statement**

By the year 2010, Northern New Mexico will have six distinct college that each offer at least one baccalaureate degree and will be a regionally recognized college that will excel and expand in quality education while maintaining the community college mission.

**Mission Statement**

Northern New Mexico College provides accessible, affordable, community-based quality learning opportunities that meet the educational, employment, and enrichment needs of our culturally diverse region.

**Setting**

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

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

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

POLICY STATEMENT

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

ADMISSION CATEGORIES

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

Deadline for submission of applications

We strongly suggest that you submit your Application for Admission at least one month prior to the term in which you wish to enroll.

ADMISSION

General Policy

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

1. have received a diploma from a public or private high school/home school (*Home school graduates must be at least 16).

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

2. have received a General Education Development (GED) diploma; or

3. are a transfer student in good standing from another accredited college, university, or other post secondary institution; and

   * Admission in regular status amounts to “matriculation,” which is a formal acceptance by the college of your qualifications to pursue a degree or certificate. You may be matriculated at only one college at a time. Therefore, if you are already matriculated at, for example, New Mexico Highlands University, regular status at Northern would not be appropriate; you would then seek admission to Northern in Non-Degree status.

   Until all required transcripts are received at the Office of Admissions, your application will be in Incomplete status.

First-Time-Any-College (FTAC) Students

Applications from FTAC students who have demonstrated eligibility through HS or GED graduation will be processed as Incomplete until the applicants present adequate ACT scores or Course Placement Evaluations.

If you test into ENG 108N and MATH 100N or above, you will be admitted as a regular, degree-seeking student, making you eligible to receive financial aid (if you meet the requirements for such aid).

If you test into ENG 106 or PD 108N/L in math, you will be admitted as a regular, degree-seeking student and will be eligible to receive whatever financial aid you may be eligible for, but such aid will not pay for either of these two courses. However, if you are already enrolled in other courses that total 12 or more credits, you can add either or both of these courses and their tuition will be covered (only if you are classified as an in-state student) because Northern does not charge in-state students for credits between 13-18. If you are classified as a non-New Mexico resident, you would have to pay for those two courses.

If, however, you test below ENG 106N or below PD 108N/L, you will be admitted as a non-degree student. This will make you ineligible to receive financial aid. You may, though, enroll in certain courses which have no pre-requisites. You may also choose to retest. If you wish to retest, visit the Student Success Center to pick up brush-up materials before retesting.
Transfer Students

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

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

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

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

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

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

International Students

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

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

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

The Designated Service Officer at Northern is the Director of Admissions (mikec@nnmc.edu or 747-2193).

Declaring a Major and Changing a Major

If you are declaring a major for a certificate or associate degree, you will achieve matriculation (final admission status) when we have received official transcripts from every institution you have previously attended. If you have never attended college before, a copy of your high school or GED diploma will suffice. If you will be seeking financial assistance, you will have to supply an official transcript showing HS graduation or GED completion.

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

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

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

If you have stopped out, when you return to Northern you will have to submit a new application. At that time, no matter what major you declare, your eligibility status starts with that current catalog. You would no longer be eligible to follow any catalog you had previously been eligible for.

Non-Degree Students

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

If you are accepted in this status, you may later apply for regular status when you can demonstrate that you have met the requirements.

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

If you have previously been a student at Northern in other than concurrent or Dual Credit status and if it has been at least one academic year since your last attendance, you will have to re-apply for admission. If your status has not changed since your last attendance, no paperwork other than a new application will be necessary; however, if you are re-applying for regular status and have been to (an)other college(s) in the meantime, you must have an official transcript sent from each such college(s). When all required information has been received, the Office of Admissions will determine if you will need to provide Course Placement Evaluation scores before granting regular status. Until everything is in order, your admission status will be classified as Incomplete.

If you re-apply in Non-degree status, you need do nothing but compete the Non-degree Application Form.

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

ADMISSION OF HIGH SCHOOL STUDENTS

DUAL CREDIT ADMISSION

Dual Credit is a term used to define the relationship existing between public school districts and public colleges and universities in New Mexico. In order to avail yourself of this program, you must first meet with your high school counselor, complete the required forms, including Northern’s Application for High School students, and Course Placement Evaluations. If your district decides that you qualify and will permit you to take selected courses, your application packet will be sent to Northern for acceptance or denial based on Northern’s admission criteria. If accepted, you will be permitted to register, but only for those courses permitted by your school district, for which you will receive both credit toward college and high school. Those who qualify pay no tuition or regular fees and have their textbooks purchased by their district. They will, however, be responsible for other, course-related fees (lab, media, etc.).

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

EARLY ADMISSION of Public High School Students for Full-time Attendance

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

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

CONCURRENT ADMISSION

Concurrent admission is a term used to define a much looser relationship existing between public school districts and public colleges and universities in New Mexico. You will apply for Non-degree status and pay all tuition and fees, including textbooks. You must be a junior or senior and carry a cumulative GPA of 2.00 to qualify. It is up to the high school to determine if it will count the courses you take at Northern toward high school graduation.

ADMISSION FOR THOSE WHO DO NOT OTHERWISE QUALIFY

If you do not otherwise qualify for admission to Northern, you may provide a written appeal of Northern’s admission policies to the Director of Admissions, providing such evidence of as may be required by that official. If the Director of Admissions does not grant your appeal, you would then have the right to appeal to Northern’s Scholastic Standards Committee, a. Faculty Committee. If the committee hears your appeal, you must be present at the hearing. A favorable recommendation from that committee could permit admission in an appropriate status, with enrollment in courses determined by Course Placement Evaluation scores, if appropriate.
SPECIAL PROGRAM CRITERIA
Admission to the college does not carry with it admission to all certificate or associate degree programs of study. You should check with the department chairpersons (listed on page 8 of this catalog) or program directors of specific programs for admission criteria to their programs.

ADMISSION TO BACCALAUREATE PROGRAMS
See the standards for matriculation to each program as shown in the degree section of this catalog. In general, you must have completed at least the 35-credits of General Education Common Core, and have at least a 2.5 cumulative grade point average (excluding any remedial courses) before being eligible to apply for acceptance to these program.

Classification of Students
As a student, you are classified as a freshman, sophomore, junior, or senior based on the number of credit hours you have earned toward your declared degree. For all practical purposes, these credits include any remediation you may have taken. The breakdown on these classifications:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>1.0 to 32.9 crs</td>
</tr>
<tr>
<td>Sophomore</td>
<td>33.0 to 67.9 crs</td>
</tr>
<tr>
<td>Junior</td>
<td>68.0 to 100.9 crs</td>
</tr>
<tr>
<td>Senior</td>
<td>101.0 to 999.9 crs</td>
</tr>
</tbody>
</table>

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

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

See the Course Placement section under Advisement and Assessment Services.
Northern recognizes that there are many ways in which college credit may be amassed and, in an effort to maximize the opportunities available to its public, has adopted the following policies:

A. Academic credit * may be granted upon:

1. the completion * of any of Northern’s credit-bearing classes with a grade of “C” or better.

   * Academic credit in this context refers to credit accepted against the courses required for graduation in any particular program.

2. receipt at Northern of an official transcript from another regionally or nationally accredited college or university showing successful completion of an equivalent credit-bearing course. Grades from other institutions are not accepted, grades of TR are posted. At the time your admission status has been finalized with the receipt of all required college transcripts, your transcripts will be evaluated and appropriate credit posted to your official Northern record. See the end of this section for details concerning transfer of credit from accredited New Mexico public institutions of higher education.

Note: Northern does not indiscriminately accept courses in transfer. Only those courses which are required for graduation or to establish pre-requisites are considered.

3. receipt at Northern of official AP/CLEP/DSST scores which meet minimum cut-off scores listed below.

**Advanced Placement (AP):** minimum score = 3.0, except English, a 4.0.  

**AP Exam Title and credit allowable**

- Art History = ART 107 (3) & ART 211 (3)
- Biology = BIOL 201/L (4) & BIOL 202/L (4) *
- Calculus AB or BC = MATH 162 (4)
- Chemistry = CHEM 121/L (4) & CHEM 122/L (4) *
- Computer Science A = CS 132 (3); Computer Science B = CS 142 (3); Computer Science C++ = CS 200 (3)

Economics = ECON 200 (3)

English = ENG 111 (3) & ENG 112 (3)

Government & Politics = PSCI 200 (3)

Music Theory = MUS 102 (3)

Physics B = PHYS 121/L (4) & PHYS 122/L (4) *

Physics C = PHYS 215/L (4) & PHYS 216/L (4) *

   * must include lab experiences

Psychology = PSY 105 (3)

Spanish = SPAN 201 (3) & SPAN 202 (3)

Statistics = MATH 115 (3)

Studio Art = ART 110 (3): additional 3 credits available upon portfolio evaluation

US History = HIST 161 (3) & HIST 162 (3)

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

**College Level Examination Program (CLEP):** Subject examinations are administered by the Student Success Center. At the time of publication of this catalog, the fee is $70.00 per test (payable to CLEP), plus a $15.00 administrative fee (payable to Northern). Call (505) 747-2199 for details. These examinations are computer-based.

**CLEP Subject Exams**

- Principles of Management (46) .......................BA 240 (3)
- Introduction to Marketing (50) .......................BA 251 (3)
- Introduction to Business Law (50) ..................BA 300 (3)
- Principles of Macroeconomics (44) .................ECON 200 (3)
- Principles of Microeconomics (41) .................ECON 201 (3)
- Freshman College Comp. (44) .......................ENG 111 (3) *

   * Essay is required.

- Analysis & Interpretation of Lit. (50) .............ENG 112 (3)
- American History I (50) ............... HIST 161 (3)
- American History II (50) ................. HIST 162 (3)
- College Algebra (46) .........................MATH 130 (3)
- College Algebra (50) # .........................MATH 150 (3)

   # A score of 50 or better will earn credit for 130 & 150

- College Algebra/Trigonometry (61) ...........MATH 155 (3)

   * A score of 61 will earn credit for 150 & 155.

- Calculus w. Elem. Functions (47) ..............MATH 162 (3)
- American Government (50) .........................PSCI 200 (3)
- General Psychology (50) .........................PSY 105 (3)
- Human Growth & Development (50) .............PSY 290 (3)
- Introduction to Sociology (50) ................SOC 101 (3)
- College Spanish I & II (50) ..................SPAN 101/102 (6)
- College Spanish I and II (63) ^ ...............SPAN 201/202 (6)

   ^ A score of 60-65 will earn 6 crs.

- College Spanish I and II (63) ^ ...............SPAN 201/202 (6)

   ^ A score of 63 or better will earn 12 crs.
8. receipt of an acceptable transcript showing courses taught at foreign colleges or universities for which an adequate determination can be made by the Registrar as to the equivalency of the course content and the student’s satisfactory progress as based on Northern’s standards.

9. receipt of a current card showing certification for CPR (issued by the American Heart Association) or CPR/First Aid (issued by the American Red Cross). Credit will be given for our equivalent course.

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

Credit for non-required courses or for community service/continuing education (CEU) courses is not granted.

B. Aside from the residency policy which requires that the last fifteen (15) credits counted toward graduation be earned in residence at Northern (30 for a baccalaureate degree), no maximum limitation is imposed on the number of credits which may be accepted in transfer or by means of nationally standardized testing. Specific programs, however, may establish time cut-offs for the acceptance of credit which had been earned in the past. This is to ensure that the course competencies that you possess are not out of date. Such restrictions are clearly defined in Northern’s College catalog and/or in the individual program’s handbook.

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

COMPLAINT PROCEDURE FOR TRANSFER STUDENTS

All New Mexico public post-secondary institutions are required to establish policies and practices for receiving and resolving complaints from students or from other complainants regarding the transfer of coursework from other public institutions in the state. A copy of Northern New Mexico College’s complaint policy may be accessed on line at Northern’s website (www.nnmc.edu). Complaints not resolved at the lower level will be referred to Northern’s Scholastic Standards Committee. If you have not received satisfaction from internal college processes, you may complain to the New Mexico Higher Education Department, 1068 Cerrillos Road, Santa Fe, NM 87501-4295, (505) 827-7383 [http://hed.state.nm.us].
TUITION AND FEES

PAYMENT POLICY

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

Once you have registered for a class, you are liable for payment in full unless you drop the class within the period designated for a full (100%) refund. Failure to pay will result in your being billed, as well as in a failing grade.

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

You may pay any charges by cash, personal check, money order, online at www.nnmc.edu or by telephone. If you pay by phone (1-866-506-8031), you will be assessed a $3.00 service charge.

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

RESIDENCY REGULATIONS

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

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

SCHEDULE OF TUITION AND FEES

<table>
<thead>
<tr>
<th>New Mexico residents</th>
<th>All Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower division courses (1-2xx)</td>
<td>$36.72/credit *</td>
</tr>
<tr>
<td>Upper division courses (3-4xx)</td>
<td>$86.70/credit *</td>
</tr>
</tbody>
</table>

* For NM residents, charges are based on enrollment from 1-12 credits. When your enrollment exceeds 12 credits, you are not charged for those from 13-18; however, any credits over 18 result in tuition charges again being assessed.

<table>
<thead>
<tr>
<th>Non-New Mexico residents</th>
<th>All Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower division courses (1-2xx)</td>
<td>$86.70/credit</td>
</tr>
<tr>
<td>Upper division courses (3-4xx)</td>
<td>$367.20/credit</td>
</tr>
</tbody>
</table>

Charges for non-New Mexico residents are assessed per credit.

Student Fees

*Student Activity* fees are assessed at $1.50 per credit to a maximum of $18.00 per term * ($9.00 in a summer session). *Instructional Technology and Student Services* fees are assessed at $5.00 per credit to a maximum of $60.00 per term ($45.00 in a summer session). * These fees are based on enrollment from 1-12 crs. You are not charged these fees for credits between 13-18 credits; however, any credits over 18 result in the assessment of additional fees for such credits (NM residents only).

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

Media fees ($50 per course) and course fees (variable per course) are assessed as appropriate.

**Some exceptions**

SENIOR CITIZENS

1. If you are age 65 and above and are classified as a resident of New Mexico, you will be charged $5.00 per credit hour if you enroll for 6 credit hours or less in lower-division courses. If you enroll for more than 6 credit hours in lower-division courses, charges for credit hours in excess of 6 will be charged at the regular rate of $36.72 per credit.

2. You will be charged $12.00 per credit hour if you enroll for 6 credit hours or less in upper-division courses. If you enroll for more than 6 credit hours in such courses, charges for credit hours in excess of 6 will be charged at the regular rate of $86.70 per credit. New Mexico Senior Citizens are subject to all regular student fees.

[Updated May 2007]
Colorado Reciprocity

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

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

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

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

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

Western Undergraduate Exchange (WUE)

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

If you are a resident of one of the following states, you may be eligible to enjoy a tuition rate which is 150% of the in-state rate ($54.00 per lower-division credit and $127.50 per upper-division credit): Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Utah, Washington, or Wyoming.

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

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

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

OTHER FEES

Registration (non-refundable; each term) ............. $5.00
Late Registration (non-refundable; added. fee) $5.00
Graduation (non-refundable) + .................. $35.00
Additional diploma (ordered at the same time as first diploma) + .................. $7.50
Replacement diploma, each .................. $7.50
Lab/course fee ** .................. $20-30.00
Damage/key dep. (dorm residents) .................. $55.00
In-house examinations (per course) ........... $20.00
CLEP examinations (per course) .................. $15.00
Transportation between campuses ............ varies
(check each published schedule of classes)
Payment by phone .................................. $3.00
**The exact amount is designated in each schedule of classes.
+ The graduation fee of $35 covers all costs of graduation, including the diploma, diploma cover, cap & gown, etc.)
Additional diplomas in the same fiscal year (1 July - 30 June) are $7.50 each.

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

Tuition: see pertinent section about resident vs non-resident and lower-division vs upper-division rates.
Books, Supplies, and Equipment (avg.) ............. $300.00
Dormitory room
Single occupancy ...................................... $900.00
Double occupancy .................................... $650.00
Damage & key deposit ................................ $55.00
Board: 5-day meal plan ................................ $1,280.00
Personal ................................................ $650.00
Transportation ........................................ $600.00

SPECIAL ASSESSMENTS

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

TUITION AND FEES
Tuition and fees are refundable only upon receipt by the Business Office of a written notice of dropping or withdrawing. Such notice may be delivered online (with your Student ID constituting written request or, in lieu of such, a written declaration of intent. In the case a class in which you enrolled is cancelled, you need do nothing. Refunds are computed from the date of drop or withdrawal according to the following schedules.

<table>
<thead>
<tr>
<th>Percentage of Refund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Courses</td>
</tr>
<tr>
<td>(in weeks)</td>
</tr>
<tr>
<td>16-longer</td>
</tr>
<tr>
<td>12-15</td>
</tr>
<tr>
<td>9-11</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>6-7</td>
</tr>
<tr>
<td>3-5</td>
</tr>
<tr>
<td>1-2</td>
</tr>
</tbody>
</table>

Note:
1. No refund is made on regular or late registration fees, or in the case of disciplinary suspension or dismissal.
2. If you are dismissed for falsification of records, eligibility for refund will be entirely at the option of the College.
3. If you mail a notice of withdrawal, the rate of refund will be based upon the date the notice is received at the College.

DROPPING COURSES

Once you have registered, you may drop from any course without special permission by accessing our website at www.nmcc.edu. Click on MyNNMC, and follow the directions. If you do not have access to a computer and browser, you can drop by completing a Change of Schedule form or by submitting your intentions to the Registrar’s Office in some written form (with your signature). You may not drop a course by telephone, nor may anyone other than your instructor drop you from a course.

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

If you drop from a course within the refund period (the first two weeks of a regular fall or spring semester or the first week of a summer session), nothing will appear on your transcript to show enrollment. If you drop during the third week of a regular term (or after the first week of a summer session), no record will appear, nor will you receive a refund.

Dropping courses: deadline for full-term courses

<table>
<thead>
<tr>
<th>Courses whose length is</th>
<th>Deadline to drop is</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-7 days</td>
<td>before scheduled class</td>
</tr>
<tr>
<td>2 weeks</td>
<td>end 2nd day of course</td>
</tr>
<tr>
<td>3 weeks</td>
<td>end 1st week</td>
</tr>
<tr>
<td>4 weeks</td>
<td>end 2nd week</td>
</tr>
<tr>
<td>5 weeks</td>
<td>end 3rd week</td>
</tr>
<tr>
<td>6 weeks</td>
<td>end 4th week</td>
</tr>
<tr>
<td>7 weeks</td>
<td>end 5th week</td>
</tr>
<tr>
<td>8 weeks</td>
<td>end 6th week</td>
</tr>
<tr>
<td>9 weeks</td>
<td>end 7th week</td>
</tr>
<tr>
<td>10 weeks</td>
<td>end 8th week</td>
</tr>
<tr>
<td>11 weeks</td>
<td>end 9th week</td>
</tr>
<tr>
<td>12 weeks</td>
<td>end 10th week</td>
</tr>
<tr>
<td>13 weeks</td>
<td>end 11th week</td>
</tr>
<tr>
<td>14-16 weeks</td>
<td>end 12th week</td>
</tr>
</tbody>
</table>
Students Receiving Assistance Under TITLE IV Funds

If you are or will be receiving federal funds under Title IV during any period of enrollment and if during that time your enrollment is terminated (cancel your registration, withdraw, be expelled) or you stop attending classes before completing more than 60 percent of the enrollment period, you will be subject to repayment of all or a portion of that aid. The amount of aid which you might be subject to repay is determined by regulations as set in Section 484B of the Higher Education Act, which also specifies the order of return of the Title IV funds to the programs from which they were awarded.

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

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

Room and Meal Plan Refunds

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

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

Transportation Fee Refunds

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

Course Cancellation Refunds

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

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

Bookstore Refunds

Textbook purchases will be fully refunded within 10 working days from the start of classes. If you return purchases between 6-10 working days after classes start, you will be entitled to only 50% refund. For courses offered for a weekend and/or one week, you will have only until the first day of class to return for a full refund. Any purchases made after the 10 days will have only 48 hours to return for a full refund. New textbooks are fully refundable only when returned in the same condition as purchased. No book purchased during the week of mid-terms or finals will be refunded; however, you may sell them back at the end of the term during the book buy-back period. Shrink-wrapped books and books with disks may be non-refundable if the seal has been opened.

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

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

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

Graduation Fee Refunds

The $35 graduation fee (or $7.50 charge per extra or replacement diploma) is refundable only if the Registrar has denied the Petition to Graduate before any service has been rendered. Once any service has been rendered, no refund will be granted. If, after submitting your Petition to Graduate, you should decide not to graduate as scheduled, or if you fail to meet the requirements for graduation, or if you withdraw from a course required for graduation, you will receive no refund.
Northern is committed to ensuring that the opportunity for a post secondary education not be denied to any student because of that student’s limited finances. To fulfill this goal, Northern’s office of Financial Aid administers a broad spectrum of grants, scholarships, student employment, and loans to meet the financial need of all its students.

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

Applying for Financial Assistance
Submit an application for financial aid, preferably by March 1, to the Department of Education, using the Free Application for Federal Student Aid (FASFA). If your application is received after the deadline, it will be considered as funding permits.

GENERAL ELIGIBILITY REQUIREMENTS
You may apply for all federal, state or institutional programs available by completing the Free Application for Student Financial Assistance (FASFA).
To receive assistance under any program administered by Northern, you must:

1. meet United States citizenship requirements for federal aid and, for non-citizens, State requirements; and
2. establish financial aid eligibility; and
3. enroll in an eligible course of study on at least a half-time basis (six credit hours minimum), although Pell Grant recipients may be less than half-time; and
4. make satisfactory progress toward the completion of your program of study (refer to Satisfactory Program Requirement later in this section); and
5. not be in default on a Federal Perkins Loan or on a Federal Stafford Loan; and
6. not owe a refund on a Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, or a New Mexico Student Incentive Grant; and
7. have declared a specific degree or certificate major and have been admitted in regular status (See the section in this Catalog on “Admissions.”); and
8. meet New Mexico residency requirements for tuition purposes (as determined by the Higher Education Department and as administered by the College Director of Admissions) for New Mexico Student Incentive Grant, New Mexico College Work Study, and for Institutional Scholarships. (See the section in this Catalog on “Residency” on page 18)

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

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

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

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

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

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

Academic Competitiveness Grant (ACG): To be eligible for this grant as a first-year student, you must
have completed a rigorous secondary school program of study after 1 January 2006, and you may not have been previously enrolled while in high school as a regular student in an ACG eligible program.

As a second-year student, you must have completed a rigorous secondary school program of study after 1 January 2005 and have a 3.0 or higher GPA at the end of the first year.

National Smart Grant: In February 2006, Congress passed the Higher Education Reconciliation Act of 2005 (HERA). The national Science and Mathematics Access to Retain Talent (SMART) was established as part of that act. You are potentially eligible for this grant if you have declared and are actively pursuing (as demonstrated by pattern of coursework) one of the following majors: Computers, Engineering, Technology, Life Sciences, Mathematics, Physical Sciences, or Designated Critical Foreign Languages.

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

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

New Mexico Health Professions: Student Loan-for-Service Programs: Provides New Mexico residents with loans to complete nursing or radiology education programs and allow them to be repaid through service in a designated area that is under-served by licensed registered nurses or certified radiologists. To be eligible, the recipient must demonstrate financial need and enroll for six or more credit hours per semester. Updated May 2007

OTHER TYPES OF ASSISTANCE

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

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

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

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

Veterans Educational Benefits (The GI Bills): Most programs at Northern are approved by the Veterans Service Commission (Veterans Approval Office) for the education of veterans, war orphans, and other eligible persons. If you are eligible under one of the many current laws, contact Pam Montrose (747-2151) who is responsible for certifying to the VA the enrollment of eligible persons. [Updated May 2007]
SATISFACTORY ACADEMIC PROGRESS REQUIREMENTS

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

_Statements of specific, detailed requirements are given to each financial assistance recipient, and requirements for all assistance programs are available in the Office of Financial Aid._

The Higher Education Act of 1965, as amended, mandates institutions of higher education to establish policies to monitor the academic progress of students who apply for and/or receive federal financial aid. Northern makes its minimum standards applicable to all federal, state, and institutional financial aid programs for the purpose of maintaining a consistent policy for all financial aid applicants. Although this policy establishes the minimum standards for all financial aid programs at Northern, an individual aid program may have unique qualitative and/or quantitative standards specific to the program, as mandated by law or the program’s governing agency (e.g., Legislative 3% Scholarship and the Legislative Scholarship).

Updated May 2007

OUR STANDARDS

Minimum Standards of Satisfactory Academic Progress (SAP)

To retain eligibility, financial aid recipients must show satisfactory progress toward a degree or certificate based on the following qualitative and quantitative standards:

1. **Cumulative Grade Point Average (GPA)**
   
   You must meet the following cumulative GPA requirement:
   
   - Undergraduate students
     
     - 0-35 earned hours = 1.8 cumulative GPA
     - 36+ earned hours = 2.0 cumulative GPA

2. **Maximum Time Frame for Degree/Certificate Completion**
   
   You will be limited to the following number of attempted hours to complete your degree or certificate program:
   
   - Associate Degree = 120 attempted hours
   - Baccalaureate Degree = 201 attempted hours

3. **Successful Credit Hour Completion Rate**
   
   Each semester, your academic progress will be measured by comparing the number of attempted credit hours with the credit hours earned (i.e. received a grade of A, B, C, or D). This includes any course for which you have remained enrolled past the drop/add period. You must earn 70 percent of credit attempted to maintain academic progress.

   If your financial aid should be suspended and if you feel you have justifiable reasons for appealing, you may file a written appeal to the Director of Financial Aid. (See the appellate process under the section of this catalog dealing with “Student Appeals.”)

GENERAL POLICIES

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

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

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

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

You may receive financial aid for a maximum of 120 credit hours attempted for associate degrees and 201 for baccalaureate degrees. Transfer credit hours accepted toward a degree or certificate will be included in the maximum credit hours attempted.

If your financial aid should be suspended and if you feel you have justifiable reasons for appealing, you may appeal in writing to the Director of Financial Aid. (See the appellate process under the section of the catalog entitled “Student Appeals.”)
You may use student financial assistance for educational expenses only. If you withdraw, you may have to repay some funds. The amount of the repayment will be contingent upon your costs and the amount of assistance received. All refunds in repayment must be made before any future financial assistance may be disbursed.

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

**ENROLLMENT SERVICES**

**Student Advisement**

In order to ensure that you have the best chance to meet your individual goals and to be successful at completing the requirements for a degree or certificate, Northern has established a Student Advisement program, which is staffed by trained professionals who provide a full range of academic advisement to any person seeking assistance.

All first-time-at-Northern students must process through the Advisement Center prior to being allowed to register for classes. Continuing students are encouraged to use the Center’s services which include referrals for placement evaluations and course placement.

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

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

**Course Placement**

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

CPE is **mandatory** if you are a First-Time-Any-College student, are a re-admitted student, or a transfer student seeking regular admission status.

You can avoid the CPE process only if

1. you are a transfer student who has received grades of “C” or better in the equivalent of Northern’s MATH 130 or ENG 111 or higher; or

2. you can provide appropriate-level ACT or COMPASS evaluation scores which are no more than 2 years old.

3. you apply in non-degree status.

<table>
<thead>
<tr>
<th>ACT scores used for placement into courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range</strong></td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>English 18-20</td>
</tr>
<tr>
<td>21-36</td>
</tr>
<tr>
<td>Math</td>
</tr>
<tr>
<td>19-21</td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td>23-25</td>
</tr>
<tr>
<td>26-36</td>
</tr>
</tbody>
</table>

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

You may schedule one or more of these placement evaluations by visiting the Student Success Center or by calling 747-2199. If you are not satisfied with your scores, you may re-test, but you must wait 5 work days before being eligible to re-test.

**Special Needs**

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

**English Requirements**

If you are seeking a degree or certificate which requires ENG 111 (English Composition I), you should enroll in ENG 111 during the first year of study at Northern or consistently take English courses preparatory to ENG 111 until you have completed ENG 111 with a grade of “C” or better.
Vertical Transfer

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

Student Enrollment Limitations

In general, the maximum number of credits in which you may enroll in any semester is limited to 21 (9 in a summer session), subject to the following stipulations:
1. If you are on “academic probation,” you must have special permission from your advisor to enroll for more than 12 credits; and/or
2. If you wish to exceed the limit, you must have special permission from the Provost.

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

REGISTRATION

Registration for Summer and Fall begins in the middle of April; for Spring, in the middle of November. Registration closes the Thursday before the first day of class in a term. We encourage you to register as early as you can and to do so online (see page 280 for instructions).

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

Note: Regardless of when you register, you will be assessed an up-front, non-refundable fee of $5.00 (not covered as part of financial aid).

Enrollment Verifications

One of the services provided by the Office of Admissions and Records is that of verifying your enrollment to outside agencies. You may need this done in order to receive some benefit from such an agency, but only if we verify your enrollment in some official way, such as on a form or letterhead. Note that we are able to verify only what you have done or are now doing, not what you intend to do. In other words, you may register in May or July for Fall courses; however, we cannot certify your enrollment for courses before the first day of class in any given term.

CHANGES IN ENROLLMENT

Once you have registered for classes you may find it necessary or desirable to change your schedule. Northern permits such changes if they take place within the time frame specified in the published catalog and/or schedule of classes; i.e., the first week of a regular semester or the first two days of a summer session. This activity usually involves dropping from one class and enrolling in another; however, you may wish to just drop from one class or drop all classes. We encourage you to make these changes online; however, you can execute such changes by coming to the Office of Admissions & Records in person or by using regular mail/fax.

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

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

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

Math Center
Do you want help to improve your math skills? The Math Center, located in the Student Success Center, offers assistance through individual tutoring, study groups, and math tutorial software. To make an appointment or for further information, contact Steve Wold in the Math Center at 747-2276.

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

Writing Center
Do you want to improve your writing skills? If you feel challenged with your writing process, from brainstorming and organization to drafting and revising, the tutors at Northern’s Writing Center are available for one-on-one sessions throughout the week. Appointments are generally for half-hour working periods, concentrating on a single aspect of your personal writing process. The Writing Center is located in the Student Success Center. To make an appointment, for hours of operation, or further information, call the Writing Center (747-2294).

Tutorial Program
As a student at Northern, you are eligible for free tutoring in several academic subjects (with a special emphasis on reading, writing, and math). Both professional and peer tutors are used on either a one-to-one or small group basis to help you master course material or to overcome difficulties, understanding texts, preparing for exams, or developing good study habits. To take advantage of this service, contact Brenda Martinez in the Student Success Center (747-2199).

STUDENT ACTIVITIES

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

All student activities are coordinated by Student Government and the Student Support Services department. Activities range from social to athletic and cultural events. Opportunities exist for becoming a member of the Student Senate or for joining such varied clubs as the literary club, engineering club, etc., or for joining our honor society, Alpha Iota Sigma (a chapter of Phi Theta Kappa, the international honor society for two-year colleges; this is not a club).

You may obtain more detailed information about the Student Senate and college clubs by contacting the Director of Student Activities, Mr. Richard Sedillo (505-747-2287). For information about Phi Theta Kappa, contact Dr. David Barton (505) 747-2217.

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

You are required to present your student ID when requesting service from any Northern department.

Students who are officially enrolled in the Adult Basic Education or High School Equivalency Programs will be issued a photo ID, without charge, restricted only in terms of specific beginning and ending dates of their program (as established by the programs, but not to exceed the normal ending date of a term). Photo IDs will be issued to those enrolled in CE/CS courses which have a minimum length of seven weeks. Beginning and ending dates of the courses will be put onto the cards.

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

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

Information about available insurance programs and claims is available through the Coordinator of Student Activities (747-2287).

If you will be living in the College residence halls (dorms) and attending under a student visa, you are required to obtain health and accident insurance. In addition, students in some programs and/or courses must obtain specific types of insurance before enrolling. For further information, check with the Department Chairperson responsible for your particular major, such as Massage Therapy, Nursing, Radiologic Science, Cosmetology, etc.

AUXILIARY SERVICES

Residence Halls

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

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

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

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

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

Transportation Services

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

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

Food Services

Northern provides food services on both the El Rito and Espanola campuses. Students living in the residence halls at El Rito are required to purchase a meal plan contract (15 meals per week), and 30-day’s notice is required to change a meal plan contract. Students may change a meal plan contract only once per semester. If you believe your dietary needs cannot be met within the limits of our food services, you may appeal this policy through our Director of Special Needs (747-2152).

Bookstore Services

The College Bookstore at the Espanola campus provides full-service; however, only limited books/program supplies are available at the El Rito campus. Students should familiarize themselves with the Bookstore hours and policies which are posted at each campus. If you will be enrolling in Auto Mechanics, Barbering, Cosmetology, Electricity, Plumbing, Spanish Colonial Furniture Making, or Welding, you will need to order a kit at the time you register for classes.

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

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

Library Services

The main library facility is at Northern’s Espanola campus; materials appropriate to El Rito programs are available in the library facility on the El Rito campus. A Northern ID card is required to borrow materials but the facilities are open to students, faculty, staff and the community for quiet study, research, viewing of audiovisual materials, and computer usage. Only five books in one subject area may be checked out at one time. Subscription library databases consisting of full text journal articles in various disciplines are made available in the library facility. Electronic books are also available. These databases and ebooks are available remotely twenty-four hours daily, seven days a week; however, Northern ID numbers are required to gain access to them from remote sites. All of these options are available through the Northern Library website, including the library book catalog.

Those community members who are not enrolled as students must pay an annual library-use fee to have borrowing privileges. In addition, New Mexico Highlands University students must pay a fee of $25.00 per term to cover use of Northern’s library and computer labs.
The Library provides orientation sessions for class groups and/or individualized instruction on the use of library database utilization. In addition, the library provides a copy machine, computers for library database access as well as Internet access and Microsoft Office products, a group study room, an audiovisual viewing and listening space, Interlibrary loan and reciprocal borrowing privileges. Library staff also provide assistance with finding research information.

For detailed information, look on Northern’s website under “Library” or call (505) 747-2243.

Parking

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

On-Campus Speed Limits

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

OTHER SERVICES AVAILABLE

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

Adult Basic Education (ABE)

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

High School Equivalency Program (HEP)

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

GED Testing

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

New Mexico Educational Opportunity Center (EOC)

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

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

Service Learning

Service Learning at Northern includes a teaching method that is currently used in several classes within the General Education component of instruction. Service Learning projects combine community service with classroom instruction, focusing on critical, reflective thinking as well as personal and civic responsibility. Faculty who use the service learning method involve students in activities that address local needs. In this way, students develop their academic skills with a commitment to their communities. While there is presently no graduation requirement involving service learning, using the service learning method addresses one of the college’s six common learning goals: “to develop a community and social consciousness through service.”

Success, Opportunity, and Learning (SOL)

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

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

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

Continuing Education & Community Services (CE/CS)
This is the non-credit division of the College which operates to provide communities in our service area with special interest courses using conference, workshop, and seminar formats.

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

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

STUDENT RECORDS

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

Access to and Confidentiality of Student Records

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

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

   “Educational” records consist of any record (regardless of the media in which it exists) which is maintained by the College and which is directly related to you, the student, with the exception of the following types of records:
   a. Personal records kept by a faculty or staff member which have never been revealed or made available to another person unless to the maker’s temporary substitute.
   b. Employment records of an individual whose employment is not contingent on the fact that he is a student, provided that the record is used only in relation to the individual’s employment. Transcripts submitted for the purposes of employment are not part of your educational record.
   c. Records maintained by a college security unit if the record is maintained solely for law enforcement purposes, is revealed only to law enforcement agencies of the same jurisdiction, and the unit does not have access to education records maintained by the college.
   d. Alumni records which contain information about you after you are no longer in attendance at the College and the records do not relate to you as a student.

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

3. Your records will not be released without your written consent, except to college officials with a legitimate educational interest.
   a. A college official is one who is employed by
Northern in an administrative, supervisory, or support staff position (academic or research), is a member of the Board of Regents; or is employed by or is under contract to the College to perform a special task, such as, perhaps, an attorney or auditor.

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

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

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

b. Access to certain officials of the U.S. Department of Education, the Office of Veterans Affairs, the Bureau of Homeland Security, and state and local educational authorities in connection with certain state or federally supported education programs.

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

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

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

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

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

h. Access to comply with a judicial order or a lawfully issued subpoena, although the college has an obligation to make a reasonable attempt to give you prior notice before complying with the subpoena. An exception to the “reasonable attempt” exists when the subpoena is issued for a federal grand jury or for law enforcement purposes.

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

Notwithstanding other exceptions, certain personal information, called Directory Information, may be released without your written authority. This includes your name, mailing address, major field of study, classification, enrollment status (full- or part-time), dates of attendance, participation in officially recognized activities and sports (including weight, height or photograph of athletic team members), honors and degrees awarded, and the name of the education agency or college attended immediately prior to coming to Northern.

In addition to the release of information permitted under FERPA guidelines, the National Defense Authorization Act of 1995, the National Defense Authorization Act for 1996, and the Omnibus Consolidated Appropriations Act for 1997 allow the Department of Defense (under special authority granted under what is called the Solomon Amendment) to request the following information about you under its own special definition of “directory information.” This exception has been created in order to permit the Secretary of Defense access to particular information to use for recruitment purposes: Your name, address, telephone listing, date of birth, level of education, academic major, degrees received, and the name of the educational institution in which you had been most recently enrolled (prior to enrollment at Northern). The only students excluded under this definition are those who are under the age of 17 and those 17 or older who have signed a written request denying access to their records by a third party. Also excluded are those above the age of thirty-five.

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

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

Directory Information

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

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

Transcripts
Obtaining a Northern transcript or having a transcript sent on your behalf:
In order to obtain a transcript for yourself or to have one sent to someone else (to a person, agency, or school), you must submit a written request to the Registrar’s Office. You may pick up a form at the Registrar’s Office, write/fax a letter, or even request a transcript by e-mail (for which, visit our website. If you have questions, please call 747-2111. A copy of the request form can be found on our website at www.nnmc.edu.

We ask that you not take advantage of our no-cost service by keeping the number you request at any one time down to not more than six copies.

Each transcript will be issued at no cost. However, no transcripts will be issued unless all institutional obligations are paid (including loans issued through the instrumentality of Northern).

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

Change of Name
If you wish to process a change of name for your academic record, you must bring appropriate documentation (at least two types of identification showing the new name) to the Office of Admissions and Records. Examples of such documentation include a marriage certificate, birth certificate, or court order for legal name change. A name change will be processed only if you are a currently enrolled student. Name changes are not made for alumni.

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

ACADEMIC INFORMATION

GRADING SYSTEM
Since it became a college in 1977, Northern has used a letter-grade system based on 4.00 points: thus an A = 4.00, a B = 3.00, a C = 2.00, a D = 1.00, and an F = 0.00.

Beginning with Fall 2008, Northern has adopted a fractional grading system. Following are the allowable grades and associated grade points:

- A+ 4.33
- A 4.00
- A- 3.67
- B+ 3.33
- B 3.00
- B- 2.67
- C+ 2.33
- C 2.00
- C- 1.67
- D+ 1.33
- D 1.00
- D- 0.67
- F 0.00

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

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

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

- TR - a grade used to show that credit has been accepted in transfer for a course taken at other than Northern or is the entry posted in cases of “test out.”
The following grade entries have no effect on your cumulative grade point average nor do they count towards credits earned:

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

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

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

**Special note:**

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

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

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

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

**Administrative Withdrawals**

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

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

**Grade Changes**

A change in grade or a correction of an improperly reported grade may normally be made only by the
originating instructor who must complete the proper form (which includes submitting justification for the change), obtaining the required signatures of approval, and delivering the completed form to the Registrar. If you wish to challenge a grade, refer to the section of this catalog dealing with appeals of grades, or contact the Registrar for details (747-2193). If the grade you question has been issued by a former instructor (full-time or part-time) who is no longer employed by Northern, you should first contact the chairperson responsible for that department.

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

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

Issuance of Grades
Because all grades are available online, Northern mails mid-term grade reports only to those who specifically make such a request of the Registrar based on their lack of access to a computer or the skills necessary to access their records on-line. [16 August 2007]

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

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

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

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

Attendance
You are expected to attend all meetings of courses in which you have enrolled. The opportunity to make-up class work or examinations missed through absences is at the discretion of the instructor.

Each instructor establishes attendance requirements for the course and informs students in writing at the beginning of the course by providing them with a copy of the course syllabus.

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

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

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

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

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

Regulations governing academic probation and suspension are based on the 2.00 minimum cumulative GPA which is required to graduate from any certificate or degree program offered by Northern. A semester of course work with less than a 2.00 GPA results in a deficiency which must be removed in succeeding semesters if you are to graduate or successfully transfer to another college or university.
Good Standing
You are considered to be in “good (academic) standing” if your cumulative GPA is at or above 2.0.

The Dean’s List
At the end of each fall and spring semesters, the “Dean’s List” is announced as the official recognition of outstanding academic accomplishments. Only full-time students who are pursuing a declared major and who have earned a semester GPA of at least 3.50 over a minimum of 12 credit hours (excluding any courses labeled as remedial) are eligible for this honor.

The entry “Dean’s List” will be posted to your transcript and your name will be released to your hometown press.

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

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

If you should find that you are on Probation, you may continue to enroll, but you must maintain a semester GPA of 2.00 or higher, and you will not be permitted to enroll in more than 12 credit hours of course work during a regular semester or more than 6 credit hours during a summer session without special permission from the Provost.

As you continue to raise your GPA, your status would be recorded as Continued Academic Probation until you have achieved a cumulative GPA of 2.00 or higher.

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

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

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

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

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

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

STUDENT APPEALS
As a student, you may appeal any policy decision or administrative decision which you feel has been arbitrarily or improperly rendered. A special committee, the Student Appeals Committee, has been created to handle all such appeals excepting appeals of grades received, academic forgiveness, and suspension.

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

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

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

Admission / Re-Admission or Residency Classification
If you have applied to the College for admission, re-admission, or for classification of residency and believe that the Office of Admissions and Records has not adequately fulfilled its responsibilities in any of these areas, you may appeal by:
1. Providing the Director of Admissions with a letter of appeal, stating in detail what you believe to be inappropriate or incorrect with the decision. If the Director of Admissions upholds your appeal, you will be admitted or re-admitted, as appropriate, or your residency classification adjusted. If the Director of Admissions denies your appeal, you may appeal to the Scholastic Standards Committee.

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

**Academic Forgiveness**

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

The criteria for exercising this possibility:

1. The term(s) for which you seek forgiveness must have happened at least three years prior to your formal request for forgiveness, and your semester GPA at that time for each term involved must have been below 2.00; and

2. The terms involved are limited to your first or first two terms at Northern; and

3. Since returning to Northern, you must have completed at least 12 credit hours (spread over one or more terms) and must have a minimum cumulative grade point average of 2.00 over those courses completed after the period for which forgiveness is sought before applying for forgiveness; and

4. You must not yet have graduated from Northern.

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

**Suspension**

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

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

2. If the Director denies your appeal, you may appeal to the Faculty’s Scholastic Standards Committee, providing that Committee with a written summary of the situation and a detailed, specific statement of what you want. If the Committee recommendation is in your favor, it will be forwarded to the Director of Admissions for appropriate action.

**Financial Aid**

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

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

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

**Refunds**

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

1. Providing the Director of the Business Office with a letter of appeal, stating in detail what you believe to be inappropriate or incorrect with the decision. If the Director upholds your appeal, the refund will be adjusted
appropriately. If the Director denies your appeal, you may appeal to the Student Appeals Committee by providing that Committee with a written summary of the situation and a detailed, specific statement of what you want. The Committee recommendation will be forwarded to the Vice President for Finance for appropriate action.

GRADE APPEALS

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

1. Discuss the situation with the instructor who gave the grade. If the matter is not resolved to your satisfaction, you may appeal to the instructor’s immediate supervisor (usually the department chairperson, although some departments will have an intermediary step, the department director).

2. Provide the responsible department chairperson with a written summary of the situation and a detailed, specific statement of what you want. If the matter is not resolved to your satisfaction by the department chairperson, you may appeal to the Scholastic Standards Committee, a faculty committee.

3. Provide the Scholastic Standards Committee chairperson with a written summary of the situation and a detailed, specific statement of what you want. The Committee recommendation will be forwarded to the Provost for appropriate action.

STANDARD OF CONDUCT

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

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

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

General Requirements

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

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

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

Residency Requirements

3. For a certificate or associate degree program, you must have earned at least the last 15 credit hours towards an associate degree or certificate here at Northern; for a BA or BS degree, the minimum is the last 30 credit hours. Any exception to this must be cleared by the Registrar before your last term at Northern starts. Failure to comply may be grounds for denying acceptance of your courses in transfer.

4. You must complete a “Petition to Graduate” form. This includes obtaining sign-offs by your academic advisor and department head, payment of the required graduation fee, and submission of the form through various college departments, and finally to the Office of the Registrar. We ask that you finish this process no later than the end of the fourth week of the term in which you plan to graduate. The Registrar will conduct a further review of your records and, if the Registrar is satisfied, you will receive a letter which will confirm your candidacy for graduation.

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

Further, you must submit a properly and completely documented Petition-to-Graduate form within two years of the date on which you completed the program requirements. Failure to do so will be cause for Northern to deny graduation under an outdated catalog; you would have to reapply for admission and graduate under the term of the latest catalog. Updated May 2007

If you start a program and continue uninterrupted, you are entitled to graduate under the terms of the degree plan in the catalog in effect at the time of your initial written declaration of the major or under any later issued catalog, whichever is more beneficial to you. If, however, you interrupt your attendance by one or more regular semesters of non-attendance, you will be bound by the terms of the catalog in effect at the time of your latest re-admission to the College.

5. You cannot graduate if you owe a debt of any kind to the College or if your undergraduate admission status is incomplete.

6. Your diploma(s) will reflect the legal name under which you have been admitted to Northern. If you wish any other name to appear, you will have to document a legal change of name (as described in the section entitled “Change of Name”) prior to graduation.

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

Graduation with Honors

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

<table>
<thead>
<tr>
<th>Honor</th>
<th>GPA Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cum Laude</td>
<td>3.50 - 3.74</td>
</tr>
<tr>
<td>Magna Cum Laude</td>
<td>3.75 - 3.99</td>
</tr>
<tr>
<td>Summa Cum Laude</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Graduation with Mention of Honor Society Membership

If you are a member in good standing in Northern’s Alpha Iota Sigma chapter of Phi Theta Kappa, the international honor society for two-year colleges, your diploma will bear a gold seal with the imprint of the society, and your transcript will bear a notation which recognizes your membership. You will also be entitled to wear the Society’s honor regalia at graduation. See the chapter advisor for information on membership.
GENERAL CURRICULUM REQUIREMENTS

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

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

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

   Communications 6 #
   Humanities 3
   Math/Computer Science/Lab Science 6**
   Social/Behavioral 2
   18

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

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

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

The following are discipline areas acceptable for associate of applied science degrees. Only courses from these breakdowns may be used to satisfy the discipline requirement for General Education electives in an applied science degree (course numbers ending in an “N” may never be counted). For example, neither Education nor Criminal Justice are shown below; therefore, neither may be used as elective credits where any specific discipline allows “elective credit.” Also, note that although “Foreign Language” is listed under Communications, ENG 111 is the minimal acceptable course in this area for all degrees.

<table>
<thead>
<tr>
<th>Communications</th>
<th>Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>English *</td>
<td>Art (theory only)</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>History</td>
</tr>
<tr>
<td>Speech</td>
<td>Humanities</td>
</tr>
<tr>
<td>Mathematics *</td>
<td>Literature</td>
</tr>
<tr>
<td>MATH 130 or higher</td>
<td>Music (theory only)</td>
</tr>
<tr>
<td></td>
<td>Philosophy</td>
</tr>
<tr>
<td></td>
<td>Theatre (theory only)</td>
</tr>
</tbody>
</table>

*Excludes Literature courses and Creative Writing

<table>
<thead>
<tr>
<th>Laboratory Sciences **</th>
<th>Social/Behavioral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astronomy</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Biology</td>
<td>Economics</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Geography</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>Political Science</td>
</tr>
<tr>
<td>Geology</td>
<td>Psychology</td>
</tr>
<tr>
<td>Physics</td>
<td>Sociology</td>
</tr>
</tbody>
</table>

** In an AAS degree not requiring a specific laboratory experience, any approved math, science, computer, or engineering course will satisfy this requirement.
NORTHERN’S
GENERAL EDUCATION
COMMON CORE
OFFERINGS

For purposes of selecting appropriate courses to meet Northern’s Associate of Arts and/or Associate of Science and Northern’s baccalaureate degree requirements for the General Education Common Core, you will select courses from each area shown below.

Northern New Mexico College’s general education requirements reflect the values of the college and its faculty. The purpose of these courses is to help you achieve a foundation of knowledge that broadens and enriches your abilities to communicate, to think critically, to problem solve, and to broaden your world view regarding global awareness, human values, and social consciousness. These selections call for you to develop written and oral communication skills, problem solving skills, scientific, historical, cultural, and ethical thinking. Although many of these courses have deliberately been designed around the Transfer Common Core to enhance transferability, Northern has added courses which it feels present you with a greater choice of electives. If you will be transferring these courses to another college/university, you may be required to verify such courses at the gaining institution.

<table>
<thead>
<tr>
<th>Area I: Communications (9 hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required</strong></td>
</tr>
<tr>
<td>ENG 111 English Composition I</td>
</tr>
<tr>
<td>SPCH 130 Public Speaking</td>
</tr>
<tr>
<td><strong>Elective</strong></td>
</tr>
<tr>
<td>ENG 112 English Composition II</td>
</tr>
<tr>
<td>ENG 116 Technical Writing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area II: Mathematics (3 hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elective</strong></td>
</tr>
<tr>
<td>MATH 145 Introduction to Probability &amp; Statistics</td>
</tr>
<tr>
<td>MATH 150 College Algebra</td>
</tr>
<tr>
<td>MATH 155 Trigonometry</td>
</tr>
<tr>
<td>MATH 162 Calculus I</td>
</tr>
<tr>
<td>MATH 163 Calculus II</td>
</tr>
<tr>
<td>MATH 264 Calculus III</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area III: Laboratory Science (8 hrs) *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elective</strong></td>
</tr>
<tr>
<td>ASTR 110/L Introduction to Astronomy with Lab</td>
</tr>
<tr>
<td>BIOL 110/L Current Topics in Biology with Lab</td>
</tr>
<tr>
<td>CHEM 110/L Introduction to Chemistry with Lab</td>
</tr>
<tr>
<td>ES 112/L Intro to Environmental Science I w/Lab</td>
</tr>
<tr>
<td>GEOL 101/L Physical Geology with Lab</td>
</tr>
<tr>
<td>GEOL 102/L Historical Geology with Lab</td>
</tr>
<tr>
<td>PHYS 110/L Introduction to Physics with Lab</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Area IV: Social/Behavioral Sciences (6-9 hrs) *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>You must select courses from at least two different discipline areas</strong> from the following:</td>
</tr>
<tr>
<td>ANTH 101/L Physical Anthropology with Lab (4)</td>
</tr>
<tr>
<td>ANTH 102 Intro to Social/Cultural Anthropology (3)</td>
</tr>
<tr>
<td>ANTH 110 Indian Culture of the Southwest (3)</td>
</tr>
<tr>
<td>ANTH 207 Cultures of New Mexico (3)</td>
</tr>
<tr>
<td>ECON 200 Macroeconomics (3)</td>
</tr>
<tr>
<td>ECON 201 Microeconomics (3)</td>
</tr>
<tr>
<td>GEOG 111 World Geography (3)</td>
</tr>
<tr>
<td>PSCI 110 The Political World (3)</td>
</tr>
<tr>
<td>PSCI 120 Contemporary Political Issues (3)</td>
</tr>
<tr>
<td>PSCI 200 American Politics (3)</td>
</tr>
<tr>
<td>PSCI 210 State and Local Government (3)</td>
</tr>
<tr>
<td>PSCI 212 The American Presidency (3)</td>
</tr>
<tr>
<td>PSY 105 General Psychology (3)</td>
</tr>
<tr>
<td>PSY 210 Theories of Personality (3)</td>
</tr>
<tr>
<td>PSY 229 Adolescent Psychology (3)</td>
</tr>
<tr>
<td>PSY 230 Psychology of Adjustment (3)</td>
</tr>
<tr>
<td>PSY 232 Abnormal Behavior (3)</td>
</tr>
<tr>
<td>PSY 270 Social Psychology (3)</td>
</tr>
<tr>
<td>PSY 290 Developmental Psychology (3)</td>
</tr>
<tr>
<td>SOC 101 Introduction to Sociology (3)</td>
</tr>
<tr>
<td>SOC 213 Deviant Behavior (3)</td>
</tr>
<tr>
<td>SOC 216 Ethnic and Intercultural Relations (3)</td>
</tr>
<tr>
<td>SOC 220 Social Problems (3)</td>
</tr>
<tr>
<td>SOC 225 Marriage and the Family (3)</td>
</tr>
<tr>
<td>Plus, topic courses with student advisor’s approval</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area V: Humanities and Fine Arts (6-9 hrs) *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>You must select courses from at least two different discipline areas</strong> from the following:</td>
</tr>
<tr>
<td>ART 105 Introduction to Art (3)</td>
</tr>
<tr>
<td>ART 107 History of Art I (3)</td>
</tr>
<tr>
<td>ART 211 History of ART (3)</td>
</tr>
<tr>
<td>DANC 240 Dance Appreciation (3)</td>
</tr>
<tr>
<td>ENG 270 Children’s Literature (3)</td>
</tr>
<tr>
<td>ENG 262 Literature of the Southwest (3)</td>
</tr>
<tr>
<td>ENG 265 Native American Literature I (3)</td>
</tr>
</tbody>
</table>
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
THE 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

** Students in associate degree programs are advised that upper-division courses are not covered under financial aid. These upper-division courses are for those in baccalaureate programs.

* If your major is in the area of the Humanities/Fine Arts, unless otherwise regulated by a given department, you should select 9 hrs from Area V and 6 hrs from Area IV; if in the Social/Behavioral Sciences, you should select 9 hrs from Area IV and 6 hrs from Area V. Consult your major advisor.

Note: For purposes of meeting graduation requirements, courses which appear on this list and which also appear as part of your program/major core will be used to satisfy only major core requirements. For example, if your major requires ECON 200 and ECON 201, you may not count these courses to also satisfy General Education Common Core requirements.

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

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

Total to be selected 35 semester hours
TRANSFER AMONG NEW MEXICO HIGHER EDUCATION INSTITUTIONS

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

Student Responsibility

New Mexico’s colleges and universities have collaborated to produce guides to assist students who plan to transfer before completing a program of study. Course modules are designed to help students select courses carefully so that they may transfer with little or no loss of credit. However, planning for effective transfer with maximum efficiency is ultimately the student’s responsibility. Responsible transfer planning includes early and regular consultation with the intended degree-seeking institution to assure that all pre-transfer coursework will meet the requirements of the desired degree.

TRANSFERABLE LOWER DIVISION GENERAL EDUCATION COMMON CORE

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

Area I: Communications Select 9 sem hrs
(a) College-level English Composition ..................... 3 crs
(b) College-level Writing (a second course building on the above) .................................................. 3 crs
(c) Oral Communication ........................................ 3 crs

Area II: Mathematics Select 3 sem hrs
(a) College Algebra ................................................ 3 crs
(b) Other math course at/above level of College Algebra

Area III: Laboratory Science Select 8 sem hrs
(a) General Biology, with laboratory .................... 4-8 crs
(b) General Chemistry, with laboratory ............... 4-8 crs
(c) General Physics, with laboratory .................... 4-8 crs
(d) Geology/Earth Science, with lab .................... 4-8 crs
(e) Astronomy, with laboratory ......................... 4-8 crs

Area IV: Social/Behavioral Sciences Select 6-9 sem hrs
(a) Economics (Macro- or Microeconomics) .......... 3 crs
(b) Introduction to Political Science .................... 3 crs
(c) Introduction to Psychology ............................ 3 crs
(d) Introduction to Sociology .............................. 3 crs
(e) Introduction to Anthropology ......................... 3 crs

Area V: Humanities and Fine Arts Select 6-9 sem hrs
(a) Introduction to History Survey ....................... 3 crs
(b) Introduction to Philosophy ............................ 3 crs
(c) Introduction to courses in history, theory, or aesthetics of the arts or literature * ........................... 3 crs

• This may include HIST 260, History of New Mexico.

Total to be selected  35 semester hours

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

TRANSFERABLE LOWER DIVISION 64-HOUR TRANSFER MODULES

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

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

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

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

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

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

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

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

STUDENT RIGHT-TO-KNOW & CAMPUS SECURITY POLICIES

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

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

Specific questions concerning this policy should be directed to the Director of Institutional Effectiveness at (505) 747-2118.

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

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

* Commonly referred to as the Megan Act.

Specific questions concerning this policy should be directed to the Director of Facilities and Capital Projects.
DISTANCE EDUCATION
THROUGH INSTRUCTIONAL TECHNOLOGY

Northern New Mexico College offers online courses as an alternative to the traditional campus experience. If you have scheduling problems, work full-time, or live at a distance from our two campuses, you may want to consider taking a class online as a way to advance your education. Courses are completed electronically from a computer with Internet/Web access. Students are assured an interactive relationship with the instructor throughout the semester. Online courses are taught on a semester basis for College credit, and follow the regular Northern course schedule. All Northern admissions and registration deadlines, policies, and procedures apply to students who participate in online courses. Online courses are identified in our schedules as “Blackboard” or “ITV” to assist you in choosing the type of instruction you prefer. Each online course is assessed a media fee of $50 at the time of registration. This fee is also applied to the students who are personally attending in the ITV classroom from which the broadcast originates.

Northern currently uses Blackboard for online instruction. Blackboard is web-based course management systems that Instructors use to develop, organize and administer online classes. Instructors post syllabi, lecture notes and assignments to course web-pages, accessible to enrolled students via a secure login. Courses may be supplemented with multimedia content including video and audio, depending upon course needs. Students participate in Blackboard courses in a familiar Web environment and interact with instructors and other students using familiar tools such as email and discussion boards. Students may also submit assignments and take quizzes and exams online. Blackboard’s biggest advantage is that it allows students access to information at any time of the day or night.

Taking an online course is very different from the traditional classroom environment. Participation requirements vary from instructor to instructor. Please be aware that some instructors have additional requirements for their courses such as online live-chats, proctored exams, attending field trips, or other face-to-face meetings. Most online courses are not self-paced and have a schedule of due dates as posted in the course syllabus. A typical 3 credit–hour course may require an average of 6-9 hours of online coursework and homework per week. Please keep in mind that online instruction is not for everyone; it requires a high degree of self direction and discipline.

User support and assistance is provided via telephone or email. For questions concerning individual courses or assignments, please contact that course’s instructor or department. For technical assistance call Tom Vallejo or Jeremy Gonzalez at 747- 5418 or email tomas@nnmc.edu. If you are off-campus, go directly to http://nnmc.org/ for a faster connection.

Requirements for accessing online courses:
- Access to a computer system that meets the minimum technical requirements (see below)
- Familiarity with the Internet and browsing the web
- A Northern email address is optional—call 747-2100 to request an email account
- Log in information: username = first two initials of first name attached to whole last name (ex. Tom Vallejo would be tovallejo), password = the last five digits of one’s student ID (banner ID)
- Training for students and instructors: Thursday & Friday before & after first day of regular class, 9-12 for instructors; 1:30-3:00 pm for students.

As a Northern student, you have access to the computer lab in the Student Success Center on the Española campus. If you have a computer that has been purchased within the last 3 years, you will probably meet the following requirements:

MINIMUM Hardware and Software Requirements
Operating System - Windows 2000 or above,
Macintosh System 10.0 or higher
Processor - 1GHz or higher
Memory - 500 MB of RAM (1 GB recommended)
Hard Drive Space 25 GB free disk space for assignments
Browser - Internet Explorer 6.0 (do not use version 7),
Mozilla Firefox 2 w/flash, Java & Real Player plugin
Modem - 28.8 kbps or higher speed (DSL recommended)
Printer - graphics-capable (inkjet or laser) printer (may not be needed in some classes)
Monitor - 15” monitor (1024 x 768 resolution)
Software - If you are enrolled in a course that requires specific software (such as Microsoft Word or Real Player) you will need to purchase the software for your computer, or use the computer lab in the Student Success Center on the Española campus. Northern does not provide course-specific software as part of the enrollment process.

If you do not understand these requirements or have a computer that is more than 3 years old, please have someone who knows about computers help you.
Distance Education

Important information for those registering for online classes.

Starting Summer 2008 All online/web based courses will using Blackboard 6.1.
If this is your first time logging in, please read “Accessing your Blackboard account” below.

For information on Blackboard Orientation training call (505) 747-5418.

Accessing your Blackboard account:

Your Blackboard username will be as follows:
The Blackboard username is the first two letters of your first name and all of your last name, passwords are the last five digits of your Banner ID number.

*You can find your Banner ID on your Northern student ID card (student ID & Banner ID are the same number), class schedule, or contact the Admissions office at 747-2110.*

Example of formula used for student username & password:

Student Name: Mary John or Manuel John
Banner ID: 000012345
Web username: majohn or manjohn
password: 12345

If Northern’s homepage is down for any reason, you will need to know how to get to us directly. Depending on which server your course is located, here is the direct address:

Alternative Blackboard 6.1 Address for bypassing this page: webct6.nnmc.org
DEPARTMENT
OF
FINE ARTS

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

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

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

Donna Winchell, MEd.............. Chairperson .................................. 747-2292.......................... ddwinchell@nnmc.edu
Marcos Cavalcante, DM .......... Director, Music............................. 747-2293..........................mcavalcante@nnmc.edu
Judith Vejvoda, MA............... Art .................................................. 747-2295..........................jvejvoda@nnmc.edu
This program is designed to maximize transfer of credit to a four-year college or university. In addition to a generous exposure to general education courses, you will concentrate your efforts in art.

**GENERAL EDUCATION (35 crs)**

**Communications (9 crs)**

**ENG 111** English Composition I (3)

**SPCH 130** Public Speaking (3)

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>English Composition II (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing (3)</td>
<td></td>
</tr>
</tbody>
</table>

**Mathematics (3 crs)**

**MATH 150** College Algebra (3)

**Laboratory Science (8 crs)**

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 110/L</td>
<td>Introduction to Astronomy w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 110/L</td>
<td>Survey of Modern Biology w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>CHEM 110/L</td>
<td>Introduction to Chemistry w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>ES 112/L</td>
<td>Environmental Science w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>GEOL 101/L</td>
<td>Physical Geology w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>GEOL 102</td>
<td>Historical Geology (4)</td>
<td></td>
</tr>
<tr>
<td>PHYS 110/L</td>
<td>Introduction to Physics w/Lab (4)</td>
<td></td>
</tr>
</tbody>
</table>

**Social/Behavioral Sciences (6-9 crs)**

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101/L</td>
<td>Physical Anthropology with Lab (4)</td>
<td></td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Intro to Social/Cultural Anthropology (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 110</td>
<td>Indian Culture of the Southwest (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 207</td>
<td>Cultures of New Mexico (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 200</td>
<td>Macroeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 201</td>
<td>Microeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>GEOG 111</td>
<td>World Geography (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 110</td>
<td>The Political World (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 200</td>
<td>American Politics (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 210</td>
<td>State and Local Government (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 212</td>
<td>The American Presidency (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 105</td>
<td>General Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 210</td>
<td>Theories of Personality (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 229</td>
<td>Adolescent Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 230</td>
<td>Psychology of Adjustment (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 232</td>
<td>Abnormal Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 270</td>
<td>Social Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 213</td>
<td>Deviant Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 216</td>
<td>Ethnic and Intercultural Relations (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 220</td>
<td>Social Problems (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 225</td>
<td>Marriage and the Family (3)</td>
<td></td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

**Humanities and Fine Arts (6-9 crs)**

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art (3)</td>
<td></td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I (3)</td>
<td></td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART (3)</td>
<td></td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation (3)</td>
<td></td>
</tr>
</tbody>
</table>
FINES ARTS

ENG 270  Children’s Literature (3)
ENG 262  Literature of the Southwest (3)
ENG 265  Native American Literature I (3)
ENG 265  Native American Literature II (3)
ENG 280  Readings in Literature (3)
ENG 290  Study of Literature (3)
ENG 239  Mythology (3)
HIST 101  Western Civilization I (3)
HIST 102  Western Civilization II (3)
HIST 161  History of U.S. to 1877 (3)
HIST 162  History of U.S. from 1877 (3)
HIST 200  History of World Religions (3)
HIST 220  Southwestern Women's History (3)
HIST 230  Chicano Experience in the US (3)
HIST 250  American Indian History (3)
HIST 260  History of New Mexico (3)
HUM 105  Humanities and the Southwest (3)
HUM 311  Why the Social Sciences Matter ** (3)
HUM 414  Humanity and Creativity ** (3)
HUM 421  History, Literature, Art & Philosophy ** (3)
MUS 102  Theory of Music (3)
MUS 105  Music Appreciation (3)
MUS 130  History of Music (3)
MUS 140  History of Music (3)
PHIL 110  Introduction to Philosophical Problems (3)
PHIL 111  History of Philosophy (3)
PHIL 220  Ethics (3)
PIS 200  Introduction to Pueblo Indian Studies (3)
THE 120  Introduction to Theatre I (3)

Plus, topic courses with student advisor's approval

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

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

PROGRAM REQUIREMENTS
Art (33 crs)

ART  105  Introduction to Art (3)
ART  107  History of Art I (3)
ART  110  Drawing I (3)
ART  120  Painting I (3)
ART  122  Basic Design (3)
ART  208  History of NM Art and Architecture (3)
ART  211  History of Art II (3)
ART  221  Drawing II (3)
ART  232  Painting II (3)
ART  233  Printmaking I (3)

Choose one course from the following:

ART  125  Introduction to Graphic Design (3)
ART  150  Bookmaking (3)
ART  160  Pottery (3)
ART  170  Photography I (3)
ART  235  Watercolor (3)
ART  237  Sculpture (3)
ART  240  Portrait Painting (3)
DANC 126  Modern Dance (2)
FA  101  Weaving I (1)

and

FA  101L  Weaving I Lab (6)
THE  120  Introduction to Theatre I (3)

TOTAL CREDIT HOURS  69
Certificate

FILM TECHNICIAN

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

GENERAL EDUCATION (6-9 crs)

Communications (3 crs)
ENG 108N Basic English I (3) or a higher level course

Mathematics (3-6 crs)
MATH 100N Fundamentals of Math (6) or a higher level course

PROGRAM REQUIREMENTS (24 crs)

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

TOTAL CREDIT HOURS 30-33
Associate of Arts
Flamenco Dance

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)
Choose one of the following two courses:
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)

Mathematics (3 crs)
MATH 150 College Algebra (3)

Laboratory Science (8 crs)
Choose two courses (with labs) from the following list:
ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
ES 112/L Environmental Science w/Lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102 Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 crs)
You must select courses from at least two different discipline areas from the following list:
ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

Humanities and Fine Arts (6-9 crs)
You must select courses from at least two different discipline areas from the following list:
ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
**FINE ARTS**

- **DANC 240 Dance Appreciation (3)**
- **ENG 270 Children’s Literature (3)**
- **ENG 262 Literature of the Southwest (3)**
- **ENG 265 Native American Literature I (3)**
- **ENG 265 Native American Literature II (3)**
- **ENG 280 Readings in Literature (3)**
- **ENG 290 Study of Literature (3)**
- **ENG 239 Mythology (3)**
- **HIST 101 Western Civilization I (3)**
- **HIST 102 Western Civilization II (3)**
- **HIST 161 History of U.S. to 1877 (3)**
- **HIST 162 History of U.S. from 1877 (3)**
- **HIST 200 History of World Religions (3)**
- **HIST 220 Southwestern Women’s History (3)**
- **HIST 230 Chicano Experience in the US (3)**
- **HIST 250 American Indian History (3)**
- **HIST 260 History of New Mexico (3)**
- **HUM 105 Humanities and the Southwest (3)**
- **HUM 311 Why the Social Sciences Matter ** (3)**
- **HUM 414 Humanity and Creativity ** (3)**
- **HUM 421 History, Literature, Art & Philosophy ** (3)**
- **MUS 102 Theory of Music (3)**
- **MUS 105 Music Appreciation (3)**
- **MUS 130 History of Music (3)**
- **MUS 140 History of Music (3)**
- **PHIL 110 Introduction to Philosophical Problems (3)**
- **PHIL 111 History of Philosophy (3)**
- **PIS 200 Introduction to Pueblo Indian Studies (3)**
- **THE 120 Introduction to Theatre I (3)**

Plus, topic courses with student advisor’s approval

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

Elective (1)

**PROGRAM REQUIREMENTS**

**Dance (30 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANC 126</td>
<td>Modern Dance</td>
<td>(2)</td>
</tr>
<tr>
<td>DANC 138</td>
<td>Folklorico Dance I</td>
<td>(2)</td>
</tr>
<tr>
<td>DANC 149</td>
<td>Ballet I</td>
<td>(2)</td>
</tr>
<tr>
<td>DANC 169</td>
<td>Flamenco Dance I</td>
<td>(2)</td>
</tr>
<tr>
<td>DANC 211</td>
<td>Choreography</td>
<td>(3)</td>
</tr>
<tr>
<td>DANC 212</td>
<td>Improvisation</td>
<td>(2)</td>
</tr>
<tr>
<td>DANC 214</td>
<td>Kinesiology</td>
<td>(3)</td>
</tr>
<tr>
<td>DANC 222</td>
<td>Rhythmic Fund</td>
<td>(2)</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>(3)</td>
</tr>
<tr>
<td>DANC 292</td>
<td>Dance Repertory</td>
<td>(1)</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Music Theory I</td>
<td>(3)</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>(3)</td>
</tr>
<tr>
<td>THE 134</td>
<td>Introduction to Costuming</td>
<td>(2)</td>
</tr>
</tbody>
</table>

Choose one of the following (2-3 hrs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>(3)</td>
</tr>
<tr>
<td>ART 170</td>
<td>Photography I</td>
<td>(3)</td>
</tr>
<tr>
<td>DANC 269</td>
<td>Flamenco Dance II</td>
<td>(2)</td>
</tr>
<tr>
<td>MUS 111</td>
<td>Applied Music: Guitar I</td>
<td>(2)</td>
</tr>
<tr>
<td>MUS 112</td>
<td>Applied Music: Voice</td>
<td>(2)</td>
</tr>
<tr>
<td>THE 132</td>
<td>Stagecraft Sound</td>
<td>(3)</td>
</tr>
<tr>
<td>THE 238</td>
<td>Chicana/o Theatre</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS 66**
Associate of Arts

Flamenco Music

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)

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

Choose one of the following two courses:

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

Mathematics (3 crs)

MATH 150 College Algebra (3)

Laboratory Science (8 crs)

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

ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
ES 120/L Environmental Science w/Lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102/L Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 crs) *

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

ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

Humanities and Fine Arts (6-9 crs) *

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

ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
DANC 240 Dance Appreciation (3)
FINE ARTS

ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
THE 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

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

PROGRAM REQUIREMENTS

Flamenco Music (34 crs)
DANC 222 Rhythmic Fundamentals (2)
MUS 101 Music Theory I (3)
MUS 111 Applied Music: Guitar I (2)
MUS 112 Applied Music: Voice (2)
MUS 114 Applied Music: Flamenco Guitar I (2)
MUS 119 History of Flamenco (3)
MUS 121 Dance Accompaniment I (2)
MUS 216 Music Theory II (3)
MUS 222 Dance Accompaniment II (2)
MUS 223 Applied Music: Flamenco Guitar II (2)
MUS 227 Tradition in Flamenco (3)
MUS 231 Structural Study of Flamenco Music (2)

Choose two of the following:
ART 105 Introduction to Art (3)
ART 170 Photography I (3)
DANC 240 Dance Appreciation (3)
THE 120 Introduction to Theatre I (3)
THE 132 Stagecraft (3)
THE 238 Teatro Chicana/o (3)

TOTAL CREDIT HOURS 70
This program is designed to maximize transfer of credit to a four-year college or university. In addition to a generous exposure to general education courses, you will concentrate your efforts in music.

**GENERAL EDUCATION (35 crs)**

**Communications (9 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Mathematics (3 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 150</td>
<td>College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

**Laboratory Science (8 crs)**

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 110/L</td>
<td>Introduction to Astronomy w/lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 110/L</td>
<td>Survey of Modern Biology w/lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 110/L</td>
<td>Introduction to Chemistry w/lab</td>
<td>4</td>
</tr>
<tr>
<td>ES 112/L</td>
<td>Environmental Science w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 101/L</td>
<td>Physical Geology w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 102</td>
<td>Historical Geology w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 110/L</td>
<td>Introduction to Physics w/Lab</td>
<td>4</td>
</tr>
</tbody>
</table>

**Social/Behavioral Sciences (6-9 crs)** *

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101/L</td>
<td>Physical Anthropology with Lab</td>
<td>4</td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Intro to Social/Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 110</td>
<td>Indian Culture of the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 207</td>
<td>Cultures of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>ECON 200</td>
<td>Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 111</td>
<td>World Geography</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 110</td>
<td>The Political World</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 120</td>
<td>Contemporary Political Issues</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 200</td>
<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 210</td>
<td>State and Local Government</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 212</td>
<td>The American Presidency</td>
<td>3</td>
</tr>
<tr>
<td>PSY 105</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 210</td>
<td>Theories of Personality</td>
<td>3</td>
</tr>
<tr>
<td>PSY 229</td>
<td>Adolescent Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 230</td>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>PSY 232</td>
<td>Abnormal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSY 270</td>
<td>Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 213</td>
<td>Deviant Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SOC 216</td>
<td>Ethnic and Intercultural Relations</td>
<td>3</td>
</tr>
<tr>
<td>SOC 220</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SOC 225</td>
<td>Marriage and the Family</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

**Humanities and Fine Arts (6-9 crs)** *

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART</td>
<td>3</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credits</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 239</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td>3</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women’s History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>3</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter</td>
<td>3</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity</td>
<td>3</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>3</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

- Elective (1)

**PROGRAM REQUIREMENTS**

**Music (33 crs)**

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

Choose one course from the following:

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

**TOTAL CREDIT HOURS** 69
Associate of Arts  
Southwest Folk Art

This program is designed to maximize transfer of credit to a four-year college or university. In addition to a generous exposure to general education courses, you will concentrate your efforts in southwest folk art.

**GENERAL EDUCATION (35 crs)**

**Communications (9 crs)**
- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)

Choose one of the following two courses:
- ENG 112 English Composition II (3)
- ENG 116 Technical Writing (3)

**Mathematics (3 crs)**
- MATH 150 College Algebra (3)

**Laboratory Science (8 crs)**

Choose two courses (with labs) from the following list:
- ASTR 110/L Introduction to Astronomy w/lab (4)
- BIOL 110/L Survey of Modern Biology w/lab (4)
- CHEM 110/L Introduction to Chemistry w/lab (4)
- ES 112/L Environmental Science w/Lab (4)
- GEOL 101/L Physical Geology w/Lab (4)
- GEOL 102 Historical Geology w/Lab (4)
- PHYS 110/L Introduction to Physics w/Lab (4)

**Social/Behavioral Sciences (6-9 crs) * **

You must select courses from at least two different discipline areas from the following list:
- ANTH 101/L Physical Anthropology with Lab (4)
- ANTH 102 Intro to Social/Cultural Anthropology (3)
- ANTH 110 Indian Culture of the Southwest (3)
- ANTH 207 Cultures of New Mexico (3)
- ECON 200 Macroeconomics (3)
- ECON 201 Microeconomics (3)
- GEOG 111 World Geography (3)
- PSCI 110 The Political World (3)
- PSCI 120 Contemporary Political Issues (3)
- PSCI 200 American Politics (3)
- PSCI 210 State and Local Government (3)
- PSCI 212 The American Presidency (3)
- PSY 105 General Psychology (3)
- PSY 210 Theories of Personality (3)
- PSY 229 Adolescent Psychology (3)
- PSY 230 Psychology of Adjustment (3)
- PSY 232 Abnormal Behavior (3)
- PSY 270 Social Psychology (3)
- PSY 290 Developmental Psychology (3)
- SOC 101 Introduction to Sociology (3)
- SOC 213 Deviant Behavior (3)
- SOC 216 Ethnic and Intercultural Relations (3)
- SOC 220 Social Problems (3)
- SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

**Humanities and Fine Arts (6-9 crs) * **

You must select courses from at least two different discipline areas from the following list:
- ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
DANC 240 Dance Appreciation (3)
ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
The 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

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

PROGRAM REQUIREMENTS
Southwest Folk Art (30 crs)
ART 115 Traditional Woodcarving (3)
ART 130 Tinsmithing I (3)
ART 150 Basic Jewelry and Metalworking (3)
ART 152 Traditional Spanish Colonial Retablo Making (3)
ART 156 Pueblo Sash Weaving (3)
ART 180 Micaceous Clay I (3)
ART 246 Bookmaking (3)
Choose one of the following:
ART 160 Pottery (3)
ART 170 Photography I (3)
ART 190 Silversmithing (3)
Electives Approved by department chairperson (6)

TOTAL CREDIT HOURS 66
Associate of Arts
Theatre

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)
Choose one of the following two courses:
   ENG 112 English Composition II (3)
   ENG 116 Technical Writing (3)

Mathematics (3 crs)
MATH 150 College Algebra (3)

Laboratory Science (8 crs)
Choose two courses (with labs) from the following list:
ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
ES 112/L Environmental Science w/Lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102 Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 crs) *
You must select courses from at least two different discipline areas from the following list:
ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)
Plus, topic courses with student advisor’s approval

Humanities and Fine Arts (6-9 crs) *
You must select courses from at least two different discipline areas from the following list:
ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
DANC 240 Dance Appreciation (3)
FINE ARTS

ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
The 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

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

PROGRAM REQUIREMENTS
Theatre (34 crs)
The 120 Introduction to Theatre I (3)
The 122 Acting I (3)
The 124 Acting for Film, TV, and Commercial (3)
The 126 Speech and Movement for Theatre (2)

or

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

Choose six (6) credit hours from the following:
The 134 Introduction to Costuming (2)
The 196 Introduction to Light and Sound (3)
The 220 Introduction to Theatre II (3)
The 225 Creative Drama Techniques for the Classroom K-12 (3)
The 226 Directing & Play Production (2)
The 250 Stage Management (2)
The 290 Design for the Theatre (3)
The 296 Advanced Light & Sound (3)

TOTAL CREDIT HOURS  70
Associate of Arts
Technical Theatre

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)
Choose one of the following two courses:
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)

Mathematics (3 crs)
MATH 150 College Algebra (3)

Laboratory Science (8 crs)
Choose two courses (with labs) from the following list:
ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
ES 112/L Environmental Science w/Lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102 Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 crs) *
You must select courses from at least two different discipline areas from the following list:
ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

Humanities and Fine Arts (6-9 crs) *
You must select courses from at least two different discipline areas from the following list:
ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
FINE ARTS

DANC 240 Dance Appreciation (3)
ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
THE 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

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

PROGRAM REQUIREMENTS

Technical Theatre (34 crs)
THE 120 Introduction to Theatre I (3)
THE 122 Acting I (3)
THE 124 Acting for Film, TV, and Commercial (3)
THE 130 History of Theatre (3)
THE 132 Stagecraft (3)
THE 134 Introduction to Costuming (2)
THE 150 Stage Production (2)
THE 196 Introduction to Light and Sound (3)
THE 290 Design for the Theatre (3)
THE 296 Advanced Light & Sound (3)
Choose six (6) credit hours from the following:
THE 126 Speech & Movement (2)
THE 218 Acting II (3)
THE 220 Introduction to Theatre II (3)
THE 224 Playwriting (3)
THE 225 Creative Drama Techniques for the Classroom K-12 (3)
THE 226 Directing & Play Production (2)
THE 228 Performance Poetry (2)
THE 250 Stage Management (2)

TOTAL CREDIT HOURS 70
DEPARTMENT OF BUSINESS AND OFFICE ADMINISTRATION

The Department of Business and Office Administration houses a number of associate degree and certificate programs which are designed to provide solid employment skills as well as facilitate transfer to a four-year college or university in the general areas of business and accounting, and in the areas of information management and office administration. It also offers a Bachelor of Business Administration, with majors in general Business Administration/Management, Accounting, and Project Management.

At present, only the associate degree-level programs in this department are accredited by the Association of Collegiate Business Schools and Programs.

Drucilla Duran, MA............................ Chairperson .......................... 747-2181 .................................. dru@nnmc.edu
Lori Baca, MBA............................. Business and Accounting ........ 747-2186 .................................. lbaca@nnmc.edu
Robert Behrendt, PhD..................... Director, BBA Program .............. 747-2182 ................................. rbehrendt@nnmc.edu
Leonel Gallegos, MBA.................... Business and Economics ............ 747-2188 .................................. alg@nnmc.edu
Karen Simpson, MBA..................... Accounting & Finance ............... 747-2187 ............................. ksimpson@nnmc.edu
DEPARTMENT OF ACCOUNTING
Associate of Applied Science
ACCOUNTING

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

GENERAL EDUCATION (18 crs)

Communications (6 crs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Humanities (3 crs)
Electives (3)

Math/Computers/Lab Sciences (6 crs)
BA 200 Business Computer Applications (3)
BA 205 Business Statistics (3)

Social/Behavioral Sciences (3 crs)
Elective (3)

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

PROGRAM REQUIREMENTS (48 crs)
BA 117 Business Math (3)
BA 210 Principles of Finance (3)
BA 221 Accounting Principles I (3)
BA 222 Accounting Principles II (3)
BA 225 Excel (3)
BA 230 Intermediate Accounting I (3)
BA 231 Intermediate Accounting II (3)
BA 232 Income Tax Accounting (3)
BA 235 Governmental Accounting (3)
BA 236 Computerized Accounting (3)
BA 240 Principles of Management (3)
BA 245 Cost Accounting (3)
BA 250 Business Communications (3)
BA 266 Business Law (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)

TOTAL CREDIT HOURS 67
Certificate
BOOKKEEPER

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

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

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

PROGRAM REQUIREMENTS (15 crs)
BA 200 Business Computer Applications (3)
BA 225 Excel (3)
BA 221 Accounting Principles I (3)
BA 236 Computerized Accounting (3)
BA 250 Business Communications (3)

TOTAL CREDIT HOURS 22
Students in Northern’s Business Administration program develop competency in applying technology to business strategy, management and decision-making through case studies, team projects, Internet use, as well as computer applications and systems integration.

Matriculation into one of these three majors requires that you: 1) have already completed at least 45 credit hours of college-level work, including the 35 credit hours of General Education Common Core; 2) have at least a 2.50 cumulative GPA in all college-level courses, especially business courses; and 3) submitted a letter of intent to the program director, showing evidence of written communication skills, leadership skills, community activities, and the promise of achievement in a business or professional career. Your application to the program director must be on file at least two weeks before the beginning of the term for which you seek acceptance.

**GENERAL EDUCATION (35 crs)**

**Communications (9 crs)**

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

**Mathematics (3 crs)**

MATH 150 College Algebra (3)

**Laboratory Science (8 crs)**

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

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

**Social/Behavioral Sciences (6-9 crs)**

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

ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

**Humanities and Fine Arts (6-9 crs)**
You must select survey courses from at least two different discipline areas from the following list:

| ART  | 105 | Introduction to Art (3) |
| ART  | 107 | History of Art I (3)   |
| ART  | 211 | History of ART (3)     |
| DANC | 240 | Dance Appreciation (3) |
| ENG  | 270 | Children’s Literature (3) |
| ENG  | 262 | Literature of the Southwest (3) |
| ENG  | 265 | Native American Literature I (3) |
| ENG  | 265 | Native American Literature II (3) |
| ENG  | 280 | Readings in Literature (3) |
| ENG  | 290 | Study of Literature (3) |
| ENG  | 239 | Mythology (3) |
| HIST | 101 | Western Civilization I (3) |
| HIST | 102 | Western Civilization II (3) |
| HIST | 161 | History of U.S. to 1877 (3) |
| HIST | 162 | History of U.S. from 1877 (3) |
| HIST | 200 | History of World Religions (3) |
| HIST | 220 | Southwestern Women’s History (3) |
| HIST | 230 | Chicano Experience in the US (3) |
| HIST | 250 | American Indian History (3) |
| HIST | 260 | History of New Mexico (3) |
| HUM  | 105 | Humanities and the Southwest (3) |
| HUM  | 311 | Why the Social Sciences Matter ** (3) |
| HUM  | 414 | Humanity and Creativity ** (3) |
| HUM  | 421 | History, Literature, Art & Philosophy ** (3) |
| MUS  | 102 | Theory of Music (3) |
| MUS  | 105 | Music Appreciation (3) |
| MUS  | 130 | History of Music (3) |
| MUS  | 140 | History of Music (3) |
| PHIL | 110 | Introduction to Philosophical Problems (3) |
| PHIL | 111 | History of Philosophy (3) |
| PHIL | 220 | Ethics (3) |
| PIS  | 200 | Introduction to Pueblo Indian Studies (3) |
| THE  | 120 | Introduction to Theatre I (3) |

Plus, topic courses with student advisor’s approval

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
Elective (1)

**BUSINESS CORE (33 crs)**
BA 200 Business Computer Applications (3)
BA 205 Business Statistics (3)
BA 221 Accounting Principles I (3)
BA 222 Accounting Principles II (3)
BA 225 Excel (3)
BA 240 Principles of Management (3)
BA 242 Business Information Systems (3)
BA 250 Business Communications (3)
BA 251 Principles of Marketing (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)

Common Degree Requirements (18 crs)
BA 300 Business Law (3)
BA 310 Principles of Finance (3)
BA 313 Organizational Behavior (3)
BA 330 Principles of Project Management (3)
BA 344 Cost Accounting (3)
BA 461 Ethical and Legal Issues in Business (3)

MAJORS

The Business Administration/Management major the breadth of business-related disciplines as defined in the business core curriculum. The major does not provide specific specialization but rather exposes the student to various business functions. This major is ideally suited to the new or transfer upper-division business student or for the student interested in concurrently pursuing a business area of study.

Business Administration/Management (30 crs)
BA 315 Organizational Theory and Design (3)
BA 350 Entrepreneurship (3)
BA 351 Advertising and Public Relations (3)
BA 354 E-Commerce (3)
BA 360 Human Resource Management (3)
BA 432 Strategic Management (3)
BA 460 Labor Relations (3)
BA 462 International Business and Management (3)
BA 485 Internship (6)

Upper Division Business Electives (11 crs)
You may take any 300- or 400-level course in Business Administration (BA) not required in your major to satisfy this elective requirement and bring your total credits to 128.

TOTAL CREDITS 128

The Accounting major is designed to prepare students for employment opportunities that exist in public accounting practice and in business, government, and nonprofit organizations. It is also appropriate for those students who may choose to seek either a Master of Accountancy or Master of Business Administration after graduation.

Accounting (30 crs)
BA 304 Intermediate Accounting I (3)
BA 305 Intermediate Accounting II (3)
BA 324 Federal Tax Accounting I (3)
BA 352 Accounting Information Systems (3)
BA 405 Accounting for Not-For-Profit Organizations (3)
BA 411 Managerial Accounting (3)
BA 429 Advanced Accounting (3)
BA 446 Auditing Theory and Practice (3)
BA 485 Internship (6)

Upper Division Business Electives (11 crs)
You may take any 300- or 400-level course in Business Administration (BA) not required in your major to satisfy this elective requirement and bring your total credits to 128.

TOTAL CREDITS 128
**Project Management (24 crs)**

This major is designed to meet the professional development needs of individual program and project responsibilities. Project management is applicable in a wide range of business activities as it involves the application of knowledge, skills, tools and techniques shaped by the specifications and requirements of particular projects. While project management skills have long since been recognized as important in engineering and development organizations, now many new industries are also realizing that the planning and action skills fundamental to project management are applicable and of great value.

Based on this trend, Northern’s degree is designed as an interdisciplinary program and is developed to meet the needs of project/program managers interested in professional training and certification. The program offers two completion options:

1. A professional certificate in project management after completion of 24 hours (See catalog for specific courses). Students are considered ready to take the PMI (Project Management Institute), PMP (Project Management Professional) certification exam.

2. A Bachelor of Business Administration -- Project Management after completion of an additional 19 hours of course work. [This will be available through Northern in Fall 2009.]

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 330</td>
<td>Principles of Project Management (3)</td>
</tr>
<tr>
<td>BA 331</td>
<td>Project Management Planning Process (3)</td>
</tr>
<tr>
<td>BA 332</td>
<td>Project Management Systems: Baseline Development (3)</td>
</tr>
<tr>
<td>BA 333</td>
<td>Project Planning and Execution (3)</td>
</tr>
<tr>
<td>BA 432</td>
<td>Strategic Management (3)</td>
</tr>
<tr>
<td>BA 434</td>
<td>Project Execution and Control: Strategic Management &amp; Analysis (3)</td>
</tr>
<tr>
<td>BA 436</td>
<td>Project Execution and Control: Systems Support (3)</td>
</tr>
<tr>
<td>BA 486</td>
<td>Advanced Project Management Simulation (3)</td>
</tr>
</tbody>
</table>

**Upper Division Business Electives (17 crs)**

You may take any 300- or 400-level course in Business Administration (BA) not required in your major to satisfy this elective requirement and bring your total credits to 128.

**TOTAL CREDITS** 128
Associate of Arts
BUSINESS ADMINISTRATION

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)
Choose one of the following two courses:
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)

Mathematics (3 crs)
MATH 150 College Algebra (3)

Laboratory Science (8 crs)
Choose two survey courses (with labs) from the following list:
ASTR 110/L Introduction to Astronomy w/lab (4)
BIOL 110/L Survey of Modern Biology w/lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
ES 112/L Environmental Science w/Lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102/L Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (6-9 crs)*
You must select survey courses from at least two different discipline areas from the following list:
ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval
**Humanities and Fine Arts (6-9 crs)** *
*You must select survey courses from at least two different discipline areas from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART</td>
<td>3</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 239</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td>3</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women’s History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>3</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter **</td>
<td>3</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity **</td>
<td>3</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy **</td>
<td>3</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>3</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
Elective (1)

**PROGRAM REQUIREMENTS (33 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 200</td>
<td>Business Computer Applications</td>
<td></td>
</tr>
<tr>
<td>BA 205</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>BA 225</td>
<td>Excel</td>
<td>3</td>
</tr>
<tr>
<td>BA 221</td>
<td>Accounting Principles I</td>
<td>3</td>
</tr>
<tr>
<td>BA 222</td>
<td>Accounting Principles II</td>
<td>3</td>
</tr>
<tr>
<td>BA 240</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BA 242</td>
<td>Business Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>BA 250</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>BA 251</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>ECON 200</td>
<td>Macroeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 201</td>
<td>Microeconomics (3)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS 69**
Certificate
PROPERTY MANAGEMENT

This program is designed to enhance the skills of current property professionals and is restricted to Los Alamos National Lab (LANL) employees.

GENERAL EDUCATION (6 crs)

Communications (3 crs)
ENG 109N Basic English II (3)

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (14 crs)
BA 127 Business Ethics (3)
BA 136 Property Management Baseline Training (2)
BA 225 Excel (3)
BA 242 Administrative Systems and Procedures (3)
BA 250 Business Communications (3)

TOTAL CREDITS 20
Associate of Applied Science

GENERAL BUSINESS

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

GENERAL EDUCATION (18 crs)

Communications (6 crs)

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

Math/Computers/Lab Sciences (6 crs)

BA 200 Business Computer Applications (3)
BA 205 Business Statistics (3)

Social/Behavioral Sciences (3 crs)

Elective (3)

Humanities and Fine Arts (3 crs)

Electives (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)

Elective (1)

PROGRAM REQUIREMENTS (45 crs)

BA 117 Business Math (3)
BA 210 Principles of Finance (3)
BA 220 Introduction to Business (3)
BA 225 Excel (3)
BA 221 Accounting Principles I (3)
BA 222 Accounting Principles II (3)
BA 236 Computerized Accounting (3)
BA 240 Principles Management (3)
BA 242 Business Information Systems (3)
BA 251 Principles of Marketing (3)
BA 266 Business Law (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
OA 118 Professional Development (3)

Choose one of the following:

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

TOTAL CREDIT HOURS 64
Bachelor of Business Administration  
MANAGEMENT INFORMATION SYSTEMS

Students in Northern’s Business Administration program develop competency in applying technology to business strategy, management and decision-making through case studies, team projects, Internet use, as well as computer applications and systems integration.

Acceptance into this program requires that you: 1) have already completed at least 45 credit hours of college-level work, including the 35 credit hours of General Education Common Core; 2) have at least a 2.50 cumulative GPA in all college-level courses, especially business courses; and 3) submitted a letter of intent to the program director, showing evidence of written communication skills, leadership skills, community activities, and the promise of achievement in a business or professional career. Your application to the program director must be on file at least two weeks before the beginning of the term for which you seek acceptance.

GENERAL EDUCATION (35 crs)

**Communications (9 crs)**
ENG 111 English Composition I (3)  
SPCH 130 Public Speaking (3)  
Choose one of the following:  
ENG 112 English Composition II (3)  
ENG 116 Technical Writing (3)

**Mathematics (3 crs)**
MATH 150 College Algebra (3)

**Laboratory Science (8 crs)**
Choose two survey courses (with labs) from the following list:
ASTR 110/L Introduction to Astronomy w/lab (4)  
BIOL 110/L Survey of Modern Biology w/lab (4)  
CHEM 110/L Introduction to Chemistry w/lab (4)  
ES 112/L Environmental Science w/Lab (4)  
GEOL 101/L Physical Geology w/Lab (4)  
GEOL 102/L Historical Geology w/Lab (4)  
PHYS 110/L Introduction to Physics w/Lab (4)

**Social/Behavioral Sciences (6-9 crs)** *
You must select survey courses from at least two different discipline areas from the following list:
ANTH 101/L Physical Anthropology with Lab (4)  
ANTH 102 Intro to Social/Cultural Anthropology (3)  
ANTH 110 Indian Culture of the Southwest (3)  
ANTH 207 Cultures of New Mexico (3)  
ECON 200 Macroeconomics (3)  
ECON 201 Microeconomics (3)  
GEOG 111 World Geography (3)  
PSCI 110 The Political World (3)  
PSCI 120 Contemporary Political Issues (3)  
PSCI 200 American Politics (3)  
PSCI 210 State and Local Government (3)  
PSCI 212 The American Presidency (3)  
PSY 105 General Psychology (3)  
PSY 210 Theories of Personality (3)  
PSY 229 Adolescent Psychology (3)  
PSY 230 Psychology of Adjustment (3)  
PSY 232 Abnormal Behavior (3)  
PSY 270 Social Psychology (3)  
PSY 290 Developmental Psychology (3)
BUSINESS AND 
OFFICE ADMIN

SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

Humanities and Fine Arts (6-9 crs) *
You must select survey courses from at least two different discipline areas from the following list:

ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
DANC 240 Dance Appreciation (3)
ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
THE 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

PROGRAM REQUIREMENTS (90 crs)

BUSINESS CORE (33)
BA 117 Business Math (3)
BA 221 Accounting Principles I (3)
BA 225 Excel (3)
BA 226 PowerPoint (3)
BA 240 Principles of Management (3)
BA 242 Business Information Systems (3)
BA 354 e-Commerce (3)
CS 152 Introduction to Programming I (3)
IT 130   Networking Fundamentals (3)
IT 210   IT Systems (3)
IT 250   Introduction to Databases (3)

**MANAGEMENT CORE (18)**
BA 300   Business Law (3)
BA 310   Principles of Finance (3)
BA 313   Organizational Behavior (3)
BA 330   Principles of Project Management (3)
BA 345   Cost Accounting (3)
BA 461   Ethical and Legal issues in Business (3)

**MANAGEMENT INFORMATION SYSTEMS MAJOR (24)**
BA 330   Introduction to Project Management (3)
BA 485   Internship (6)
IT 330   Networking (3)
IT 342   Wireless and Mobile Comp (3)
IT 350   Database Management (3)
IT 410   Information Assurance/Security (3)
IT 447   Routing and Switching (3)

**Upper Division Electives (17)**
You may take any 300- or 400-level course in BA, CT, or IT to satisfy this elective requirement.

**TOTAL CREDIT HOURS 128**
This program trains you for entry-level employment supervising the data processing needs of a small business or department.

**GENERAL EDUCATION (35 crs)**

**Communications (9 crs)**
- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)
- Choose one of the following:
  - ENG 112 English Composition II (3)
  - ENG 116 Technical Writing (3)

**Mathematics (3 crs)**
- MATH 150 College Algebra (3)

**Laboratory Science (8 crs)**
Choose two survey courses (with labs) from the following list:
- ASTR 110/L Introduction to Astronomy w/lab (4)
- BIOL 110/L Survey of Modern Biology w/lab (4)
- CHEM 110/L Introduction to Chemistry w/lab (4)
- ES 122/L Environmental Science w/Lab (4)
- GEOL 101/L Physical Geology w/Lab (4)
- GEOL 102/L Historical Geology w/Lab (4)
- PHYS 110/L Introduction to Physics w/Lab (4)

**Social/Behavioral Sciences (6-9 crs)** *
You must select survey courses from at least two different discipline areas from the following list:
- ANTH 101/L Physical Anthropology with Lab (4)
- ANTH 102 Intro to Social/Cultural Anthropology (3)
- ANTH 110 Indian Culture of the Southwest (3)
- ANTH 207 Cultures of New Mexico (3)
- ECON 200 Macroeconomics (3)
- ECON 201 Microeconomics (3)
- GEG 111 World Geography (3)
- PSCI 110 The Political World (3)
- PSCI 120 Contemporary Political Issues (3)
- PSCI 200 American Politics (3)
- PSCI 210 State and Local Government (3)
- PSCI 212 The American Presidency (3)
- PSY 105 General Psychology (3)
- PSY 210 Theories of Personality (3)
- PSY 229 Adolescent Psychology (3)
- PSY 230 Psychology of Adjustment (3)
- PSY 232 Abnormal Behavior (3)
- PSY 270 Social Psychology (3)
- PSY 290 Developmental Psychology (3)
- SOC 101 Introduction to Sociology (3)
- SOC 200 Social Problems (3)
- SOC 213 Deviant Behavior (3)
- SOC 216 Ethnic and Intercultural Relations (3)
- SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval
**Humanities and Fine Arts (6-9crs)** *
You must select survey courses from at least two different discipline areas from the following list:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART</td>
<td>3</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature. of the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 239</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td>3</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women’s History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>3</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter **</td>
<td>3</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity **</td>
<td>3</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy **</td>
<td>3</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>3</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

**HEALTH, PHYSICAL EDUCATION & RECREATION (2 cr)**
Elective (2)

**PROGRAM REQUIREMENTS (30-crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 117</td>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>BA 225</td>
<td>Excel</td>
<td>3</td>
</tr>
<tr>
<td>BA 226</td>
<td>PowerPoint</td>
<td>3</td>
</tr>
<tr>
<td>BA 242</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CS 152</td>
<td>Introduction to Programming I</td>
<td>3</td>
</tr>
<tr>
<td>IT 130</td>
<td>Networking Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>IT 210</td>
<td>Information Technology Systems</td>
<td>3</td>
</tr>
<tr>
<td>IT 250</td>
<td>Introduction to Databases</td>
<td>3</td>
</tr>
<tr>
<td>OA 118</td>
<td>Professional Development</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS 66**
This program will provide you with the course work necessary for employment above the entry level in the secretarial fields in the private and governmental sectors.

GENERAL EDUCATION (18 crs)

Communications (6 crs)
- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (6 crs)
- BA 200 Business Computer Applications (3)
- BA 117 Business Math (3)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Arts (3 crs)
Elective (3)

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

PROGRAM REQUIREMENTS (48 crs)
- BA 225 Excel (3)
- BA 226 PowerPoint (3)
- BA 227 Advanced Excel (3)
- BA 242 Business Information Systems (3)
- BA 250 Business Communications (3)
- OA 101 Business Editing Skills (3)
- OA 104 Principles of Keyboarding (3)
- OA 113 Notehand (3)
- OA 115 Files Management (3)
- OA 117 Time Management (3)
- OA 135 Introduction to Accounting (3)
- OA 249 Microsoft Word (3)
- OA 251 Advanced Word (3)
- OA 265 Access (3)
- OA 267 Advanced Access (3)

Choose one of the following:
- OA 260 Adobe Pagemaker (3)
- OA 261 Desktop Publishing: MSPublisher (3)

TOTAL CREDIT HOURS 67
Certificate
ADMINISTRATIVE ASSISTANT

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

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (33 crs)
BA 200 Business Computer Applications (3)
BA 225 Excel (3)
BA 227 Advanced Excel (3)
OA 101 Business Editing Skills (3)
OA 104 Principles of Keyboarding (3)
OA 249 Microsoft Word (3)
OA 251 Advanced Word (3)
OA 265 Access (3)
OA 267 Advanced Access (3)
OA 260 Adobe PageMaker (3)
OA 261 Desktop Publisher: MS Publisher (3)

TOTAL CREDIT HOURS 42
Certificate

CLERK RECEPTIONIST

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

GENERAL EDUCATION (6 crs)

**Communications (3 crs)**

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

**Mathematics (3 crs)**

BA 117 Business Math (3)

PROGRAM REQUIREMENTS (21 crs)

BA 200 Business Computer Applications (3)

OA 101 Business Editing Skills (3)

OA 104 Principles of Keyboarding (3)

OA 117 Time Management (3)

OA 249 Microsoft Word (3)

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

BA 225 Excel (3)

OA 265 Access (3)

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

OA 260 Adobe PageMaker (3)

OA 261 Desktop Publishing: MS Publisher (3)

**TOTAL CREDIT HOURS 27**
Certificate

LEGAL OFFICE PROFESSIONAL

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

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (31 crs)
BA 115 Introduction to MS Excel (1)
BA 116 Introduction to MS PowerPoint (1)
BA 200 Business Computer Applications (3)
BA 242 Business Information Systems (3)
BA 250 Business Communications (3)
OA 101 Business Editing Skills (3)
OA 102 Introduction to the Internet (3)
OA 104 Principles of Keyboarding (3)
OA 115 Files Management (3)
OA 117 Time Management (3)
OA 134 Legal Transcription (3)
OA 139 Introduction to MS Word (1)
OA 155 Introduction to MS Access (1)

TOTAL CREDIT HOURS 37
Certificate
MEDICAL OFFICE PROFESSIONAL

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

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (31 crs)
BA 115 Introduction to MS Excel (1)
BA 116 Introduction to MS PowerPoint (1)
BA 200 Business Computer Applications (3)
BA 242 Business Information Systems (3)
BA 250 Business Communications (3)
OA 101 Business Editing Skills (3)
OA 104 Principles of Keyboarding (3)
OA 113 Notehand (3)
OA 115 Files Management (3)
OA 117 Time Management (3)
OA 132 Medical Transcription (3)
OA 139 Introduction to MS Word (1)
OA 155 Introduction to MS Access (1)

TOTAL CREDIT HOURS 37
Certificate

HOSPITALITY, TOURISM, AND RESTAURANT MANAGEMENT

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

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

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

TOTAL CREDIT HOURS 24
The Department of Cosmetology includes programs which are designed to provide the skills necessary to prepare you for New Mexico licensure and to provide the entry skills necessary for full- and part-time employment in this career cluster. These programs include:

- **Associates of Applied Science in**
  - Cosmetology
  - Barbering

- **Certificates in**
  - Cosmetology
  - Barbering
  - Manicurist/Esthetician
  - Manicurist/Pedicurist
  - Esthetician
  - Cosmetology Instructor

### Basic program information
The Cosmetology department accepts students in the Fall and Spring terms only. Requirements include:

1. Final admission standing in the College as a degree-seeking student.

2. Applicants must achieve a Course Placement Score placing them into ENG 109N or show evidence of having completed its pre-requisite (ENG 108N).

3. After having met criteria 1 and 2, arrange for an appointment with the Cosmetology Department for an admission interview prior to being accepted into one of the above programs. Call (505) 747-2473 for an appointment.

4. Complete the registration process required by the New Mexico State Board of Barbers and Cosmetologists upon acceptance to the program.

Betty Espinoza, AAS............... Barbering/Cosmetology .................. 747-2472 .............. bettymespinoza@nnmc.edu
Elaine Valdez, Cert. ................. Barbering/Cosmetology .................. 747-2472 .............. elainevaldez@nnmc.edu
Associate of Applied Science  
COSMETOLOGY

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure (45 credit hours, 1600 clock hours) and expands those skills with the addition of General Education courses. This is not a transfer program.

GENERAL EDUCATION (18 crs)

Communications (6 crs)
ENG 111 English Composition I (3)  
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (6 crs)
BA 200 Business Computer Applications (3)  
BA 117 Business Math (3)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Arts (3 hrs)
Electives (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Electives (1)

PROGRAM REQUIREMENTS (45 crs)
COSM 111 Theory I (2)  
COSM 112 Facials (3)  
COSM 114 Shampoos, Rinses, and Scalp Treatments (3)  
COSM 116 Hair Cutting (6)  
COSM 122 Chemical Restructuring/Perms (4)  
COSM 160 Theory II (2)  
COSM 162 Sterilization and Sanitation (2)  
COSM 164 Manicuring/Pedicuring (3)  
COSM 170 Hairstyling (3)  
COSM 212 Theory III (2)  
COSM 214 Clinical Practicum (6)  
COSM 216 Hair Coloring/Bleaching (3)  
COSM 218 Personal and Community Health (3)  
BA 220 Introduction to Business (3)

TOTAL CREDITS 64
# Associate of Applied Science

## BARBERING

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (45 credit hours, 1200 clock hours) and expands those skills with the addition of General Education courses. This is not a transfer program.

### GENERAL EDUCATION (18 crs)

#### Communications (6 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Math/Computers/Lab Sciences (6 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 200</td>
<td>Business Computer Applications</td>
<td>3</td>
</tr>
<tr>
<td>BA 117</td>
<td>Business Math</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Social/Behavioral Sciences (3 crs)

- Elective (3)

#### Humanities and Fine Arts (3 hrs)

- Electives (3)

### HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)

- Electives (1)

### PROGRAM REQUIREMENTS (45 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSM 111</td>
<td>Theory I</td>
<td>2</td>
</tr>
<tr>
<td>COSM 112</td>
<td>Facials</td>
<td>3</td>
</tr>
<tr>
<td>COSM 114</td>
<td>Shampoos, Rinses, and Scalp Treatments</td>
<td>3</td>
</tr>
<tr>
<td>COSM 118</td>
<td>Hair Cutting and Beard Trimming</td>
<td>6</td>
</tr>
<tr>
<td>COSM 122</td>
<td>Chemical Restructuring/Perms</td>
<td>4</td>
</tr>
<tr>
<td>COSM 160</td>
<td>Theory II</td>
<td>2</td>
</tr>
<tr>
<td>COSM 162</td>
<td>Sterilization and Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>COSM 170</td>
<td>Hairstyling</td>
<td>3</td>
</tr>
<tr>
<td>COSM 212</td>
<td>Theory III</td>
<td>2</td>
</tr>
<tr>
<td>COSM 214</td>
<td>Clinical Practicum</td>
<td>6</td>
</tr>
<tr>
<td>COSM 216</td>
<td>Hair Coloring/Bleaching</td>
<td>3</td>
</tr>
<tr>
<td>COSM 218</td>
<td>Personal and Community Health</td>
<td>3</td>
</tr>
<tr>
<td>BA 220</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS** 64
Certificate
BARBERING

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (45 credit hours, 1200 clock hours) and expands those skills with the addition of General Education courses.

GENERAL EDUCATION (6 crs)

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

**Mathematics (3 crs)**
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (37-40crs)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSM 111</td>
<td>Theory I</td>
<td>2</td>
</tr>
<tr>
<td>COSM 112</td>
<td>Facials</td>
<td>3</td>
</tr>
<tr>
<td>COSM 114</td>
<td>Shampoos, Rinses, and Scalp Treatments</td>
<td>3</td>
</tr>
<tr>
<td>COSM 118</td>
<td>Hair Cutting and Beard Trimming</td>
<td>6</td>
</tr>
<tr>
<td>COSM 122</td>
<td>Chemical Restructuring/Perms</td>
<td>4</td>
</tr>
<tr>
<td>COSM 160</td>
<td>Theory II</td>
<td>2</td>
</tr>
<tr>
<td>COSM 162</td>
<td>Sterilization and Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>COSM 170</td>
<td>Hairstyling</td>
<td>3</td>
</tr>
<tr>
<td>COSM 212</td>
<td>Theory III</td>
<td>2</td>
</tr>
<tr>
<td>COSM 214</td>
<td>Clinical Practicum (3-6)</td>
<td></td>
</tr>
<tr>
<td>COSM 216</td>
<td>Hair Coloring/Bleaching</td>
<td>3</td>
</tr>
<tr>
<td>COSM 218</td>
<td>Personal and Community Health</td>
<td>3</td>
</tr>
<tr>
<td>BA 220</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 43-46
Certificate
COSMETOLOGY

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (45 credit hours, 1200 clock hours) and expands those skills with the addition of General Education courses.

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (45 crs)
COSM 111 Theory I (2)
COSM 112 Facials (3)
COSM 114 Shampoos, Rinses, and Scalp Treatments (3)
COSM 116 Hair Cutting (6)
COSM 122 Chemical Restructuring/Perms (4)
COSM 160 Theory II (2)
COSM 162 Sterilization and Sanitation (2)
COSM 164 Manicuring/Pedicuring (3)
COSM 170 Hairstyling (3)
COSM 212 Theory III (2)
COSM 214 Clinical Practicum (6)
COSM 216 Hair Coloring/Bleaching (3)
COSM 218 Personal and Community Health (3)
BA 220 Introduction to Business (3)

TOTAL CREDITS 51

Certificate
COSMETOLOGY INSTRUCTOR

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (30 credit hours, 1000 clock hours). Pre-requisite for acceptance into this program: a valid New Mexico Cosmetology license and an associate degree from an accredited college.

GENERAL EDUCATION (6 crs)
As evidenced by college level English and math courses in an earned associate degree. If such evidence is not presented, you must complete at least ENG 111 (3) and MATH 130 (3) to meet this requirement.

PROGRAM REQUIREMENTS (30 crs)
COSM 250 Theory I (2)
COSM 252 Course Development and Lesson Planning (4)
COSM 258 Theory Teaching and Classroom Management (8)
COSM 260 Teaching Aids (2)
COSM 264 Teaching Methods (4)
COSM 270 Laboratory or Clinical Supervision (8)
COSM 274 Testing and Student Evaluation (2)

TOTAL CREDITS 36
Certificate

ESTHETICIAN

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (19 credit hours, 600+ clock hours) and expands those skills with the addition of General Education courses.

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (16-19 CRS)
COSM 111 Theory I (2)
COSM 112 Facials (3)
COSM 162 Sterilization and Sanitation (2)
COSM 170 Hairstyling (3)
COSM 212 Theory III (2)
COSM 214 Clinical Practicum (3-6)
COSM 218 Personal and Community Health (3)
BA 220 Introduction to Business (3)

TOTAL CREDITS 22-25

Certificate

MANICURIST / PEDICURIST

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area and expands those skills with the addition of General Education courses.

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (13-16 CRS)
COSM 111 Theory I (2)
COSM 162 Sterilization and Sanitation (2)
COSM 164 Manicuring/Pedicuring (3)
COSM 214 Clinical Practicum (3-6)
BA 220 Introduction to Business (3)

TOTAL CREDITS 19-22
Certificate
MANICURIST / ESTHETICIAN

This program provides you with the courses required by the New Mexico Board of Barbers and Cosmetology for licensure in this area (19 credit hours, 600 clock hours) and expands those skills with the addition of General Education courses.

GENERAL EDUCATION (6 crs)

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

Mathematics (3 crs)
BA 117 Business Math (3)

PROGRAM REQUIREMENTS (13-16 CRS)
COSM 111 Theory I (2)
COSM 112 Facials (3)
COSM 162 Sterilization and Sanitation (2)
COSM 164 Manicuring/Pedicuring (3)
COSM 214 Clinical Practicum (3-6)
BA 220 Introduction to Business (3)

TOTAL CREDITS 22-25
The Department of Career and Technical Education (CTE) supervises the instruction over all of the career and technical programs at the El Rito and Espanola campuses, in addition to some fine art programs which are housed at the El Rito Campus.

These many programs which lead to associate of applied science degrees and certificates include programs within the fields of career and technical education:


- Ric Gonzales, Cert. ..................Director, CTE, El Rito .................... 581-4123 ............................... rikgonzales@nnmc.edu
- Karen Martinez, Cert. .............Fiber Arts (Weaving) ...................... 581-4113 ............................... kmartinez@nnmc.edu
- Daniel Tafoya, Cert. ..................Spanish Col. Furniture Making ...... 581-4123 ............................... dtafoya@nnmc.edu
- Ernest L Tafoya, Cert. .............Electrical Technology .................... 581-4142 ............................... ltafoya@nnmc.edu
- Quentin Wilson, BS ..................Construction Trades .................. 581-4156 ............................... qwilson@nnmc.edu

**Espanola programs:** Auto Body Repair, Automotive Technology, Drafting Technology, Machining Technology, Plumbing Technology, Visual Communications, and Welding Technology.

- Gilbert Sena, BA ..................Chair, CTE, Espanola ................... 581-4135 ............................... grsena@nnmc.edu
- Ray Auckermann, BS .............Auto Body Repair .......................... 747-2254 ............................... capitolpaintworks@cnsp.com
- Jeff Toomey, BS ..................Drafting Technology ..................... 747-2254 ............................... jtoomey@nnmc.edu
Certificate
ADOBE CONSTRUCTION

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

GENERAL EDUCATION (6-7 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (3-4 crs)
MATH 100N (4) or a higher level math course (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (27-28 crs)

ADOB 100 Adobe Construction Basics (3)

or

ADOB 101 Adobe Design and Construction Worldwide (3)
ADOB 102 Adobe Wall Construction (4)
ADOB 103 Roof Design and Construction (4)
ADOB 104 Floor Design and Construction (4)
ADOB 105 Interior Finish Practices (4)
ADOB 106 Exterior Finish Practices (4)
ADOB 107 Heating (2)
Choose one elective from the following courses:
ADOB 110 Adobe Preservation, Conservation, and Renovation (2)
ADOB 111 Horno Design/Construction (2)
ADOB 112 Arches, Domes, and Vaults (2)
CONS 155 Construction Math and Blueprint Reading (3)
CONS 158 Foundation Theory and Construction (2)

TOTAL CREDITS 34-35
Associate of Applied Science
AUTO BODY REPAIR

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

GENERAL EDUCATION (22 crs)

**Communications (6 hrs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I (3)</td>
</tr>
<tr>
<td>ENG 112</td>
<td>English Composition II (3)</td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing (3)</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking (3)</td>
</tr>
</tbody>
</table>

**Math/Computers/Lab Sciences (10 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 102</td>
<td>Computer Literacy (3)</td>
</tr>
<tr>
<td>BA 117</td>
<td>Business Math (3)</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>Introduction to Chemistry (3)</td>
</tr>
<tr>
<td>CHEM 110L</td>
<td>Introduction to Chemistry Lab (1)</td>
</tr>
</tbody>
</table>

**Social/Behavioral Sciences (3 crs)**

PSY or SOC Elective - approved by advisor (3)

**Humanities and Fine Arts (3 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 220</td>
<td>Ethics (3)</td>
</tr>
</tbody>
</table>

**HEALTH, PHYSICAL EDUCATION & RECREATION (2 crs)**

Electives (2)

**PROGRAM REQUIREMENTS (40 crs)**

Choose one of the following concentrations:

**Refinishing (40 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABR 110</td>
<td>Introduction to Auto Body Repair (4)</td>
</tr>
<tr>
<td>ABR 111</td>
<td>Metal Work I (4)</td>
</tr>
<tr>
<td>ABR 112</td>
<td>Refinishing I (5)</td>
</tr>
<tr>
<td>ABR 120</td>
<td>Body Welding Methods (4)</td>
</tr>
<tr>
<td>ABR 212</td>
<td>Refinishing II (5)</td>
</tr>
<tr>
<td>ABR 214</td>
<td>Refinishing III (5)</td>
</tr>
</tbody>
</table>

Approved Electives - 13 credit hours of other ABR course work.

**Non-structural Analysis and Damage Repair (40 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABR 110</td>
<td>Introduction to Auto Body Repair (4)</td>
</tr>
<tr>
<td>ABR 111</td>
<td>Metal Work I (4)</td>
</tr>
<tr>
<td>ABR 114</td>
<td>Unitized Body Repair (5)</td>
</tr>
<tr>
<td>ABR 120</td>
<td>Body Welding Methods (4)</td>
</tr>
<tr>
<td>ABR 211</td>
<td>Metal Work II (4)</td>
</tr>
<tr>
<td>ABR 213</td>
<td>Metal Work III (4)</td>
</tr>
</tbody>
</table>

Approved Electives - 10 credit hours of other ABR course work.

**Estimation of Body Repair (40 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABR 110</td>
<td>Introduction to Auto Body Repair (4)</td>
</tr>
<tr>
<td>ABR 111</td>
<td>Metal Work I (4)</td>
</tr>
<tr>
<td>ABR 112</td>
<td>Refinishing I (5)</td>
</tr>
<tr>
<td>ABR 115</td>
<td>Estimation of Auto Body Repair (4)</td>
</tr>
<tr>
<td>ABR 120</td>
<td>Body Welding Methods (4)</td>
</tr>
<tr>
<td>ABR 215</td>
<td>Software Applications (3)</td>
</tr>
</tbody>
</table>

Approved Electives - 16 credit hours of other ABR course work.

**TOTAL CREDITS** 64
Certificate
AUTO BODY REPAIR - REFINISHING

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

GENERAL EDUCATION (6-7 crs)

**Communications (3 hrs)**
ENG 108N Basic English I (3)

**Mathematics (3-4 crs)**
MATH 100N (4) or higher level math course (3) or BA 117 (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (23 crs)
ABR 110 Introduction to Auto Body Repair (4)
ABR 111 Metal Work I (4)
ABR 112 Refinishing I (5)
ABR 212 Refinishing II (5)
ABR 214 Refinishing III (5)

**TOTAL CREDITS 29-32**
Certificate

AUTO BODY REPAIR - NON-STRUCTURAL ANALYSIS AND DAMAGE

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

GENERAL EDUCATION (6-7 crs)

**Communications (3 hrs)**
ENG 108N Basic English I (3)

**Mathematics (3-4 crs)**
MATH 100N (4) or higher level math course (3) or BA 117 (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (30 crs)
ABR 110 Introduction to Auto Body Repair (4)
ABR 111 Metal Work I (4)
ABR 112 Refinishing I (5)
ABR 114 Unitized Body Repair (5)
ABR 120 Body Welding Methods (4))
ABR 211 Metal Work II (4)
ABR 213 Metal Work III (4)

TOTAL CREDITS 36-37
Certificate

ESTIMATION OF AUTO BODY REPAIR

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

GENERAL EDUCATION (6-7 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (3-4 crs)
MATH 100N (6) or higher level math course (3) or BA 117 (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (20 crs.)
ABR 110 Introduction to Auto Body Repair (4)
ABR 111 Metal Work I (4)
ABR 112 Refinishing I (5)
ABR 115 Estimation of Auto Body Repair (4)
ABR 215 Software Applications (3)

TOTAL CREDITS 26-27
Completion of the Automotive Technology program is designed to provide you with entry level employment. You must attend on a full-time basis. By the time you complete this program, you should be able to achieve Automotive Service Excellence (ASE) certification in four or more competency areas.

GENERAL EDUCATION (18 crs)

Communications (6 crs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (6 chrs)
CS 102 Computer Literacy (3)
Elective (3)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Arts (3 crs)
Elective (3)

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

PROGRAM REQUIREMENTS (47 crs)
ATEC 101L Basic Service Fundamentals (4)
ATEC 102L Engine Repair (5)
ATEC 104L Brake Systems (5)
ATEC 105L Suspension and Alignment (4)
ATEC 109L Air Conditioning and Heating (5)
ATEC 203L Electrical and Electronics (5)
ATEC 206L Manual Transmission and Differential (5)
ATEC 207L Automatic Transmission (5)
ATEC 210L Engine Performance (5)
Electives Choose one of the following:
ATEC 280L Practicum (3)
WELD 110 Introduction to Welding (3)

TOTAL CREDITS 66
Certificate

AUTOMOTIVE SERVICE FUNDAMENTALS

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

GENERAL EDUCATION (9-10 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (6-7 crs)
MATH 100N (3) or a higher level math course (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]
CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (13 crs.)
Enrollment in ATEC courses is based upon completion of MATH 100N or a higher level math course, course placement evaluation scores, or instructor permission.
ATEC 101L Basic Service Fundamentals (4)
ATEC 104L Brake Systems (5)
ATEC 105L Suspension and Alignment (4)

TOTAL CREDITS 22-25
Certificate

AUTOMOTIVE MECHANICAL REPAIR

The completion of this program may lead to entry-level employment in automotive technology-related businesses, including such businesses as auto part stores and car dealerships. You must attend on a full-time basis. By the time you complete this program and the necessary work experience, you should be able to achieve Automotive Service Excellence (ASE) in four or more competency areas. Enrollment is based on having completed Fundamentals of Math (MATH 100N) and Basic English I (ENG 108N) or tested above those levels, or with permission of the instructor. The total program hours meet or exceed NATEF Program standards and are not reflected by credit hours.

GENERAL EDUCATION (9-10 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (6-7 crs)
MATH 100N (4) or a higher level math course (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]
CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (43 crs.)
Enrollment in ATEC courses is based upon completion of MATH 100N or a higher level math course, course placement evaluation scores, or instructor permission.
ATEC 101L Basic Service Fundamentals (4)
ATEC 102L Engine Repair (5)
ATEC 104L Brake Systems (5)
ATEC 105L Suspension and Alignment (4)
ATEC 109L Air Conditioning and Heating (5)
ATEC 203L Electrical and Electronics (5)
ATEC 206L Manual Transmission and Differential (5)
ATEC 207L Automatic Transmission (5)
ATEC 210L Engine Performance (5)

TOTAL CREDITS 52-53
Associate of Applied Science
CONSTRUCTION TRADES TECHNOLOGY

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

GENERAL EDUCATION (25 hcrs)

Communications (9 hrs)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (10 crs)
CS 102 Computer Literacy (3)
MATH 130 Intermediate Algebra (3)
PHYS 110/L Introduction to Physics I with lab (4)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Arts (3 crs)
Electives (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 crs)
Elective (2)

PROGRAM REQUIREMENTS (39 crs)
ADOB 100 Traditional Dwelling Design (3)
BA 240 Principles Management (3)
BA 266 Business Law (4)
CONS 150 Contractor Licensing Requirements (3)
CONS 151 Inspection Processes (1)
CONS 152 Labor Laws and Safety (2)
CONS 153 Construction Contractor Taxation (3)
CONS 155 Construction Math & Blueprint Reading (3)
CONS 156 Uniform Bldg Code (2)
CONS 157 Site Development and Layout (2)
CONS 206 Building Construction (3)
CONS 207 Construction Materials & Estimating (3)
ELEC 141 Introduction to Electrical Code (3)
PLB 131 Plumbing Code I (2)
PLB 141 Plumbing Code II (2)

TOTAL CREDITS 66
Associate of Applied Science
CONSTRUCTION TRADES MANAGEMENT

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

GENERAL EDUCATION (18 crs)

**Communications (6 hrs)**
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

**Math/Computers/Lab Sciences (6 crs)**
CS 102 Computer Literacy (3)
Elective (3)

**Social/Behavioral Sciences (3 crs)**
Elective (3)

**Humanities and Fine Arts (3 crs)**
Elective (3)

**HEALTH, PHYSICAL EDUCATION & RECREATION (2 crs)**
Electives (2)

**PROGRAM REQUIREMENTS (64-74 crs)**
BA 117 Business Math (3)
BA 220 Introduction to Business (3)
BA 240 Principles of Management (3)

**Concentrations** (choose one of the following)
Option 1: Adobe Construction (27 crs)
Electives (10 hrs) from ADOB, CARP, CONS, or DRFT courses
Option 2: Wood/Steel Frame Building Construction (38 crs)
Five courses from CARP 171-178 (30 hrs)
Electives (8 hrs) from ADOB, CONS, CARP, or DRFT courses

**TOTAL CREDITS 67-76 HRS**
Associate of Applied Science

ELECTRICAL TECHNOLOGY

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

GENERAL EDUCATION (25 crs)

**Communications (9)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

**Math/Computers/Lab Sciences (10 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 102</td>
<td>Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>ENGR 110</td>
<td>Intro to Engineering Technology</td>
<td>4</td>
</tr>
<tr>
<td>MATH 130</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

**Social/Behavioral Sciences (3 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Humanities and Fine Arts (3 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**PROGRAM REQUIREMENTS (39 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 240</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>CONS 207</td>
<td>Construction Materials &amp; Estimating</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 140</td>
<td>Introduction to Electrical Theory</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 141</td>
<td>Introduction to Electrical Code</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 142L</td>
<td>Residential Wiring Lab</td>
<td>6</td>
</tr>
<tr>
<td>ELEC 150</td>
<td>Electrical Theory</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 151</td>
<td>Electrical Code</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 152L</td>
<td>Commercial Wiring Code</td>
<td>6</td>
</tr>
<tr>
<td>ELEC 160</td>
<td>Motor Controls</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 160L</td>
<td>Motor Controls Lab</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS 65**
Certificate

ELECTRICAL TECHNOLOGY

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

GENERAL EDUCATION (6-7 crs)

**Communications (3 hrs)**
- ENG 108N Basic English I (3)

**Mathematics (3-4 crs)**
- MATH 100N (3) or a higher level math course (3)
  [In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (24 crs)
- ELEC 140 Introduction to Electrical Theory (3)
- ELEC 141 Introduction to Electrical Code (3)
- ELEC 142L Residential Wiring Lab (6)
- ELEC 150 Electrical Theory (3)
- ELEC 151 Electrical Code (3)
- ELEC 152L Commercial Wiring Code (6)

**TOTAL CREDITS** 30-31
**Associate of Applied Science**  
**FIBER ARTS**

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

**GENERAL EDUCATION (24 crs)**

**Communications (6 crs)**
- ENG 111 English Composition I (3)

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

**Math/Computers/Lab Sciences (6 crs)**
- Elective: (6)

**Social/Behavioral Sciences (6 crs)**
- Electives (6)

**Humanities and Fine Arts (6 crs)**
- Two courses from Humanities or Fine Arts (lecture only) (6)

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
- Elective (1)

**PROGRAM REQUIREMENTS (49 crs)**
- FA 101/L Weaving I with lab (7)
- FA 103 Spinning I (3)
- FA 105 Dyeing (3)
- FA 107 Textile Color & Design (2)
- FA 110 History of Textiles (2)
- FA 208 Marketing of Woven Goods (2)
- FA 210/L Weaving II with lab (7)
- FA 213/L Weaving III Lab (7)
- FA 225 Four Harness Weave (4)
- FA 230 Weaving Practicum (4)

Choose 8 credit hours from the following courses:
- FA 109 Loom Building (1)
- FA 112 Vegetable Dyes: Identification. and Selection (5)
- FA 116 Quilting (2)
- FA 202 Spinning II (2)
- FA 216 Rug Restoration (2)
- FA 218 Rag Rug Weaving (2)

**TOTAL CREDITS 74**
This program prepares you for entry-level jobs in the weaving industry, working with others or on your own.

GENERAL EDUCATION (6-7 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (3-4 crs)
MATH 100N (3) or a higher level math course (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (41 crs)
FA 101/L Weaving I with lab (7)
FA 103 Spinning I (3)
FA 105 Dyeing (3)
FA 107 Textile Color & Design (2)
FA 110 History of Textiles (2)
FA 208 Marketing of Woven Goods (2)
FA 210/L Weaving II with lab (7)
FA 213/L Weaving III with lab (7)
FA 225 Four Harness Weave (4)
FA 230 Weaving Practicum (4)

TOTAL CREDITS 47-48
Associate of Applied Science

MACHINING TECHNOLOGY

This program is for students who are actively participating in the Machinist Apprenticeship Program.

GENERAL EDUCATION (18-19 crs)

Communications (6 hrs)
ENG 111 English Composition I (3)
Choose one of the following three courses:
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (6-7 crs)
CS 102 Computer Literacy (3)
MATH 130 Intermediate Algebra (3)
or
ENGR 110 Intro to Engineering Technology (4)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Arts (3 crs)
Elective (3)

HEALTH, PHYSICAL EDUCATION, AND RECREATION (1 cr)
Elective (1)

PROGRAM REQUIREMENTS (52 crs)
MT 110 MAP Basic Machining Operations I (2)
MT 120 MAP Basic Machining Operations II (2)
MT 130 MAP Basic Print Reading (2)
MT 140 MAP Basic Math for Machinists (2)
MT 210 MAP Advanced Math for Machinists (2)
MT 220 MAP Advanced Machining Operations I (2)
MT 230 MAP Adv. Print Reading and Measurement (3)
MT 240 MAP Adv. Machining Operations II (1)
MT 190A Machinist Apprenticeship Training A (12)
MT 191B Machinist Apprenticeship Training B (12)
MT 290D Machinist Apprenticeship Training D (12)

TOTAL CREDITS 71-72
Associate of Applied Science
PLUMBING TECHNOLOGY

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

GENERAL EDUCATION (21 crs)

Communications (9 hrs)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (6 crs)
CS 102 Computer Literacy (3)
Elective (3)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities (3 crs)
Elective (3)

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

PROGRAM REQUIREMENTS (42 crs)
PLB 130 Plumbing Systems I (3)
PLB 130L Plumbing Systems Lab I (5)
PLB 131 Plumbing Code I (2)
PLB 132 Blueprint Reading (2)
PLB 140 Plumbing Systems II (3)
PLB 140L Plumbing Systems Lab II (5)
PLB 141 Plumbing Code II (2)
PLB 142 Blueprint Reading and Drawing (2)
BA 240 Principles of Management (3)
DRFT 100 Introduction to Computer Aided Drafting (4)
CONS 206 Building Construction (3)
Electives (8)

TOTAL CREDITS 64
Certificate
PLUMBING TECHNOLOGY

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

GENERAL EDUCATION (6-7 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (3-4 crs)
MATH 100N (3) or a higher level math course (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (24 crs)
PLB 130 Plumbing Systems I (3)
PLB 130L Plumbing Systems Lab I (5)
PLB 131 Plumbing Code I (2)
PLB 132 Blueprint Reading (2)
PLB 140 Plumbing Systems II (3)
PLB 140L Plumbing Systems Lab II (5)
PLB 141 Plumbing Code II (2)
PLB 142 Blueprint Reading and Drawing (2)

TOTAL CREDITS 30-31
Associate of Applied Science

RENEWABLE ENERGY

This program will provide you with the skills necessary to enter environmental fields -- the renewable energy, alternative technology, and construction industries -- at higher than entry level. You will be capable of entering at supervisory or management internship levels or of establishing a small related business.

GENERAL EDUCATION (29 hrs)

Communications (9)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (14)
MATH 145 Introduction to Probability and Statistics (3)
MATH 150 College Algebra (3)
CHEM 121/L General Chemistry I with lab (4)
PHYS 121/L Applied Physics I with lab (4)

Humanities and Fine Arts (3)
Elective (3)

Social/Behavioral Sciences (3)
GEOG 111 World Geography (3)
or
Elective (3)

Health, Physical Education, and Recreation (2)
Electives (2)

PROGRAM REQUIREMENTS (36 hrs)
Completion of Renewable Energy Certificate Program (26)
Electives from: RE, ELEC, ES, ADOB, CONS, CARP, DRFT (10)

TOTAL CREDITS 67
Certificate

RENEWABLE ENERGY

This program will provide you with the information and practical experience necessary to design and build or install various types of renewable energy systems. It emphasizes conservation and efficiency as the first step in any renewable energy endeavor through a study of historical, modern, and emerging technologies and materials. As a graduate, you will be capable of being employed with construction firms, renewable energy firms, alternative technology firms, design and planning firms, or of being self-employed as a specialized subcontractor. You will be capable of designing and building your own off-the-grid homes and vehicles.

GENERAL EDUCATION (10-13 crs)

Communications (3)
ENG 108N Basic English I (3) or a higher level English course.

Math/Computers/Lab Sciences (3-4 crs)
MATH 102N Basic Algebra (4) or a higher level math course
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (26 crs)

General: Complete 9 crs from the following:
ES 100 Introduction to Environmental Science (3)
ES 224 Environmental and Community Planning (3)
ES 126 Introduction to Waste Management (3)
RE 103 Renewable Energy Introduction and Overview (3)
RE 104 Architecture 2030 and the 2010 Imperative (3)

Solar Heating: Complete 5 crs from the following:
ADOB 107 Passive Solar Heating (2)
RE 108 Active Solar Heating (3)
RE 108L Solar Energy Lab (2)
PLB 110 Intro to Solar Heating Plumbing (1)
PLB 110L Intro to Solar Heating Plumbing Lab (2)

Renewable Electric and Electronics: Complete 8 crs from the following:
ELEC 100 Introduction to Solar Electricity (1)
ELEC 110L Introduction to Solar Electricity Lab (2)
ELEC 140 Electrical Theory I (3)
ELEC 190 Solar and Wind Systems in the Electric Code (2)
RE 160 Renewable Electric Power Systems (3)
RE 207 Wind Electric System Design and Installation (4)
RE 208 Photovoltaic System Design and Installation (4)

Renewable Vehicle Power: Complete 2 crs from the following:
RE 140 Electric Vehicle Conversion: Nuts and Bolts (2)
RE/ATEC 144 Bio-Diesel Fuel Production and Engine Requirements (3)
RE/ATEC 146 Bio-Hybrid Fuel Production and Engine Requirements (3)

Geothermal, Biomass, and Emerging Heat and Power: Complete 2 crs from the following
RE 127 Geothermal Systems for Heat and Power (4)
RE 128 Biomass Systems for Heat, Power, and Cogeneration (4)
RE 129 Trends and Emerging Energy Sources (2)

TOTAL CREDITS 32-44
Associate of Applied Science

SPANISH COLONIAL FURNITURE MAKING

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

GENERAL EDUCATION (18 Crs)

**Communications (6 hrs)**
- ENG 111 English Composition I (3)
- Choose one of the following:
  - ENG 112 English Composition II (3)
  - ENG 116 Technical Writing (3)
  - COMM 111 Business and Professional Communication Studies (3)
  - SPCH 130 Public Speaking (3)

**Math/Computers/Lab Sciences (6 crs)**
- CS 102 Computer Literacy (3)
- MATH Elective at/above MATH 145 (3)

**Social/Behavioral Sciences (3 crs)**
- Elective (3)

**Humanities and Fine Arts (3 crs)**
- HIST 260 History of NM (3)

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
- Elective (1)

**PROGRAM REQUIREMENTS (46 crs)**
- SCFM 150 Introduction to Spanish Colonial Furniture (3)
- SCFM 150L Introduction to Spanish Colonial Furniture Lab (9)
- SCFM 160L Spanish Colonial Furniture Making Lab (12)
- SCFM 170L Advanced Spanish Colonial Furniture Making Lab (12)
- DRFT 100 Introduction to Computer Aided Drafting (4)
- ART 170 Photography I (3)
- Elective (3)

TOTAL CREDITS 65
Certificate

SPANISH-COLONIAL FURNITURE MAKING:

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

GENERAL EDUCATION (6-7 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (3-4 crs)
MATH 100N (3) or a higher level math course (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (36 crs)
SCFM 150 Introduction to Spanish Colonial Furniture (3)
SCFM 150L Introduction to Spanish Colonial Furniture Lab (9)
SCFM 160L Spanish Colonial Furniture Making Lab (12)
SCFM 170L Advanced Spanish Colonial Furniture Making Lab (12)

TOTAL CREDITS 42-43
Associate of Applied Science  
VISUAL COMMUNICATION

This program is designed to prepare you for the general area of electronic imaging and publication, animation and digital production for film, with the option of transferring to a four-year institution and a professional degree.

**GENERAL EDUCATION (18- crs)**

**Communications (6 crs)**  
ENG 111  English Composition I (3)  
Elective (3)

**Math/Computers/Lab Sciences (6 crs)**  
MATH 130 or higher level math course (3)  
Elective (3)

**Social/Behavioral Science (3 crs)**  
Elective (3)

**Humanities and Fine Arts (3 crs)**  
VC 280  Visual Communication History (3)

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**  
Elective (1)

**PROGRAM REQUIREMENTS (46 crs)**  
VC 110  Fundamentals of Visualization (3)  
VC 111  2-D Computer Visualization (4)  
VC 120  3-D Visualization (3)  
VC 121  3-D Computer Visualization (4)  
VC 135  Electronic Publications I (4)  
VC 140  Digital Imaging I (4)  
VC 155  Computer Animation I (4)  
VC 160  Digital Production for Film I (4)  
VC/CT 175  Internet Publication I (4)  
Choose **three** from the following eight courses:  
VC 165  Visual Communications I (4)  
VC 265  Visual Communications II (4)  
VC 235  Electronic Publication II (4)  
VC 240  Digital Imaging II (4)  
VC 255  Computer Animation II (4)  
VC 260  Digital Production for Film II (4)  
VC 275  Internet Publication II (4)  
VC 290  Multimedia (4)

**TOTAL CREDIT HOURS**  
65
Associate of Applied Science
WELDING TECHNOLOGY

This program prepares you for the more technical aspects of the welder’s trade, with emphasis on jobs available in the government sector, particularly at sites such as the Los Alamos National Laboratory.

GENERAL EDUCATION (21-22 crs)

Communications (9 hrs)
- ENG 111 English Composition I (3)
- ENG 116 Technical Writing (3)
- SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (6-7 hrs)
- CS 102 Computer Literacy (3)
- ENGR 110 Intro to Engineering Technology (4)
  or
- MATH 130 Intermediate Algebra (3)

Social/Behavioral Sciences (3 hrs)
- Elective (3)

Humanities and Fine Art (3 hrs)
- Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
- Electives (1)

PROGRAM REQUIREMENTS (42-43 crs)
- BA 220 Introduction to Business (3)
- DRFT 100 Computer Aided Drafting I (4)
- DRFT 199 Job Skills (1)
- WELD 110 Introduction to Welding (3)
- WELD 111L Fundamentals of Oxyacetylene Welding (3)
- WELD 112L Fundamentals of Arc Welding (3)
- WELD 120L Oxyacetylene Welding (3)
- WELD 121L Arc Welding (3)
- WELD 122L Inert Gas Welding (3)
- WELD 210 Welding Blueprint Reading (3)
  or
- CONS 155 Construction Math and Blueprint Reading (3)
- WELD 211L Practical Arc Lab (3)
- WELD 212L Practical Oxyacetylene Lab (3)
- WELD 213L Practical Inert Gas Lab (3)

Approved Technical Elective (4-5) such as ABR, ATEC, DRFT, ELEC, WELD, etc.

TOTAL CREDITS 64-66
Certificate
WELDING

This program prepares you for entry-level jobs in the manufacturing and construction trades as production or specialized welders, welder fitters, and welder-tackers. When you have completed the program you will be eligible to apply for national certification from the American Welding Society.

GENERAL EDUCATION (6-7 crs)

Communications (3 hrs)
ENG 108N Basic English I (3)

Mathematics (3-4 crs)
MATH 100N (4) or a higher level math course (3)
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]

PROGRAM REQUIREMENTS (30 crs.)
WELD 110 Introduction to Welding (3)
WELD 111L Fundamentals of Oxyacetylene Welding (3)
WELD 112L Fundamentals of Arc Welding (3)
WELD 120L Oxyacetylene Welding (3)
WELD 121L Arc Welding (3)
WELD 122L Inert Gas Welding (3)
WELD 210 Welding Blueprint Reading (3)

or
CONS 155 Construction Math and Blueprint Reading (3)
WELD 211L Practical Arc Lab (3)
WELD 212L Practical Oxyacetylene Lab (3)
WELD 213L Practical Inert Gas Lab (3)

TOTAL CREDITS 39-42
Associate of Applied Science
WILDLAND FIRE SCIENCE

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

GENERAL EDUCATION (19 crs)

Communications (6 hrs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (7 crs)
ES 112/L Environmental Science with lab (4)
CS 102 Computer Literacy (3)

Social/Behavioral Sciences (3 crs)
PSY 105 General Psychology (3)

Humanities and Fine Arts (3 crs)
HIST 162 History of the U.S. from 1877 (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (5 crs)
HPER Electives (5)

PROGRAM REQUIREMENTS (40 crs)
DRFT 110 GIS/GPS (3)
ES 134 OSHA Safety and Health (3)
FOR 101 Introduction to Forestry (3)
FOR 123 Forest Ecology (3)
HSCI 109 CPR/First Aid (.5)
WFS 110 Wildland Fire Technician I (2)
WFS 112 Wildland Fire Fighter Training (3)
WFS 118 Interagency Incident Business (1)
WFS 125 Basic Air Operations (1)
WFS 127 Advanced Fire Fighting Training (2)
WFS 201 Wildland Fire Technician II (3)
WFS 215 Interagency (IA) Helicopter Training (3)
WFS 232 Fundamentals of Fire Behavior (3)
WFS 235 Ignition Operation (2)
WFS 237 Crew Boss (2)
WFS 281 Field Training (3)
WFS 282 Wildland Chainsaws (3)

TOTAL CREDITS 64
## Associate of Applied Science
### WILDLAND FIRE SCIENCE

## Required Sequence of Courses

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR 101 (3)</td>
<td>ES 134 (3)</td>
</tr>
<tr>
<td>FOR 123 (3)</td>
<td>PSY 105 (3)</td>
</tr>
<tr>
<td>WFS 110 (2)</td>
<td>WFS 118 (1)</td>
</tr>
<tr>
<td>WFS 112 (3)</td>
<td>WFS125 (1)</td>
</tr>
<tr>
<td>CS 102 (3)</td>
<td>WFS 127 (2)</td>
</tr>
<tr>
<td></td>
<td>BIOL 112/L (4)</td>
</tr>
</tbody>
</table>

### Summer Session
- WFS 281 (3)
- WFS 281 (3)

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFS 201 (3)</td>
<td>WFS 232 (3)</td>
</tr>
<tr>
<td>WFS 215 (3)</td>
<td>WFS 235 (2)</td>
</tr>
<tr>
<td>SPCH 130 (3)</td>
<td>WFS 237 (2)</td>
</tr>
<tr>
<td>HPER Elective (1)</td>
<td>HPER Elective (1)</td>
</tr>
<tr>
<td>ENG 111 (3)</td>
<td>DRFT 110 (3)</td>
</tr>
<tr>
<td>HIST 162 (3)</td>
<td></td>
</tr>
</tbody>
</table>
When you successfully complete this program you will be prepared for entry level CAD positions in engineering, architectural, construction, or surveying firms.

**GENERAL EDUCATION (21-22 crs.)**

**Communications (6 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
</tbody>
</table>
| Choose one of the following three courses:
| ENG 112  | English Composition II    | 3       |
| ENG 116  | Technical Writing         | 3       |
| SPCH 130 | Public Speaking           | 3       |

**Math/Computers/Lab Sciences (9-10 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 102</td>
<td>Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>MATH 130</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

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

**Social/Behavioral Sciences (3 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>Having a</td>
<td>3</td>
</tr>
</tbody>
</table>

**Humanities and Fine Arts (3 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>Having a</td>
<td>3</td>
</tr>
</tbody>
</table>

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>Having a</td>
<td>1</td>
</tr>
</tbody>
</table>

**PROGRAM REQUIREMENTS**

**General Drafting (42 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRFT 100</td>
<td>Computer Aided Drafting I</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 101</td>
<td>Residential CAD I</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 102</td>
<td>Mechanical Engineering CAD I</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 103</td>
<td>Surveying and CAD Mapping I</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 110</td>
<td>GIS/GPS</td>
<td>3</td>
</tr>
<tr>
<td>DRFT 111</td>
<td>Commercial Building CAD</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 112</td>
<td>Mechanical Engineering CAD II</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 113</td>
<td>Surveying and CAD Mapping II</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 199</td>
<td>Job Skills</td>
<td>1</td>
</tr>
<tr>
<td>DRFT 209</td>
<td>Computer Aided Drafting II</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives (2 crs): Choose from DRFT, CONS, VC, ENGR, CT/CS/IT, PHYS, or WELD.

Choose two of the following three courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRFT 201</td>
<td>Residential CAD II</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 202</td>
<td>Mechanical Engineering CADIII</td>
<td>4</td>
</tr>
<tr>
<td>DRFT 203</td>
<td>Civil Engineering CAD</td>
<td>4</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS** 64-65
Certificate
COMPUTER AIDED DRAFTING

This program prepares you for entry-level positions in architectural drafting. You will be skilled in both manual and computer-aided drafting.

GENERAL EDUCATION (9-10 crs)

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

Math/Computer/Lab Sciences (6-7 crs)
MATH 102 Basic Algebra (4)
CS 102 Computer Literacy (3)

PROGRAM REQUIREMENTS (27 crs)
DRFT 100 Computer Aided Drafting I (4)
DRFT 101 Residential CAD I (4)
DRFT 103 Surveying and CAD Mapping I (4)
DRFT 111 Commercial Building CAD (4)
DRFT 199 Job Skills (1)
DRFT 201 Residential CAD II (4)
DRFT 209 Computer Aided Drafting II (3)
Elective (3): Choose CONS 206 or CONS 207:

TOTAL CREDIT HOURS 36-37
The mission of the Communications, Humanities, and Social Sciences Department is to provide you with high quality academic course work leading to a certificate or associate degree, or in preparation for transfer into a baccalaureate degree program. Additionally, this department provides excellent scholastic support in the many general education courses required if you are pursuing any degree program at Northern. Our programs are relevant to your personal and professional needs; they develop critical thinking skills, enhance self-esteem, and assist in your development into an organized, focused, empowered, and independent lifelong learner.

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

Mellis Schmidt, PhD ................. Chairperson ............................... 747-2213 ......................... mschmidt@nnmc.edu
David Barton, PhD ................. English/Humanities .............................. 747-2217 ......................... dbarton@nnmc.edu
Tim Crone, MA .......................... Anthropology, Sociology ...................... 747-2111 ............................. tcrone@nnmc.edu
Lori Franklin, MA ........................ English ..................................... 747-2215 ............................. lorig@nnmc.edu
Louis Schiano, PhD ................. Humanities ....................................... 747-2480 ............................. lschiano@nnmc.edu
Pamela Lapcevic, MA ............... Developmental Studies ..................... 747-2219 ............................. plapcevic@nnmc.edu
Associate of Arts
CRIMINAL JUSTICE

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

GENERAL EDUCATION (35 crs)

Communications (9 hrs)
- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)

Choose one of the following two courses:
- ENG 112 English Composition II (3)
- ENG 116 Technical Writing (3)

Mathematics (3 crs)
- MATH 145 Introduction to Probability and Statistics (3)
- MATH 150 College Algebra (3)

Laboratory Science (8 crs)
Choose two survey course ss (with labs) from the following list:
- ASTR 110/L Introduction to Astronomy w/lab (4)
- BIOL 110/L Survey of Modern Biology w/lab (4)
- CHEM 110/L Introduction to Chemistry w/lab (4)
- ES 112/L Environmental Science w/Lab (4)
- GEOL 101/L Physical Geology w/Lab (4)
- GEOL 102/L Historical Geology w/Lab (4)
- PHYS 110/L Introduction to Physics w/Lab (4)

Social/Behavioral Sciences (9 crs) *
- PSY 105 General Psychology (3)
- SOC 101 Introduction to Sociology (3)

Choose one survey course from the following list:
- ANTH 101/L Physical Anthropology with Lab (4)
- ANTH 102 Intro to Social/Cultural Anthropology (3)
- ANTH 110 Indian Culture of the Southwest (3)
- ANTH 207 Cultures of New Mexico (3)
- ECON 200 Macroeconomics (3)
- ECON 201 Microeconomics (3)
- GEOG 111 World Geography (3)
- PSCI 110 The Political World (3)
- PSCI 120 Contemporary Political Issues (3)
- PSCI 200 American Politics (3)
- PSCI 210 State and Local Government (3)
- PSCI 212 The American Presidency (3)
- PSY 105 General Psychology (3)
- PSY 210 Theories of Personality (3)
- PSY 229 Adolescent Psychology (3)
- PSY 230 Psychology of Adjustment (3)
- PSY 232 Abnormal Behavior (3)
- PSY 270 Social Psychology (3)
- PSY 290 Developmental Psychology (3)
- SOC 101 Introduction to Sociology (3)
- SOC 213 Deviant Behavior (3)
- SOC 216 Ethnic and Intercultural Relations (3)
- SOC 220 Social Problems (3)
- SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval
Humanities and Fine Arts (6-9 crs) *

Choose two survey courses from the following list:

- ART 105 Introduction to Art (3)
- ART 107 History of Art I (3)
- ART 211 History of ART (3)
- DANC 240 Dance Appreciation (3)
- ENG 270 Children’s Literature (3)
- ENG 262 Literature of the Southwest (3)
- ENG 265 Native American Literature I (3)
- ENG 265 Native American Literature II (3)
- ENG 280 Readings in Literature (3)
- ENG 290 Study of Literature (3)
- ENG 239 Mythology (3)
- HIST 101 Western Civilization I (3)
- HIST 102 Western Civilization II (3)
- HIST 161 History of U.S. to 1877 (3)
- HIST 162 History of U.S. from 1877 (3)
- HIST 200 History of World Religions (3)
- HIST 220 Southwestern Women’s History (3)
- HIST 230 Chicano Experience in the US (3)
- HIST 250 American Indian History (3)
- HIST 260 History of New Mexico (3)
- HUM 105 Humanities and the Southwest (3)
- HUM 311 Why the Social Sciences Matter ** (3)
- HUM 414 Humanity and Creativity ** (3)
- HUM 421 History, Literature, Art & Philosophy ** (3)
- MUS 102 Theory of Music (3)
- MUS 105 Music Appreciation (3)
- MUS 130 History of Music (3)
- MUS 140 History of Music (3)
- PHIL 110 Introduction to Philosophical Problems (3)
- PHIL 111 History of Philosophy (3)
- PHIL 220 Ethics (3)
- PIS 200 Introduction to Pueblo Indian Studies (3)
- THE 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)

Elective (1)

PROGRAM REQUIREMENTS (31 crs)

- CJ 111 Introduction to Criminal Justice System (4)
- CJ 132 Introduction to Criminology (3)
- CJ 201 Criminal Law (3)
- CJ 202 Courts and Criminal Justice (3)
- CJ 221 Criminal Justice & Comm. Relations (3)
- CJ 233 Juvenile Justice Procedures (3)
- CJ 235 Introduction to Corrections (3)

Choose one of the following two courses:

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

Elective (3)

TOTAL CREDITS 64
This program, which allows you to take courses for personal growth or for transfer to a four-year college or university, allows a great deal of flexibility in choosing courses. In this way, you can work with an advisor to put together a degree major which may not be offered by Northern, thus establishing a solid foundation of courses for transfer to a four-year institution.

**GENERAL EDUCATION (35 crs)**

**Communications (9 crs)**
- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)
Choose one of the following two courses:
- ENG 112 English Composition II (3)
- ENG 116 Technical Writing (3)

**Mathematics (3 crs)**
- MATH 150 College Algebra (3)

**Laboratory Science (8 crs)**
Choose two survey courses (with labs) from the following list:
- ASTR 110/L Introduction to Astronomy w/lab (4)
- BIOL 110/L Survey of Modern Biology w/lab (4)
- CHEM 110/L Introduction to Chemistry w/lab (4)
- ES 112 Environmental Science w/Lab (4)
- GEOL 101/L Physical Geology w/Lab (4)
- GEOL 102/L Historical Geology w/Lab (4)
- PHYS 110/L Introduction to Physics w/Lab (4)

**Social/Behavioral Sciences (6-9 crs)** *
You must select survey courses from at least two different discipline areas from the following list:
- ANTH 101/L Physical Anthropology with Lab (4)
- ANTH 102 Intro to Social/Cultural Anthropology (3)
- ANTH 110 Indian Culture of the Southwest (3)
- ANTH 207 Cultures of New Mexico (3)
- ECON 200 Macroeconomics (3)
- ECON 201 Microeconomics (3)
- GEOG 111 World Geography (3)
- PSCI 110 The Political World (3)
- PSCI 120 Contemporary Political Issues (3)
- PSCI 200 American Politics (3)
- PSCI 210 State and Local Government (3)
- PSCI 212 The American Presidency (3)
- PSY 105 General Psychology (3)
- PSY 210 Theories of Personality (3)
- PSY 229 Adolescent Psychology (3)
- PSY 230 Psychology of Adjustment (3)
- PSY 232 Abnormal Behavior (3)
- PSY 270 Social Psychology (3)
- PSY 290 Developmental Psychology (3)
- SOC 101 Introduction to Sociology (3)
- SOC 213 Deviant Behavior (3)
- SOC 216 Ethnic and Intercultural Relations (3)
- SOC 220 Social Problems (3)
- SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval
Humanities and Fine Arts (6-9 crs) *
You must select survey courses from at least two different discipline areas from the following list:

- **ART** 105  Introduction to Art (3)
- **ART** 107  History of Art I (3)
- **ART** 211  History of ART (3)
- **DANC** 240  Dance Appreciation (3)
- **ENG** 270  Children’s Literature (3)
- **ENG** 262  Literature of the Southwest (3)
- **ENG** 265  Native American Literature I (3)
- **ENG** 265  Native American Literature II (3)
- **ENG** 280  Readings in Literature (3)
- **ENG** 290  Study of Literature (3)
- **ENG** 239  Mythology (3)
- **HIST** 101  Western Civilization I (3)
- **HIST** 102  Western Civilization II (3)
- **HIST** 161  History of U.S. to 1877 (3)
- **HIST** 162  History of U.S. from 1877 (3)
- **HIST** 200  History of World Religions (3)
- **HIST** 220  Southwestern Women’s History (3)
- **HIST** 230  Chicano Experience in the US (3)
- **HIST** 250  American Indian History (3)
- **HIST** 260  History of New Mexico (3)
- **HUM** 105  Humanities and the Southwest (3)
- **HUM** 311  Why the Social Sciences Matter ** (3)
- **HUM** 414  Humanity and Creativity ** (3)
- **HUM** 421  History, Literature, Art & Philosophy ** (3)
- **MUS** 102  Theory of Music (3)
- **MUS** 105  Music Appreciation (3)
- **MUS** 130  History of Music (3)
- **MUS** 140  History of Music (3)
- **PHIL** 110  Introduction to Philosophical Problems (3)
- **PHIL** 111  History of Philosophy (3)
- **PHIL** 220  Ethics (3)
- **PIS** 200  Introduction to Pueblo Indian Studies (3)
- **THE** 120  Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (2 crs)**

- Elective (2)

**PROGRAM REQUIREMENTS (27 crs)**

**General Education Electives (24)**

*Must be taken from the following discipline areas and must include at least 3 credits of Fine Arts (lecture only):
- Communications
- Mathematics
- Fine Arts (lecture only)
- Laboratory Sciences
- Humanities
- Social/Behavioral Sciences
- Electives (from any discipline) (3)

**TOTAL CREDITS 64**
Associate of Arts

HUMAN SERVICES IN THE SOCIAL SCIENCES

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)

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

Mathematics (3 crs)

MATH 145 Introduction to Probability and Statistics (3)
or
MATH 150 College Algebra (3)

Laboratory Science (8 crs)

BIOL 110/L Survey of Modern Biology w/lab (4) *
Choose one of the following survey courses (with labs):**
ASTR 110/L Introduction to Astronomy w/lab (4)
CHEM 110/L Introduction to Chemistry w/lab (4)
ES 112/L Environmental Science w/Lab (4)
GEOL 101/L Physical Geology w/Lab (4)
GEOL 102/L Historical Geology w/Lab (4)
PHYS 110/L Introduction to Physics w/Lab (4)
** You may substitute BIOL 201/L for BIOL 110/L.

Social/Behavioral Sciences (9 crs) *

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

Humanities and Fine Arts (6 crs) *

You must select two survey courses from the following list:
ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
DANC 240 Dance Appreciation (3)
ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter **</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity **</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy **</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>(3)</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

Elective (1)

**PROGRAM REQUIREMENTS (33 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 210</td>
<td>Theories of Personality &amp; Counseling</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 217</td>
<td>Interviewing and Assessment</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 232</td>
<td>Abnormal Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 260</td>
<td>Family Systems Theory and Counseling Applications</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 275</td>
<td>Group Process</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 280</td>
<td>Practicum for Human Services</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 105</td>
<td>Introduction to Human Services</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 140</td>
<td>Sociology of Substance Abuse</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 216</td>
<td>Ethnic and Intercultural Relations</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 225</td>
<td>Marriage &amp; Family</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS** 69
Associate of Applied Science
HUMAN SERVICES

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

GENERAL EDUCATION (28 crs)

Communications (6 hrs)
ENG 111 English Composition I (3)
Choose one of the following
ENG 112 English Composition II (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (7 hrs)
Choose one of the following two BIOL courses:
BIOL 110/L Survey of Modern Biology with lab (4)

or
BIOL 201/L Principles of Molecular and Cell Biology with lab (4)
Choose one of the following:
CS 102 Computer Literacy (3)
MATH 145 Introduction to Probability and Statistics (3)

or
MATH 150 College Algebra (3)

Social/Behavioral Sciences (12 hrs)
ANTH 102 Introduction to Social & Cultural Anthropology (3)
PSCI 200 American Politics (3)
PSY 105 General Psychology (3)
SOC 101 Introduction to Sociology (3)

Humanities (3 hrs)
Elective (3)

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

PROGRAM REQUIREMENTS (36 crs)
PSY 210 Theories of Personality & Counseling (3)
PSY 217 Interviewing and Assessment (3)
PSY 232 Abnormal Psychology (3)
PSY 260 Family Systems Theory and Counseling Applications (3)
PSY 275 Group Process (3)
PSY 280 Practicum for Human Services (3)
PSY 290 Developmental Psychology (3)
SOC 105 Introduction to Human Services (3)
SOC 140 Sociology of Substance Abuse (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 225 Marriage & Family (3)
Elective in Social/Behavioral Sciences (3)

TOTAL CREDITS 65
Northern’s Library Technology program will prepare you for rewarding entry-level career opportunities in public, school, academic, or special libraries.

GENERAL EDUCATION (25 crs)

Communications (6 hrs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (10 crs)
Laboratory Science Elective with lab (4)
CS 102 Computer Literacy (3)
Choose one of the following two courses:
MATH 130 Intermediate Algebra (3)
MATH 145 Introduction to Probability and Statistics (3)

Social/Behavioral Sciences (3 crs)
PSY 105 General Psychology (3)

Humanities and Fine Arts (6 crs)
HUM 101 Humanities I (3)
Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (2 crs)
Elective (2)

PROGRAM REQUIREMENTS (37-40 crs)
BA 202 Principles of Management (3)
ENG Chose either ENG 280 or 290 (3)
LT 201 Technical Services - Cataloging (3)
LT 202 Technical Services - Acquisition (3)
LT 205 Library Public Services (3)
LT 207 Basic Reference Mats (3)
LT 209 Media Services (3)
OA 104 Principles of Keyboarding (3)
LT Electives: Choose two of the following four courses:
LT 213 Special Libraries (3)
LT 215 Public Libraries (3)
LT 217 School Libraries (3)
LT 219 Academic Libraries (3)
Electives: Choose three of the following seven courses:
ART 105 Introduction to Art (3)
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
HIST 260 History of New Mexico (3)
LT 220 Adv. Reference Materials (3)
LT 221 Media Production (3)
SPAN Elective: any course (3)

TOTAL CREDITS 64-66
Certificate

LIBRARY TECHNOLOGY

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

GENERAL EDUCATION (7 crs)

**Communications (4 hrs)**
- ENG 110 Writing the Research Paper (1)
- ENG 111 English Composition I (3)

**Mathematics (3 crs)**
Choose one of the following two courses:
- MATH 130 Intermediate Algebra (3)
- MATH 145 Introduction to Probability and Statistics (3)

PROGRAM REQUIREMENTS (28-30 crs)
- CS 102 Computer Literacy (3)
- ENG Choose either ENG 280 or 290 (3)
- LT 201 Technical Services - Cataloging (3)
- LT 202 Technical Services - Acquisitions (3)
- LT 205 Library Pub Services (3)
- LT 207 Basic Reference Materials (3)
- LT 209 Media Services (3)
- OA 104 Principles of Keyboarding (3)

LT Electives: Choose two of the following four courses:
- LT 213 Special Libraries (3)
- LT 215 Public Libraries (3)
- LT 217 School Libraries (3)
- LT 219 Academic Libraries (3)

**TOTAL CREDITS** 35-37
Associate of Applied Science
POLICE SCIENCE

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

GENERAL EDUCATION (21 hrs)

Communications (6 hrs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (6 crs)
CS 102 Computer Literacy (3)
MATH 145 Intro to Probability & Statistics (3)

Social/Behavioral Sciences (6 crs)
PSCI 210 State and Local Government (3)
SOC 101 Introduction to Sociology (3)

Humanities (3 crs)
PHIL 220 Ethics (3)

PROGRAM REQUIREMENTS (43 crs)
CJ 228 Forensic Investigation (3)
ENG 116 Technical Writing (3)
SOC 140 Sociology of Alcohol & Substance Abuse (3)
SPAN SPAN 100, 101/102 or 111/112 (3)

NM law Enforcement Academy Certification which includes credit for the following courses (31 hrs):
CJ 111 Introduction to Criminal Justice (4)
CJ 201 Criminal Law (3)
HPER Electives (2) [meets graduation requirement]
SOC 213 Deviant Behavior (3)

Law Enforcement Electives (19):
LE 130 Patrol, Communications, and Investigations (6)
LE 235 Traffic Enforcement and Accident Investigation (3)
LE 236 First Responder for Law Enforcement (1)
LE 237 Police Proficiency I (3)
LE 238 Police Proficiency II (3)
LE 239 Police Proficiency III (3)

TOTAL CREDITS 64
PUEBLO INDIAN STUDIES

This program is committed to broadening your knowledge in the histories, languages, culture, art, and contemporary situations of Pueblo Indian nations and peoples. It is designed to protect the integrity and identity of the Pueblo populations of New Mexico and Arizona, and to create a learning environment conducive to critical and creative thought. It not only stresses sound academic preparation in the classroom but also encourages you to interact and conduct research with Pueblo Indian governments, organizations, and communities, with whom Northern continues to form strong partnerships.

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I (3)</td>
<td></td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking (3)</td>
<td></td>
</tr>
</tbody>
</table>

Choose one of the following two courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 112</td>
<td>English Composition II (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing (3)</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics (3 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 150</td>
<td>College Algebra (3)</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Science (8 crs)

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 110/L</td>
<td>Introduction to Astronomy w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 110/L</td>
<td>Survey of Modern Biology w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>CHEM 110/L</td>
<td>Introduction to Chemistry w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>ES 112/L</td>
<td>Environmental Science w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>GEOL 101/L</td>
<td>Physical Geology w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>GEOL 102/L</td>
<td>Historical Geology w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>PHYS 110/L</td>
<td>Introduction to Physics w/Lab (4)</td>
<td></td>
</tr>
</tbody>
</table>

Social/Behavioral Sciences (6-9 crs) *

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101/L</td>
<td>Physical Anthropology with Lab (4)</td>
<td></td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Intro to Social/Cultural Anthropology (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 110</td>
<td>Indian Culture of the Southwest (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 207</td>
<td>Cultures of New Mexico (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 200</td>
<td>Macroeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 201</td>
<td>Microeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>GEOG 111</td>
<td>World Geography (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 110</td>
<td>The Political World (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 120</td>
<td>Contemporary Political Issues (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 200</td>
<td>American Politics (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 210</td>
<td>State and Local Government (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 212</td>
<td>The American Presidency (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 105</td>
<td>General Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 210</td>
<td>Theories of Personality (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 229</td>
<td>Adolescent Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 230</td>
<td>Psychology of Adjustment (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 232</td>
<td>Abnormal Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 270</td>
<td>Social Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 213</td>
<td>Deviant Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 216</td>
<td>Ethnic and Intercultural Relations (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 220</td>
<td>Social Problems (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 225</td>
<td>Marriage and the Family (3)</td>
<td></td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval
**Humanities and Fine Arts (6-9 crs)** *
You must select courses from **at least two different discipline areas** from the following list:

- ART 105 Introduction to Art (3)
- ART 107 History of Art I (3)
- ART 211 History of Art (3)
- DANC 240 Dance Appreciation (3)
- ENG 270 Children’s Literature (3)
- ENG 262 Literature of the Southwest (3)
- ENG 265 Native American Literature I (3)
- ENG 266 Native American Literature II (3)
- ENG 280 Readings in Literature (3)
- ENG 290 Study of Literature (3)
- ENG 239 Mythology (3)
- HIST 101 Western Civilization I (3)
- HIST 102 Western Civilization II (3)
- HIST 161 History of U.S. to 1877 (3)
- HIST 162 History of U.S. from 1877 (3)
- HIST 200 History of World Religions (3)
- HIST 220 Southwestern Women’s History (3)
- HIST 230 Chicano Experience in the US (3)
- HIST 250 American Indian History (3)
- HIST 260 History of New Mexico (3)
- HUM 105 Humanities and the Southwest (3)
- HUM 311 Why the Social Sciences Matter ** (3)
- HUM 414 Humanity and Creativity ** (3)
- HUM 421 History, Literature, Art & Philosophy ** (3)
- MUS 102 Theory of Music (3)
- MUS 105 Music Appreciation (3)
- MUS 130 History of Music (3)
- MUS 140 History of Music (3)
- PHIL 110 Introduction to Philosophical Problems (3)
- PHIL 111 History of Philosophy (3)
- PHIL 220 Ethics (3)
- PIS 200 Introduction to Pueblo Indian Studies (3)
- THE 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
Elective (1)

**PROGRAM REQUIREMENTS (30 crs)**
Choose **30** credits from the following:

- PIS 200 Introduction to Pueblo Indian Studies (3)
- PIS 220 Pueblo arts, Crafts, and Culture (3)
- PIS 242 Pueblo Indian Women’s Lives (3)
- PIS 250 Internship in Tribal Leadership I (3)
- PIS 251 Internship in Tribal Leadership II (3)
- PIS 252 Pueblo Indian History (3)
- PIS 256 Pueblo Indian Government (3)
- PIS 265 Native American Literature I (3)
- PIS 266 Native American Literature II (3)
- PIS 270 Pueblo Indians and Education (3)
- PIS 272 Pueblo Health Concepts and Practices (3)
- PIS 283 Tewa Ethnobiology: Plants and Animals of the Tewa World (3)
- PIS 284 Agriculture Practices of the Pueblo World (3)

**TOTAL CREDITS** 66
Certificate
RESIDENTIAL ASSISTANT

This program is for Resident Assistants at Santa Fe Indian School. It meets the requirements established by the U.S. Department of Education for meeting the Highly Qualified requirements for staff working in a residential setting.

Pre-requisite for entering and remaining in this program is a current certification in CPR/First Aid.

GENERAL EDUCATION (9-12 crs)

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

Humanities (3-6 crs)
Choose 1 or 2 courses from the following: *
ENG 265 Native American Literature I (3)
HIST 250 American Indian History (3)
PIS 200 Introduction to Pueblo Indian Studies (3)

Math/Computers/Lab Sciences (3-4 crs) *
MATH 100N Fundamentals of Mathematics (4) or higher level math course.
[In Spring 2009, the credit value for MATH 102N increases to 4 crs]
* If you complete a high level math than MATH 100N, you will need to take 2 courses from the Humanities area.

PROGRAM REQUIREMENTS (21 crs)
HSCI 109 CPR/First Aid (.5)
PSY 150 Personal Growth (3)
PSY 215 Basic Counseling Techniques (3)
PSY 220 Topics in Psychology: Learning Skills Application (3)
PSY 229 Adolescence Psychology (3)
PSY 260 Family Systems Theory and Counseling Application (3)
PSY 262 Intervening in Adolescent Behavior (3)
SOC 140 Sociology of Substance Abuse (3)

TOTAL CREDITS 30-34
Combining broad based general education courses with area studies, you will be exposed to much of the lower division foundation courses required by four-year colleges as well as to a solid foundation in intercultural and international relations.

### GENERAL EDUCATION (35 crs)

#### Communications (9 hrs)
- **ENG** 111 English Composition I (3)
- **SPCH** 130 Public Speaking (3)
- Choose one of the following two courses:
  - **ENG** 112 English Composition II (3)
  - **ENG** 116 Technical Writing (3)

#### Mathematics (3 crs)
- **MATH** 150 College Algebra (3)

#### Laboratory Science (8 hrs)
Choose two course (with labs) from the following list:
- **ASTR** 110/L Introduction to Astronomy w/lab (4)
- **BIOL** 110/L Survey of Modern Biology w/lab (4)
- **CHEM** 110/L Introduction to Chemistry w/lab (4)
- **ES** 112/L Environmental Science w/Lab (4)
- **GEOL** 101/L Physical Geology w/Lab (4)
- **GEOL** 102/L Historical Geology w/Lab (4)
- **PHYS** 110/L Introduction to Physics w/Lab (4)

#### Social/Behavioral Sciences (6-9 crs) *
You must select courses from at least two different discipline areas from the following list:
- **ANTH** 101/L Physical Anthropology with Lab (4)
- **ANTH** 102 Intro to Social/Cultural Anthropology (3)
- **ANTH** 110 Indian Culture of the Southwest (3)
- **ANTH** 207 Cultures of New Mexico (3)
- **ECON** 200 Macroeconomics (3)
- **ECON** 201 Microeconomics (3)
- **GEOG** 111 World Geography (3)
- **PSCI** 110 The Political World (3)
- **PSCI** 120 Contemporary Political Issues (3)
- **PSCI** 200 American Politics (3)
- **PSCI** 210 State and Local Government (3)
- **PSCI** 212 The American Presidency (3)
- **PSY** 105 General Psychology (3)
- **PSY** 210 Theories of Personality (3)
- **PSY** 229 Adolescent Psychology (3)
- **PSY** 230 Psychology of Adjustment (3)
- **PSY** 232 Abnormal Behavior (3)
- **PSY** 270 Social Psychology (3)
- **PSY** 290 Developmental Psychology (3)
- **SOC** 101 Introduction to Sociology (3)
- **SOC** 213 Deviant Behavior (3)
- **SOC** 216 Ethnic and Intercultural Relations (3)
- **SOC** 220 Social Problems (3)
- **SOC** 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

#### Humanities and Fine Arts (6-9 crs) *
You must select courses from at least two different discipline areas from the following list:
- **ART** 105 Introduction to Art (3)
- **ART** 107 History of Art I (3)
- **ART** 211 History of ART (3)
- **DANC** 240 Dance Appreciation (3)
- **ENG** 270 Children’s Literature (3)
ENG 262  Literature of the Southwest (3)
ENG 265  Native American Literature I (3)
ENG 265  Native American Literature II (3)
ENG 280  Readings in Literature (3)
ENG 290  Study of Literature (3)
ENG 239  Mythology (3)
HIST 101  Western Civilization I (3)
HIST 102  Western Civilization II (3)
HIST 161  History of U.S. to 1877 (3)
HIST 162  History of U.S. from 1877 (3)
HIST 200  History of World Religions (3)
HIST 220  Southwestern Women’s History (3)
HIST 230  Chicano Experience in the US (3)
HIST 250  American Indian History (3)
HIST 260  History of New Mexico (3)
HUM 105  Humanities and the Southwest (3)
HUM 311  Why the Social Sciences Matter (3)
HUM 414  Humanity and Creativity (3)
HUM 421  History, Literature, Art & Philosophy (3)
MUS 102  Theory of Music (3)
MUS 105  Music Appreciation (3)
MUS 130  History of Music (3)
PHIL 110  Introduction to Philosophical Problems (3)
PHIL 111  History of Philosophy (3)
PHIL 220  Ethics (3)
PIS 200  Introduction to Pueblo Indian Studies (3)
The 120  Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval

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

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

PROGRAM REQUIREMENTS (30 crs)
Choose 30 credit hours from the following courses:

ANTH 207  Cultures of NM (3)
ANTH 210  Southwestern Folklore (3)
ART 208  History of NM Art and Architecture (3)
ENG 262  Southwest Literature (3)
ENG 265  Native American Literature I (3)
ENG 266  Native American Literature II (3)
ENG 290  Study of Literature: Chicano Literature (3)
HIST 220  Southwest Women’s History (3)
HIST 230  Chicano Experience in U.S. (3)
HIST 250  American Indian History (3)
HUM 105  Humanities and the Southwest (3)
HUM 204  Chicana Feminist Thought (3)
PSCI 211  American Indian Government (3)
PIS 200  Introduction to Pueblo Indian Studies (3)
PIS 220  Pueblo Arts, Crafts, and Culture (3)
PIS 242  Pueblo Indian Women’s Lives (3)
PIS 284  Agriculture Practices of the Pueblo World (3)

You may choose up to 6 credit hours from the following if you include language in the program requirements:
SPAN 101  Spanish I (3)
SPAN 102  Spanish II (3)
SPAN 111  Spanish as a Heritage Language I (3)
SPAN 112  Spanish as a Heritage Language II (3)

** If you have satisfied another area requirement with any course from this list, you may not count that course twice.

TOTAL CREDITS 66
## Associate of Arts
### SUBSTANCE ABUSE COUNSELOR

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

### GENERAL EDUCATION (35 crs)

#### Communications (9 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENG 112</td>
<td>English Composition II</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Mathematics (3 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 145</td>
<td>Introduction to Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 150</td>
<td>College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Laboratory Science (8 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110/L</td>
<td>Survey of Modern Biology w/Lab</td>
<td>4</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 110/L</td>
<td>Introduction to Astronomy w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 110/L</td>
<td>Introduction to Chemistry w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>ES 112/L</td>
<td>Environmental Science w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 101/L</td>
<td>Physical Geology w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 102/L</td>
<td>Historical Geology w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 110/L</td>
<td>Introduction to Physics w/Lab</td>
<td>4</td>
</tr>
</tbody>
</table>

**You may substitute BIOL 201/L for BIOL 110/L.**

#### Social/Behavioral Sciences (9 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 102</td>
<td>Introduction to Social and Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 105</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Humanities and Fine Arts (6 crs)

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART</td>
<td>3</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 239</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td>3</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women's History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>3</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter **</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity **</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>(3)</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
Elective (1)

**PROGRAM REQUIREMENTS (33 crs)**
PSY 210 Theories of Personality and Counseling Applications (3)
PSY 217 Interviewing and Assessment (3)
PSY 232 Abnormal Psychology (3)
PSY 240 Alcohol & Drug Abuse Evaluation & Assessment (3)
PSY 241 Alcohol & Drug Abuse Treatment & Referral (3)
PSY 260 Family Systems Theory and Counseling Applications (3)
PSY 275 Group Process (3)
PSY 281 Practicum - Substance Abuse Counselors (3)
SOC 140 Sociology of Alcohol & Drug Abuse (3)
SOC 141 Effects of Alcohol and Drug Abuse (3)
SOC 213 Deviant Behavior (3)

**TOTAL CREDITS** 69
Associate of Applied Science

SUBSTANCE ABUSE COUNSELOR

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

GENERAL EDUCATION (25 crs)

Communications (6 crs)
ENG 111 English Composition I (3)
Choose one of the following:
ENG 112 English Composition II (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (7 crs)
Choose one of the following two BIOL courses:
BIOL 110/L Survey of Modern Biology with lab (4)
or
BIOL 201/L Principles of Molecular and Cell Biology with lab (4)
Choose one of the following:
CS 102 Computer Literacy (3)
MATH 145 Introduction to Probability and Statistics (3)
or
MATH 150 College Algebra (3)

Social/Behavioral Sciences (9 crs)
ANTH 102 Introduction to Social and Cultural Anthropology (3)
PSY 105 General Psychology (3)
SOC 101 Introduction to Sociology (3)

Humanities and Fine Arts (3 crs)
Elective (3)

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

PROGRAM REQUIREMENTS (39 crs)
PSY 210 Theories of Personality and Counseling Applications (3)
PSY 217 Interviewing and Assessment (3)
PSY 232 Abnormal Psychology (3)
PSY 240 Alcohol & Drug Abuse Evaluation & Assessment (3)
PSY 241 Alcohol & Drug Abuse Treatment & Referral (3)
PSY 260 Family Systems Theory and Counseling Applications (3)
PSY 275 Group Process (3)
PSY 281 Practicum -Substance Abuse Counselors (3)
PSY 290 Developmental Psychology (3)
SOC 140 Sociology of Alcohol and Drug Abuse (3)
SOC 141 Effects of Alcohol and Drug Abuse (3)
SOC 213 Deviant Behavior (3)
Elective in Social/Behavioral Sciences (3)

TOTAL CREDITS 65
The Department of Computers and Engineering Technology provides Bachelor of Engineering (BEng) degrees in Information Technology, Software Engineering, and Mechanical Engineering (Solar Energy Concentration) as well as Associate of Engineering degrees (AEng) in Information Technology, Software Engineering, and Pre-Engineering.

Andres Salazar, PhD .................. Chairperson ............................... 747-2266 ........................................ asalazar@nnmc.edu
Ivan Lopez, PhD .......................................................... 
Marina Popova, PhD .......................................................... 
Fangyang Shen, PhD .......... Software Engineer .......................................................... 
Feng Shi, PhD ...........................................................................
Associate in Engineering

INFORMATION ENGINEERING TECHNOLOGY

The curriculum for the Associate in Engineering (AEng) in Information Technology is designed for those engineering students who intend to launch a career in the design, installation, maintenance, and repair of computer networks used for critical data entry, transfer, retrieval, and management. Coursework in the program is practice-oriented and prepares students to work in a variety of computer-intensive environments, such as technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services. The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles in such environments as network designer, network support and administrator, project manager, data applications or computer communications engineer, test and integration manager or technologist in business applications. The graduate of this curriculum will be a computer network specialist, but broadly versed in mathematics, physics, computer science and business fundamentals.

Failure to maintain an overall GPA of at least a 2.0 in all coursework is sufficient cause for being dropped from the program.

### GENERAL EDUCATION (26 crs)

**Communications (9 crs)**
- ENG 111 English Composition I (3)
- ENG 116 Technical Writing (3)
- SPCH 130 Public Speaking (3)

**Mathematics (7 crs)**
- MATH 145 Introduction to Probability & Statistics (3)
- MATH 162 Calculus I (4)

**Laboratory Science (4 crs)**
- PHYS 215/L Engineering Physics I with lab (4)

**Social/Behavioral Sciences (3 crs)**
- ECON 201 Microeconomics (3)

**Humanities and Fine Arts (3 crs)**
- PHIL 220 Ethics (3)

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
- Electives (1)

### PROGRAM REQUIREMENTS (37 crs)

**Business (3 crs)**
- BA 220 Introduction to Business (3)

**Computer Science (17 crs)**
- CS 152L Computer Programming I (4)
- CS 201 Mathematical Foundations of Computer Science (3)
- CS 238L Computer Logic Design (4)
- CS 241L Data Organization (3)
- CS 251L Intermediate Programming (3)

**Information Technology (17 crs)**
- IT 105L Microcomputer Systems (4)
- IT 130 Networking Fundamentals (3)
- IT 210 IT Systems (3)
- IT 220 Network and Server Software (4)
- IT 250 Introduction to Databases (3)

**TOTAL CREDITS** 64
Associate in Engineering
SOFTWARE ENGINEERING

The curriculum in the Associate Degree in Engineering (AEng) in Software Engineering Technology is designed for those who intend to launch a career in the testing, installation, and maintenance of computer software modules and systems. Coursework in the program is practice-oriented and prepares students to work in a variety of computer-intensive environments that involve engineering support: technical organizations, small or large businesses, manufacturing companies, and data-directed services. The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles in such environments as software technician, computer systems technician, data applications or computer technician, or as a test and integration assistant. The graduate of this curriculum will be a software engineering technician versed in mathematics, physics, computer science, software development, and business fundamentals.

Failure to maintain an overall GPA of at least a 2.00 in all coursework is sufficient cause for being dropped from the program.

GENERAL EDUCATION (30 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Mathematics (11 crs)
MATH 145 Introduction to Probability & Statistics (3)
MATH 160 College Algebra/Trigonometry (4)
MATH 162 Calculus I (4)

Laboratory Science (4 crs)
PHYS 121/L Applied Physics I with lab (4)

Social/Behavioral Sciences (3 crs)
ECON 201 Microeconomics (3)

Humanities and Fine Arts (3 crs)
PHIL 220 Ethics (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Electives (1)

PROGRAM REQUIREMENTS (34 crs)

Business (3 crs)
BA 220 Introduction to Business (3)

Computer Science (10 crs)
CS 152L Computer Programming I (4)
CS 201 Mathematical Foundations of Computer Science (3)
CS 241L Data Organization (3)

Information Technology (17 crs)
IT 105L Microcomputer Systems (4)
IT 130 Networking Fundamentals (3)
IT 210 IT Systems (3)
IT 220 Network and Server Software (4)
IT 250 Introduction to Databases (3)

Support Technology (4 crs)
VC 135 Electronic Publication I (4)

TOTAL CREDITS 65
Associate in Engineering

PRE-ENGINEERING

This program will prepare you for a bachelor’s degree in engineering. You will obtain a general background in mathematics and the physical sciences, and will be introduced to the concepts and methods of engineering. This program is not a professional degree and does not prepare you for specific job opportunities. It does, however, provide a broad educational background on which to build a career through additional education or work experience.

Failure to maintain an overall GPA of at least a 2.00 in all coursework is sufficient cause for being dropped from the program.

GENERAL EDUCATION (30 crs)

Communications (9 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

Mathematics (11 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 145</td>
<td>Introduction to Probability &amp; Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 160</td>
<td>College Algebra/Trigonometry</td>
<td>4</td>
</tr>
<tr>
<td>MATH 162</td>
<td>Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

Laboratory Science (12 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 121/L</td>
<td>General Chemistry with lab</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 215/L</td>
<td>Engineering Physics I with lab</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 216/L</td>
<td>Engineering Physics II with lab</td>
<td>4</td>
</tr>
</tbody>
</table>

Social/Behavioral Sciences (3 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 201</td>
<td>Microeconomics</td>
<td>3</td>
</tr>
</tbody>
</table>

Humanities and Fine Arts (3 crs)

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

HEALTH, PHYSICAL EDUCATION & RECREATION (2 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

PROGRAM REQUIREMENTS (25 crs)

Business (3 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 220</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
</tbody>
</table>

Engineering (12 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EECE 203L</td>
<td>Circuit Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>ME 160L</td>
<td>General Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>ME 202</td>
<td>Engineering Statics</td>
<td>3</td>
</tr>
<tr>
<td>ME 260L</td>
<td>Engineering Design II</td>
<td>3</td>
</tr>
</tbody>
</table>

Support Technology (10 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 152L</td>
<td>Computer Programming I</td>
<td>4</td>
</tr>
<tr>
<td>CS 201</td>
<td>Mathematical Foundations of Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>CS 251L</td>
<td>Intermediate Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 64
Bachelor of Engineering (BEng)
INFORMATION ENGINEERING TECHNOLOGY

The curriculum of the BEng in Information Engineering Technology is designed for those engineering students who intend to launch a career in the design, installation, maintenance, and repair of computer networks used for critical data entry, transfer, retrieval, and management. Coursework in the program is practice-oriented and prepares students to work in a variety of computer-intensive environments, such as technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services. The breadth of training in hardware, software, troubleshooting equipment, and other computer tools will enable the graduate to work in a variety of roles in such environments as network designer, network support and administrator, project manager, data applications or computer communications engineer, test and integration manager or technologist in business applications. The graduate of this curriculum will be a computer network specialist, but broadly versed in mathematics, physics, computer science, and business fundamentals.

Students are advised not to attempt upper division coursework (300 and 400-level classes unless you have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 100 and 200-level. Failure to maintain an overall GPA of 2.00 or better in all coursework will be sufficient cause for being dropped from the program.

GENERAL EDUCATION (43 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Mathematics (11 crs)
MATH 145 Introduction to Probability and Statistics (3)
MATH 162 Calculus I (4)
MATH 163 Calculus II (4)

Laboratory Science (8 crs)
PHYS 215/L Engineering Physics I/L (4)
PHYS 216/L Engineering Physics II/L (4)

Social/Behavioral Sciences (6 crs)
ECON 201 Microeconomics (3)
Elective (3)

Humanities and Fine Arts (9 crs)
PHIL 220 Ethics (3)
Electives (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Electives (1)

MAJOR REQUIREMENTS (84 crs)

Computer Science (23)
CS 152 Computer Programming I (4)
CS 201 Math Foundations of Computer Science (3)
CS 238L Computer Logic Design (4)
CS 241 Data Organization (3)
CS 251 Intermediate Programming (3)
CS 341 Computer Architecture (3)
CS 352 Software Development (3)
Information Technology (40)
IT 105L  Microcomputer Systems (4)
IT 130  Networking (3)
IT 210  IT Systems (3)
IT 220  Network/Server SW (4)
IT 250  Introduction to Databases (3)
IT 330  Networking (3)
IT 342  Wireless and Mobile Comp (3)
IT 350  Database Management (3)
IT 410  Information Assurance/Security (3)
IT 447  Routing and Switching (3)
IT 490  Capstone I (4)
IT 491  Capstone II (4)

Business (9)
BA 220  Introduction to Business (3)
BA 242  Business Information Systems (3)
BA 435  Project Contracting and Supply Chain Management (3)

TECHNICAL ELECTIVES (12 crs)
Upper-division electives from CS, and IT courses.

TOTAL CREDITS 128
The curriculum of the BEng in Software Engineering is designed for those engineering students who intend to launch a career in the design, development, testing, installation, and maintenance of computer software modules and systems. Coursework in the program is practice-oriented and prepares students to work in a variety of computer-intensive environments that involve engineering analysis and software management – technical organizations, small or large businesses, product design or manufacturing companies, and data-directed services. The breadth of training in hardware, software, computer logic and laboratory tools will enable the graduate to work in a variety of roles in such environments as a software engineer or developer, software systems engineer, software project manager, data applications or computer engineer, test and integration manager or technologist in computer applications. The graduate of this curriculum will be a software engineering specialist, but broadly versed in mathematics, physics, computer science, software development and business fundamentals.

Students are advised to not attempt upper division coursework (300 and 400-level classes unless you have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 100 and 200-level. Failure to maintain an overall GPA of 2.00 or better in all coursework will be sufficient cause for being dropped from the program.

GENERAL EDUCATION (53 crs)

Communications (9 crs)
ENG 111 English Composition I (3)  
ENG 116 Technical Writing (3)  
SPCH 130 Public Speaking (3)

Mathematics (14 crs)
MATH 145 Introduction to Probability and Statistics (3)  
MATH 162 Calculus I (4)  
MATH 163 Calculus II (4)  
MATH 312 Linear Analysis (3)

Laboratory Science (12 crs)
CHEM 121/L General Chemistry I/L (4)  
PHYS 215/L Engineering Physics I/L (4)  
PHYS 216/L Engineering Physics II/L (4)

Social/Behavioral Sciences (9 crs)
ECON 201 Microeconomics (3)  
Elective (6)

Humanities and Fine Arts (9 crs)
PHIL 220 Ethics (3)  
Electives (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Electives (1)

MAJOR REQUIREMENTS (74 crs)

Computer Science (43)
CS 152 Introduction to Programming (4)  
CS 201 Mathematics Foundations of Computer Science (3)  
CS 238L Computer Logic Design (4)  
CS 241 Data Organization (3)  
CS 251 Intermediate Programming (3)  
CS 341 Introduction to Computer Architecture and Organization (3)  
CS 351 Design of Large Programs (3)  
CS 352 Software Development (3)
CS 361  Data Structures and Algorithms (3)
CS 374  Real Time Computing (3)
CS 442  Introduction to Parallel Processing (3)
CS 490  CS Capstone I (4)
CS 491  CS Capstone II (4)

**Engineering and Information Technology (22)**
IT 105L  Microcomputer Systems (4)
IT 210  IT Systems (3)
IT 330  Networking (3)
IT 342  Wireless and Mobile Comp (3)
IT 350  Database Management (3)
IT 447  Routing and Switching (3)
ME 160L  Engineering Design I (3)

**Business (9)**
BA 220  Introduction to Business (3)
BA 242  Business Information Systems (3)
BA 435  Project Contracting and Supply Chain Management (3)

**TOTAL CREDITS**  128
The curriculum of the BEng in Mechanical Engineering is designed for those engineering students who intend to launch a career in the design, installation, maintenance and repair of solar energy conversion and storage devices, modules and systems used for alternative energy sources or controllers. Coursework in the program is practice-oriented and prepares students to work in a variety of technology-intensive environments – engineering organizations, small or large businesses, product design or manufacturing companies, and alternative energy consultancies and public policy agencies. The breadth of training in hardware, software, power engineering, troubleshooting equipment and other technological tools will enable the graduate to work in a variety of roles in such environments as an electric grid engineer, a power engineering network designer, alternative energy engineer or project manager. The graduate of this curriculum will be a professional engineering specialist in solar energy power sources, but broadly versed in mathematics, physics, computer science, and business fundamentals.

Students are advised to not attempt upper division coursework (300 and 400-level classes unless you have earned a GPA of 2.50 or better in all IT, CS, and CT coursework taken at the 100 and 200-level. Failure to maintain an overall GPA of 2.00 or better in all coursework will be sufficient cause for being dropped from the program.

GENERAL EDUCATION (53 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Mathematics (17 crs)
MATH 145 Introduction to Probability and Statistics (3)
MATH 162 Calculus I (4)
MATH 163 Calculus II (4)
MATH 312 Linear Analysis (3)
MATH 314 Differential Equations (3)

Laboratory Science (12 crs)
CHEM 121/L General Chemistry I/L (4)
PHYS 215/L Engineering Physics I/L (4)
PHYS 216/L Engineering Physics II/L (4)

Social/Behavioral Sciences (6 crs)
ECON 201 Microeconomics (3)
Elective (3)

Humanities and Fine Arts (9 crs)
PHIL 220 Ethics (3)
Electives (6)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Electives (1)

MAJOR REQUIREMENTS (74 crs)
Solar Energy and Storage (41)
ME 160L Engineering Design I (3)
ME 202 Engineering Statics (3)
ME 260 Engineering Design II (3)
ME 301 Thermodynamics (3)
ME 308 Dynamics (3)
ME 317 Fluid Mechanics (4)
ME 318  Mechanical Engineering Lab (4)
ME 357  Mechanical Vibrations (3)
ME 390  Power Systems (4)
ME 401  Advanced Mechanics (3)
ME 490  ME Capstone I (4)
ME 491  ME Capstone II (4)

Support Technologies (24)
CS 152  Introduction to Programming (4)
CS 238L Computer Logic Design (4)
EECE 203 Circuit Analysis I (3)
EECE 213 Circuit Analysis II (3)
EECE 371 Materials Science (3)
EECE 452 Power Controllers (3)
EECE 472 Photovoltaic Devices (4)

Business (9)
BA 220  Introduction to Business (3)
BA 242  Business Information Systems (3)
BA 435  Project Contracting and Supply Chain Management (3)

TOTAL CREDITS 128
Northern offers a Bachelor of Arts degree in Elementary Education. This degree requires 43 credits in Education and 24 credits in a Humanities/Social Sciences major. The Humanities/Social Sciences major is structured in a seminar format similar to that followed by St. John’s College. This degree is accredited at the four-year level by the Higher Learning Commission of the North Central Association of Colleges and Schools.

The Associate of Arts in Elementary Education provides a smooth transition to our BA in Elementary Education as well as providing an opportunity to transfer to other colleges and universities with minimal loss of credit.

We also offer an Associate of Arts in Early Childhood Education, designed for those of you who wish to prepare for working with younger children from birth to grade three.

The Alternative Licensure Program is designed for Teachers in Elementary Education (K-8), Secondary Education (7-12), or in Special Education (K-12). Completion of these courses of study leads to teacher licensure and/or to subject endorsements through the New Mexico Department of Public Education.

Catherine Berryhill, PhD ............ Dean .......................................... 747-2194 ............................... cberryhill@nnmc.edu
Walter Archuleta, PhD ............... Bilingual ..................................... 747-2242 .................................... walter@nnmc.edu
Rose Cavalcante, PhD .............. Elem. Ed. ................................... 747-2463............................... rcavalcante@nnmc.edu
Christina Esquibel, MA ............. Elem. Ed. ................................... 747-2242............................... christina@nnmc.edu
Emily Romero, PhD ................. Alt. Lic. ....................................... 747-2290 ........................................

Associate of Arts
EARLY CHILDHOOD EDUCATION

This program offers instruction and practical experience in working with young children and their families. Academic learning is integrated with on-site experience which builds the pre-service teacher’s confidence and hands-on competence.

This degree also addresses the general early childhood competency areas which partially fulfill the requirements for the New Mexico Department of Public Education licensure in Early Childhood Education (birth-grade three).

In addition, this degree provides an excellent background if you wish to transfer into the Education Program at New Mexico Highlands University or to the College of Santa Fe. However, to insure the best transition to another college, you must work closely with your Northern advisor and with department advisors in the institution to which you wish to transfer.

GENERAL EDUCATION (35 crs)

Communications (9 crs)
ENG  111    English Composition I (3)
SPCH 130    Public Speaking (3)
Choose one of the following two courses:
ENG  112    English Composition II (3)
ENG  116    Technical Writing (3)

Mathematics (3 crs)
MATH 150    College Algebra (3)
<table>
<thead>
<tr>
<th>Laboratory Science (8 crs)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Choose two course (with labs) from the following list:</strong></td>
<td></td>
</tr>
<tr>
<td>ASTR 110/L Introduction to Astronomy w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 110/L Current Topics in Biology w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>CHEM 110/L Introduction to Chemistry w/lab (4)</td>
<td></td>
</tr>
<tr>
<td>ES 112/L Environmental Science w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>GEOL 101/L Physical Geology w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>GEOL 102/L Historical Geology w/Lab (4)</td>
<td></td>
</tr>
<tr>
<td>PHYS 110/L Introduction to Physics w/Lab (4)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social/Behavioral Sciences (6 crs)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>You must select courses from at least two different discipline areas from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>ANTH 101/L Physical Anthropology with Lab (4)</td>
<td></td>
</tr>
<tr>
<td>ANTH 102 Intro to Social/Cultural Anthropology (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 110 Indian Culture of the Southwest (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 207 Cultures of New Mexico (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 200 Macroeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 201 Microeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>GEOG 111 World Geography (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 110 The Political World (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 120 Contemporary Political Issues (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 200 American Politics (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 210 State and Local Government (3)</td>
<td></td>
</tr>
<tr>
<td>PSCI 212 The American Presidency (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 105 General Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 210 Theories of Personality (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 229 Adolescent Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 230 Psychology of Adjustment (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 232 Abnormal Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 270 Social Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>PSY 290 Developmental Psychology (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 101 Introduction to Sociology (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 213 Deviant Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 216 Ethnic and Intercultural Relations (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 220 Social Problems (3)</td>
<td></td>
</tr>
<tr>
<td>SOC 225 Marriage and the Family (3)</td>
<td></td>
</tr>
<tr>
<td>Plus, topic courses with student advisor’s approval</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Humanities and Fine Arts (9 crs)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>You must select two courses from at least one different discipline area from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>ART 105 Introduction to Art (3)</td>
<td></td>
</tr>
<tr>
<td>ART 107 History of Art I (3)</td>
<td></td>
</tr>
<tr>
<td>ART 211 History of ART (3)</td>
<td></td>
</tr>
<tr>
<td>DANC 240 Dance Appreciation (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 270 Children’s Literature (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 262 Literature of the Southwest (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 265 Native American Literature I (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 265 Native American Literature II (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 280 Readings in Literature (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 290 Study of Literature (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 239 Mythology (3)</td>
<td></td>
</tr>
<tr>
<td>HIST 101 Western Civilization I (3)</td>
<td></td>
</tr>
<tr>
<td>HIST 102 Western Civilization II (3)</td>
<td></td>
</tr>
<tr>
<td>HIST 161 History of U.S. to 1877 (3)</td>
<td></td>
</tr>
<tr>
<td>HIST 162 History of U.S. from 1877 (3)</td>
<td></td>
</tr>
<tr>
<td>HIST 200 History of World Religions (3)</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women’s History</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter **</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity **</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy **</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>MUS 125</td>
<td>History of Jazz I</td>
</tr>
<tr>
<td>MUS 126</td>
<td>History of Jazz II</td>
</tr>
<tr>
<td>MUS 127</td>
<td>History of Latin Jazz</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

You must complete 15 credits (*) between the areas of Social/Behavioral Science and Humanities/Fine Arts.

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

Elective (1)

**PROGRAM REQUIREMENTS (29 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 102</td>
<td>Computer Literacy</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 202</td>
<td>Child Development</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 218</td>
<td>Nutrition, Health, and Safety</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 219</td>
<td>Introduction to Early Childhood Education</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 221</td>
<td>Methods and Materials for Early Childhood Education</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 224</td>
<td>Learning Environments</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 226</td>
<td>Parent/Community Involvement in the School Setting</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 234</td>
<td>Field Based Practicum</td>
<td>(2)</td>
</tr>
<tr>
<td>ECE 285</td>
<td>Child Guidance</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 235</td>
<td>Student Teaching: Infant/ Toddler</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 236</td>
<td>Student Teaching: Preschool</td>
<td>(3)</td>
</tr>
<tr>
<td>ECE 237</td>
<td>Student Teaching: Elem. School</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT** 65
Associate of Arts

ELEMENTARY EDUCATION

This program introduces you to career pathways in K-8 teaching. The curriculum is aligned to the State's Transfer Common Core and to Northern’s General Education Common Core offerings. It meets the competencies and coursework requirements of New Mexico’s Elementary Teacher Education statewide transfer module and it offers a seamless transition to Northern’s Bachelor’s Degree in Elementary Education.

**GENERAL EDUCATION (54 crs)**

**Communications (9 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Comp. I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 112</td>
<td>English Comp. II</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

**Mathematics (6 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 150</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Choose one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 145</td>
<td>Introduction to Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 155</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 162</td>
<td>Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

**Laboratory Sciences (12 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 110/L</td>
<td>Current Topics in Biology with lab</td>
<td>4</td>
</tr>
<tr>
<td>Any two laboratory science courses from the following list:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASTR 110/L, CHEM 110/L, GEOL 101/L, or PHYS 110/L.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Social/Behavioral Sciences (6 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 105</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Humanities (12 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 161</td>
<td>History of the U.S. to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of the U.S. from 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>Choose one of the following two courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fine Arts (6 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>Choose one introductory course (no applied courses) from the following disciplines:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ART, MUSIC, THEATRE.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Literature (3 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG Elective from ENG 260-296</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**PROGRAM REQUIREMENTS (10 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 201</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>ED 205L</td>
<td>Integrating Technology in the K-8 Classroom</td>
<td>2</td>
</tr>
<tr>
<td>ED 213</td>
<td>Field Experience I</td>
<td>1</td>
</tr>
<tr>
<td>ED 220</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>LT 223</td>
<td>Library Information for Educators</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS** 65
Bachelor of Arts  
EDUCATION  
Elementary Education

This program is designed so that you may earn your baccalaureate degree in Elementary Education completely at Northern. Upon successful completion of the BA program and passing scores on the New Mexico Teacher Assessments, you will be eligible to apply for teacher certification through the New Mexico Public Education Department.

Admission criteria
1. Admission to the College in regular status (i.e., all transcripts have been received).
2. Good standing at Northern.
3. Completion of at least 55 credits of coursework toward an Associate of Arts in Elementary Education, 35 of which are the College’s General Education Common Core.
4. Cumulative GPA of at least 2.50.
5. Passing score of 240 or higher on the New Mexico Assessment of Teacher Basic Skills. The Education department recommends that you take the Basic Skills test during the last semester of your AA in Elementary Education coursework.

Application Process
To apply to the program, you must submit the following to the Education department:
1. A letter of Intent: a one page typed letter stating a) your reasons for wanting to become a teacher, 2) experience, and 3) personal strengths.
2. Personal Philosophy of Education Statement: a one page statement that describes your beliefs about a) education, b) learning, and c) working with students.
3. Proof of passing scores on the New Mexico Assessment of Teacher Basic Skills.
4. Signed Assurances form.
5. Copies of all college transcripts.
6. Completed program application form.

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

Personal Interview
Once all of your application materials are received, you will be interviewed by the Education Department.

Transfer Credits
Up to 12 credits of Professional Preparation coursework will be considered on a case-by-case basis.

NMTA tests
Candidates must offer proof of passing scores on each of the following before enrolling in ED 479 Student Teaching: 1) the New Mexico Content Knowledge Assessment in Elementary Education, and 2) the New Mexico Assessment of Teacher Competency (Elementary).

Assessment of Candidate Learning
In general, you must maintain an overall 2.50 CPA to remain in good standing in the program. In addition, your progress will be evaluated by: 1) the New Mexico Content Knowledge Assessment - Elementary Education and the New Mexico Assessment of Teacher Competency - Elementary; 2) an entry-level teacher, competency-based presentation portfolio; and 3) practicum and student teaching observations and self-assessments.

GENERAL EDUCATION (54 crs)

Communications (9 crs)
ENG 111 English Comp. I (3)  
ENG 112 English Comp. II (3)  
SPCH 130 Public Speaking (3)
Mathematics (6 crs)
MATH 150 College Algebra (3)
Choose one of the following three courses:
MATH 145 Intro to Probability and Statistics (3)
MATH 155 Trigonometry (3)
MATH 162 Calculus (4)

Laboratory Sciences (12 crs)
BIOL 110/L Current Topics in Biology with lab (4)
Any two laboratory science courses from the following list:
ASTR 110/L, CHEM 110/L, GEOL 101/L, or PHYS 110/L.

Social/Behavioral Sciences (6 crs)
PSY 105 General Psychology (3)
SOC 101 Introduction to Sociology (3)

Humanities (12 crs)
HIST 161 History of the U.S. to 1877 (3)
HIST 162 History of the U.S. from 1877 (3)
HIST 260 History of New Mexico (3)
Choose one of the following two courses:
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)

Fine Arts (6 crs)
ART 105 Introduction to Art (3)
Choose one introductory course (no applied courses) from the following disciplines:
ART, MUSIC, THEATRE.

Literature (3 crs)
ENG Elective from ENG 260-296 (3)

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

Program Requirements Common to the AA degree (10 crs)
ED 201 Foundations of Education (3)
ED 205L Integrating Technology in the K-8 Classroom (2)
ED 213 Field Experience I (1)
ED 220 Educational Psychology (3)
LT 223 Library Information for Educators (1)

PROFESSIONAL PREPARATION REQUIREMENTS (43 crs)

Introductory Block
ED 311 Practicum I (1)
ED 326 Strategies for Successful Classrooms (2)
ED 450 Pedagogy and Learning (3)

Literacy and Language Arts Block
ED 410 Teaching & Diagnosis of Reading (3)
ED 411 Practicum II (1)
ED 460 Reading & Writing Across the Curriculum (Elem.) (3)

Math and Science Block
ED 313 Science & Math for Educators I (3)
ED 322 Math for Educators I (3)
ED 422 Math for Educators II (3)
ED 423 Science & Math for Educators II (3)
Art, Exceptionalities, and Assessment Block

ED 404 Music & Art Across the K-8 Classroom (2)

or

ED 420 Creative Movement for the Classroom (2)

SPED 475 Curriculum Methods & Materials for Special Education (3)

ED 495 Assessment & Evaluation of Student Learning (3)

Capstone

ED 479 Student Teaching (9)

ED 480 Student Teaching Seminar (1)

MAJOR REQUIREMENTS

Choose one of the following majors:

Humanities and Social Sciences (24 crs)

HSS 222 Understanding Diverse Communities (3)

HSS 310 Indigenous Perspectives of New Mexico History and Culture (4)

HSS 311 Why the Social Sciences Matter (4)

HSS 320 Genesis of Math and Science (4)

HSS 410 Senior Seminar: Teaching the Humanities (1)

HSS 414 Humanity and Creativity (4)

HSS 421 History, Literature, Art, and Philosophy (4)

Bilingual Education (24 crs)

Pre-requisite for this major: 6 crs of Spanish as a Heritage Language or permission of department.

EDBE 211 Foundations of Bilingual/ESL Education (3)

EDBE 212 Second Language Acquisition (3)

EDBE 305 Spanish Literacy for Bilingual Education (3) *

EDBE 306 Spanish for the Bilingual Classroom (3) *

EDBE 360 Methods of Teaching Bilingual/ESL (3)

EDBE 361 Introduction to Linguistics (3)

EDBE 481 Linguistics and Phonetics for the Bilingual Teacher (3) *

EDBE 482 Spanish Language and Folklore of New Mexico for the Bilingual Teacher (3) *

These courses * are taught in Spanish.

TESOL (24 crs)

Pre-requisite for this major: 6 crs of a language other than English or permission of department.

EDTE 211 Foundations of Bilingual/ESL Education (3)

EDTE 212 Second Language Acquisition (3)

EDTE 360 Methods of Teaching Bilingual/ESL (3)

EDTE 361 Introduction to Linguistics (3)

EDTE 380 Approaches to Teaching English Writing Skills to ESL/Bilingual Students (3)

EDTE 381 ESL Across the Content Areas (3)

EDTE 412 Assessing English Language Learners (3)

EDTE 413 Special Topics in TESOL (3)

TOTAL CREDITS 132
The Alternative Licensure Program for Teachers provides a course of study leading to teacher licensure. The program, approved by the New Mexico Department of Public Education and the Professional Standards Commission, offers elementary- and secondary- track course work.

Students enrolled in the Alternative Licensure Program must complete all course work, pass the required New Mexico Teachers Assessment Tests (NMTA), and complete other application requirements for licensure.

Tamera Lopez, MA..................... Coordinator ALP ..................... 747-2224 ...................................tamera@nnmc.edu

**DEGREE REQUIREMENTS**
Each applicant must hold a degree in a field other than education:
- Bachelor’s including 30 credits in a particular field;
- or Master’s, including 12 graduate credits in a particular field;
- or Doctorate in a particular field.

**TESTING REQUIREMENTS**
After admission into the program and during the first semester of enrollment, you must pass the NMTA Basic Skills. Other assessments are required for teacher licensure.
- New Mexico Assessment of Teacher Competency (Elementary or Secondary).
- New Mexico Content Knowledge Assessment (Elementary, Middle-Level, or Secondary-level).

**GENERAL REQUIREMENTS:**
You must have already applied and been accepted to Northern and have had official transcripts from all colleges sent to the Office of Admissions.

Submit to Northern’s Teacher Education Department an application packet that includes: a letter of intent; a letter stating your philosophy of education; two letters of recommendation; copies of all transcripts to the Education Department; and an Alternative Licensure Program Application form. You will be required to sign an Assurance form.

**PROFESSIONAL EDUCATION REQUIREMENTS:** 20 credit hours for the Elementary track and 18 credit hours for the Secondary track program, as approved by the New Mexico Public Education Department and the Professional Standards Commission.

**ELEMENTARY (K-8)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 401</td>
<td>Foundations of Education</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 412</td>
<td>Teaching and Diagnosis of Reading (Elem)</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 452</td>
<td>Pedagogy and Human Learning</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 464</td>
<td>Reading and Writing Across the Curriculum (Elem)</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 493</td>
<td>The Integrated Elementary Classroom</td>
<td>(2)</td>
</tr>
<tr>
<td>ED 494</td>
<td>Assessment and Evaluation of Student Learning</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 496</td>
<td>Supervised Field Experience (Elem)</td>
<td>(1)</td>
</tr>
<tr>
<td>ED 496L</td>
<td>Supervised Field Experience Lab (Elem)</td>
<td>(2)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS** 20

**SECONDARY (7-12)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 401</td>
<td>Foundations of Education</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 452</td>
<td>Pedagogy and Human Learning</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 462</td>
<td>Reading and Writing Across the Curriculum (Sec)</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 474</td>
<td>Methods and Materials in Secondary Education</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 494</td>
<td>Assessment and Evaluation of Student Learning</td>
<td>(3)</td>
</tr>
<tr>
<td>ED 498</td>
<td>Supervised Field Experience (Sec)</td>
<td>(1)</td>
</tr>
<tr>
<td>ED 498L</td>
<td>Supervised Field Experience Lab (Sec)</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS** 18
The Special Education Alternative Licensure Program for teachers provides a course of study leading to teacher licensure. The program, approved by the New Mexico Department of Public Education and the Professional Standards Commission, offers elementary- and secondary-track course work.

Students enrolled in this program must complete all course work, pass the required New Mexico Teachers Assessment tests (NMTA), and complete other application requirements for licensure.

Tamera Lopez, MA..................... Coordinator ALP ................... 747-2224 ..................................tamera@nnmc.edu

DEGREE REQUIREMENTS
Applicants must hold a degree in education or in any other field of study.
  Bachelor’s including 30 credits in a particular field;
  or Master’s, including 12 graduate credits in a particular field;
  or Doctorate in a particular field.

TESTING REQUIREMENTS
After admission into the program and during the first semester of enrollment, you must pass the NMTA Basic Skills. Other assessments are required for teacher licensure.
  New Mexico Assessment of Teacher Competency (Elementary or Secondary)
  New Mexico Content Knowledge Assessment (Elementary, Middle-Level, or Secondary-level).

GENERAL REQUIREMENTS
You must have already applied and been accepted to Northern and have had official transcripts from all colleges sent to the Office of Admissions.

Submit to Northern’s Teacher Education Department an application packet that includes: a letter of intent; a letter stating your philosophy of education; two letters of recommendation; copies of all transcripts to the Education Department; and an Alternative Licensure Program Application form. You will be required to sign an Assurance form.

PROFESSIONAL EDUCATION REQUIREMENTS: 20 credit hours for the Special Education program, as approved by the New Mexico Department of Public Education and the Professional Standards Commission.

SPECIAL EDUCATION (K-12)
SPED 401 Foundations of Education (3)
SPED 455 The Special Education Program: IEP’s and Assessment (4)
SPED 465 Reading for Special Learners (3)
SPED 475 Curriculum Methods and Materials for Special Learners (3)
SPED 485 Teaching Reading in Special Education (3)
SPED 497 Supervised Field Experience (1)
SPED 497L Supervised Field Experience Lab (3)

TOTAL CREDIT 20
The Department of Health Occupations offers certificates and degrees in the areas of Allied Health (Allied Health, Integrative Health Studies, Massage Therapy, and Radiologic Technology, and in Nursing. Degrees offered include Associate of Applied Sciences, an Associate of Science, a Bachelor of Science, and a baccalaureate degree in Nursing (ADN to BSN).

Ellen Trabka, MS ................................................... Chairperson ........................................ 747-2209 etrabka@nnmc.edu
Barbara Benzaquen, BSN ..................................... Nursing ................................................. 747-2281 bbenzaquen@nnmc.edu
Siri Guru Nam Kaur Khalsa, BSN .......... Nursing ............................................... 747-2250 sirigurunam@nnmc.edu
Lucas Gonzales, BSN ............................................ Nursing ............................................. 747-2208 lucasgonzales@nnmc.edu
Cappie Hausman, BSN ........................................... Nursing ............................................. 747-2284 chaudman@nnmc.edu
Jeffrey Hawkins, PhD ........................... Director, Integrative Health ......... 747-2256 jhawkins@nnmc.edu
Theresa Lopez, BSN ................................. Director, Nursing ........................................ 747-2282 talopez@nnmc.edu
Denise Michel, DO ............................... Integrative Health Studies ........... 747-2257 denise_michel@msn.com
Mike Frain, MS ................................................... Director, Radiology ....................... 747-2218 frainm@nnmc.edu
Eric Gidney, AAS ........................................... Radiology ........................................ 747-2229 eric@nnmc.edu
# DEPARTMENT OF ALLIED HEALTH

## Associate of Applied Science

### ALLIED HEALTH

This program provides basic courses designed for maximum transfer to satisfy the requirements for pre-professional allied health programs at four-year institutions, as well as entry-level employment in the health care field for those who choose a career in the area of Nurse Aide.

### GENERAL EDUCATION (29 crs.)

**Communications (6 hrs)**
- ENG 111 English Composition I (3)
- Choose one of the following:
  - ENG 112 English Composition II (3)
  - ENG 116 Technical Writing (3)
  - SPCH 130 Public Speaking (3)

**Humanities (6 crs)**
- Elective (6)

**Mathematics (3 crs)**
- Choose one of the following three courses:
  - MATH 130 Intermediate Algebra (3)
  - MATH 145 Introduction to Probability and Statistics (3)
  - MATH 150 College Algebra (3)

**Laboratory Sciences (8 crs)**
- BIOL 237/L Human Anatomy & Physiology I with lab (4)
- BIOL 238/L Human Anatomy & Physiology II with lab (4)

**Social/Behavioral Sciences (6 crs)**
- PSY 105 General Psychology (3)
- SOC 101 Introduction to Sociology (3)

### HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
- Elective (1)

### PROGRAM REQUIREMENTS (34 crs.)
- CS 102 Computer Literacy (3)
- NURS 100/L Nurse Aide with lab (5)
- HSCI 125 Medical Terminology (2)
- HSCI 204 Nutrition (3)
- PSY 290 Developmental Psychology (3)
- SPAN 230 Spanish for the Health Professions (3)
- SOC 105 Introduction to Human Services (3)
- Electives: HSCI or Laboratory Science electives * (12)

**TOTAL CREDITS** 64
Bachelor of Science

INTEGRATIVE HEALTH STUDIES

The IHS program at NNMC is designed for both practitioners (e.g., nurses, massage therapists, yoga instructors, etc.) as well as new learners to the field. Students are given valuable skills: 1) Fundamental applications of a range of integrated health systems including nutrition, homeopathy, herbology, therapeutic touch, Ayurveda, energy medicine, aromatherapy, mind-body interactions, acupressure and fundamentals of oriental medicine; 2) Knowledge of the basic principles, trends and complexities of the field; 3) Awareness of the interconnectedness of mind, body and spirit as components of health; 4) Understanding of the effectiveness and place of complementary and alternative medicine; and 5) Familiarity with ethical and legal responsibilities in holistic healing. Students can specialize in herbology, homeopathy, aromatherapy, acupressure/TCM and yoga therapy.

GENERAL EDUCATION REQUIREMENTS (46 crs)

**Communications (9 crs)**
- ENG 111 English Composition I (3)
- ENG 112 English Composition II (3)
- SPCH 130 Public Speaking (3)

**Mathematics (6 crs)**
- MATH 145 Introduction to Probability and Statistics (3)
- MATH 150 College Algebra (3)

**Laboratory Sciences (16 crs)**
- CHEM 110/L Intro to Chemistry with Lab (4)
- CHEM 210/L Integrated Organic & Biochemistry with Lab (4)
- BIOL 237/L Human Anatomy & Physiology I Lab (4)
- BIOL 238/L Human Anatomy & Physiology II Lab (4)

**Social/Behavioral Sciences (9 crs)**
- SOC 141 Effects of Alcohol & Drug Abuse (3)
- PSY 110 Issues of Death and Dying (3)
- PSY 271 Human Sexuality (3)

**Humanities and Fine Arts (6 credits)**
- IHS 220 Bioethics (3)
- Elective (3)

**HEALTH, PHYSICAL EDUCATION, and RECREATION (4 cr)**
- 1 credit required from the following each year during the program:
  - HPER 116 Aikido I (1)
  - HPER 117 Introduction to Kundalini Yoga (1)
  - HPER 119 Hatha Yoga (1)
  - HPER 127 Tai Chi Chuan I (1)

**INTEGRATIVE HEALTH STUDIES CORE**

**Lower Division Required Courses (31 crs)**
- IHS 102 Introduction to Homeopathy (3)
- IHS 103 Meditation and Breath: Mind-Body Healing (2)
- IHS 115 Introduction to Traditional Chinese Medicine (3)
- IHS 116 Introduction to Aromatherapy (3)
- IHS 118 Introduction to Integrative Healing (3)
- IHS 121 Introduction to Ayurveda: Ancient Science of Living (3)
- IHS 123 Introduction to Acupressure (1)
- IHS 130 Communication Skills for Healing (1)
- IHS 208 Introduction to Holistic Nutrition (3)
- IHS 255 Introduction to Herbal Medicine (2)
IHS 257  Herbal Pharmacy (2)  
IHS 264  Therapeutic Touch Techniques (3)  
IHS 270  Energy Bodywork for Integrative Healing (2)  

**Upper Division Required Courses (31 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 343</td>
<td>Pathophysiology I (3)</td>
</tr>
<tr>
<td>NURS 344</td>
<td>Pathophysiology II (3)</td>
</tr>
<tr>
<td>IHS 305</td>
<td>Historical Development of Healthcare Paradigms (2)</td>
</tr>
<tr>
<td>IHS 320</td>
<td>Intro to the Five Elements &amp; the 12 Channels (1)</td>
</tr>
<tr>
<td>IHS 345</td>
<td>Homeopathy II (3)</td>
</tr>
<tr>
<td>IHS 353</td>
<td>Food and Supplements: Home Medicine (2)</td>
</tr>
<tr>
<td>IHS 357</td>
<td>Herbal Medicine II (2)</td>
</tr>
<tr>
<td>IHS 390</td>
<td>CAM: Legal Issues &amp; Scope of Practice (2)</td>
</tr>
<tr>
<td>IHS 438</td>
<td>Practical Application of Essential Oils (2)</td>
</tr>
<tr>
<td>IHS 455</td>
<td>Advanced Herbal Formulations (2)</td>
</tr>
<tr>
<td>IHS 480</td>
<td>Evolution of Cross-Cultural Healing (3)</td>
</tr>
<tr>
<td>IHS 481</td>
<td>Health: The Role of Environment &amp; Ecology (3)</td>
</tr>
<tr>
<td>IHS 495</td>
<td>Research in Complementary/Alternative Med (3)</td>
</tr>
</tbody>
</table>

**Elective Courses (18 crs)**

At least 10 credits of elective courses must be Upper Division IHS courses in order to meet degree requirements. Students seeking admission to professional graduate schools (e.g., medical, osteopathic, chiropractic, acupuncture, oriental medicine or naturopathic) may substitute necessary mathematics, sciences or other courses on approval of IHS Director.

**Lower-division Electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAS 115</td>
<td>Cranial Sacral Techniques I (1)</td>
</tr>
<tr>
<td>MAS 116</td>
<td>Cranial Sacral Techniques II (2)</td>
</tr>
<tr>
<td>MAS 215</td>
<td>Cranial Sacral Techniques III (1)</td>
</tr>
<tr>
<td>IHS 120</td>
<td>Ayurveda &amp; Energy Healing I (1)</td>
</tr>
<tr>
<td>IHS 122</td>
<td>Ayurveda &amp; Energy Healing II (1)</td>
</tr>
<tr>
<td>IHS 124</td>
<td>Ayurveda &amp; Energy Healing III (1)</td>
</tr>
<tr>
<td>IHS 161</td>
<td>Healthy Living Locally (1)</td>
</tr>
<tr>
<td>IHS 162</td>
<td>Nutrition for Diabetes (2)</td>
</tr>
<tr>
<td>IHS 163</td>
<td>Healthy Living Locally II (2)</td>
</tr>
<tr>
<td>IHS 164</td>
<td>Healthy Living Locally Tutorial Training (3)</td>
</tr>
<tr>
<td>IHS 166</td>
<td>Aztec Mexican Healing I (1)</td>
</tr>
<tr>
<td>IHS 167</td>
<td>Aztec Mexican Healing II (1)</td>
</tr>
<tr>
<td>IHS 201</td>
<td>Acupressure Facial: Radiance of Shen (1)</td>
</tr>
<tr>
<td>IHS 218</td>
<td>Movement &amp; Alignment: Musculoskeletal Health (3)</td>
</tr>
<tr>
<td>IHS 258</td>
<td>Fall Herbal Fieldwork (1)</td>
</tr>
<tr>
<td>IHS 259</td>
<td>Summer Herbal Fieldwork (1)</td>
</tr>
</tbody>
</table>

**Upper-division electives**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHS 280</td>
<td>Healthcare Traditions of the Southwest (2)</td>
</tr>
<tr>
<td>IHS 323</td>
<td>Myofascial Armoring: Opening the Chest: Fire Element (1)</td>
</tr>
<tr>
<td>IHS 324</td>
<td>Myofascial Armoring: Opening Chest: Wood Element (1)</td>
</tr>
<tr>
<td>IHS 325</td>
<td>Energetic Blocks to Healing (2)</td>
</tr>
<tr>
<td>IHS 326</td>
<td>Therapeutic Technique Cupping, Moxa, Gua Sha (1)</td>
</tr>
<tr>
<td>IHS 327</td>
<td>Windows of the Sky (1)</td>
</tr>
<tr>
<td>IHS 328</td>
<td>Acupressure: The Extraordinary Vessels (2)</td>
</tr>
<tr>
<td>IHS 329</td>
<td>Assessment: The Pulse in Oriental Medicine (1)</td>
</tr>
<tr>
<td>IHS 331</td>
<td>Spirituality and Essential Oils (2)</td>
</tr>
<tr>
<td>IHS 332</td>
<td>Enhancing Creativity with Essential Oils (2)</td>
</tr>
<tr>
<td>IHS 352</td>
<td>Yoga Therapy: Mind-Body Healing (2)</td>
</tr>
<tr>
<td>IHS 381</td>
<td>Traditional Remedios of Northern New Mexico I (2)</td>
</tr>
<tr>
<td>IHS 382</td>
<td>Traditional Remedios of Northern New Mexico II (2)</td>
</tr>
</tbody>
</table>
### Recommended Sequence of Courses

#### First Year

<table>
<thead>
<tr>
<th>Fall Semester (16)</th>
<th>Spring Semester (16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111 (3)</td>
<td>ENG 112 (3)</td>
</tr>
<tr>
<td>MATH 145 (3)</td>
<td>MATH 150 (3)</td>
</tr>
<tr>
<td>CHEM 110 (3)</td>
<td>CHEM 210 (3)</td>
</tr>
<tr>
<td>CHEM 110/L (1)</td>
<td>CHEM 210/L (1)</td>
</tr>
<tr>
<td>IHS 118 (3)</td>
<td>IHS 103 (2)</td>
</tr>
<tr>
<td>IHS 115 (3)</td>
<td>IHS 123 (1)</td>
</tr>
</tbody>
</table>

#### Second Year

<table>
<thead>
<tr>
<th>Fall Semester (16)</th>
<th>Spring Semester (16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCH 130 (3)</td>
<td>SOC 141 (3)</td>
</tr>
<tr>
<td>BIOL 237 (3)</td>
<td>BIOL 238 (3)</td>
</tr>
<tr>
<td>BIOL 237/L (1)</td>
<td>BIOL 238/L (1)</td>
</tr>
<tr>
<td>IHS 208 (3)</td>
<td>IHS 255 (2)</td>
</tr>
<tr>
<td>IHS 116 (3)</td>
<td>IHS 264 (3)</td>
</tr>
<tr>
<td>IHS 121 (3)</td>
<td>IHS 257 (2)</td>
</tr>
<tr>
<td></td>
<td>IHS 130 (1)</td>
</tr>
<tr>
<td></td>
<td>HPER ** (1)</td>
</tr>
</tbody>
</table>

#### Third Year

<table>
<thead>
<tr>
<th>Fall Semester (16)</th>
<th>Spring Semester (17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 110 (3)</td>
<td>PSY 271 (3)</td>
</tr>
<tr>
<td>NURS 343 (3)</td>
<td>NURS 344 (3)</td>
</tr>
<tr>
<td>HUM 220 (3)</td>
<td>Humanities Elect (3)</td>
</tr>
<tr>
<td>IHS 305 (2)</td>
<td>IHS 357 (2)</td>
</tr>
<tr>
<td>IHS 345 (3)</td>
<td>IHS 320 (2)</td>
</tr>
<tr>
<td>IHS 390 (2)</td>
<td>IHS 330 (2)</td>
</tr>
<tr>
<td></td>
<td>IHS 270 (2)</td>
</tr>
</tbody>
</table>

#### Fourth Year

<table>
<thead>
<tr>
<th>Fall Semester (16)</th>
<th>Spring Semester (15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHS 455 (2)</td>
<td>IHS 481 (2)</td>
</tr>
<tr>
<td>IHS 495 (3)</td>
<td>IHS 353 (2)</td>
</tr>
<tr>
<td>IHS 480 (3)</td>
<td>IHS Elective (2)</td>
</tr>
<tr>
<td>IHS Electives (8)</td>
<td>IHS Elective (9)</td>
</tr>
</tbody>
</table>

Choose one ** from: HPER 116, 117, 119, or 127
This program provides 650+ hours of Massage Therapy Training designed to meet the requirements to sit for the NCBTMB and FSMTB exam which is required for entry-level employment in massage therapy. Formal application to and acceptance into the program is necessary before you may enroll in any MAS-prefixed courses. Acceptance is granted for the fall semester of each year. To be accepted into the program, you must have already completed at least ENG 109N (Basic English II) and MATH 100N (Fundamentals of Mathematics). The massage courses have been developed to coincide with the general education courses, so the sequence as listed must be followed once you have entered the massage program.

GENERAL EDUCATION (6-9 crs)

Communications (3 crs)
ENG 109N Basic English II (3)

Math/Computers/Lab Sciences (3-6 crs)
MATH 100N (6) or a higher-level math course (3)

PROGRAM REQUIREMENTS (36.5-38.5 crs)

BA 124 Introduction to Business for Massage Therapists (2)
HSCI 110 Anatomy & Physiology I (3)
HSCI 111 Anatomy & Physiology II (3)

or

BIOL 237/L Human Anatomy & Physiology I with Lab (4)
BIOL 238/L Human Anatomy & Physiology II with Lab (4)
HSCI 109 CPR/First Aid (.5)
HSCI 112 Pathology for Massage Therapists (3)
HSCI 114 Kinesiology for Massage therapists (2)
HSCI 152 Legal and Ethical Issues in Massage Therapy (2)
MAS 101L Massage Therapy I (4)
MAS 103L Massage Therapy II (4)
MAS 104L Massage Therapy Internship (3)
MAS 108L Massage Therapy Practice Lab (2)

Choose 8 crs from the following electives:

HSCI 125 Medical Terminology (2)
HSCI 204 Nutrition (3)
IHS 102 Introduction to Homeopathy (3)
IHS 103 Meditation and Breath - Mind-Body Healing (2)
IHS 115 Introduction to Traditional Chinese Medicine (3)
IHS 116 Introduction to Aromatherapy (3)
IHS 117 Raindrop Technique (1)
IHS 118 Introduction to Integrative Healing (2)
IHS 120 Ayurveda and Energy Healing I (1)
IHS 122 Ayurveda and Energy Healing II (1)
IHS 123 Introduction to Acupressure (1)
IHS 166 Aztec Mexican Healing I (1)
IHS 167 Aztec Mexican Healing II (1)
IHS 208 Holistic Nutrition (3)
IHS 255 Introduction to Herbal Medicine (2)
IHS 257 Herbal Pharmacy (2)
IHS 264 Therapeutic Touch Techniques (3)
MAS 110 Improving Your Body Mechanics (1)
MAS 113 Foot Reflexology (2)
MAS 115 Cranial Sacral Techniques I (1)
MAS 116 Cranial Sacral Techniques II (2)
MAS 117 Introduction to Thai Massage (1)
MAS 118 Develop Your Tradecraft (1)
MAS 119 Traditional Thai Massage I (1)
MAS 120 Traditional Thai Massage II (2)

TOTAL CREDITS 42.5--45.5

Prerequisites
ENG 109N Basic English II (3)
MATH 100N (4) or a higher-level math course (3)

Required sequence of courses

**Fall semester (17)**
HSCI 110 (3) or BIOL 237/L (4)
MAS 101L (4)
MAS 108L (2)
HSCI 114 (2)
HSCI 152 (2)
Electives (4)

**Spring semester (19)**
HSCI 111 (3) or BIOL 238/L (4)
MAS 103L (4)
MAS 104L (4)
BA 124 (2)
HSCI 112 (2)
Electives (4)
Associate of Applied Science
MASSAGE THERAPY

This program is for students who have completed the certificate in Massage Therapy and wish to continue their studies and receive an associate degree. This degree will broaden the student’s knowledge base in the Massage Therapy field. Employment opportunities include working with an existing spa, chiropractors, alternative healing centers, health care clinics, or self-employment.

GENERAL EDUCATION (27 crs)

Communications (6 crs)
ENG 111 English Composition I (3)
Choose one of the following four courses
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
SPAN 230 Spanish for Health Professions (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (11 crs)
BIOL 237/L Human Anatomy and Physiology I with Lab (4)
BIOL 238/L Human Anatomy and Physiology II with Lab (4)
CS 102 Computer Literacy (3)

Social/Behavioral Sciences (6 crs)
PSY Elective (3)
SOC Elective (3)

Humanities and Fine Arts (3 crs)
Elective (3)

HEALTH, PHYSICAL EDUCATION, and RECREATION (1 cr)
Elective (1)

PROGRAM REQUIREMENTS (38 crs)
BA 124 Introduction to Business for Massage Therapists (2)
HSCI 112 Pathology for Massage Therapists (3)
HSCI 114 Kinesiology for Massage therapists (2)
HSCI 125 Medical Terminology (2)
HSCI 152 Legal and Ethical Issues in Massage Therapy (2)
MAS 101L Massage Therapy I (4)
MAS 103L Massage Therapy II (4)
MAS 104L Massage Therapy Internship (3)
MAS 108L Massage Therapy Practice Lab (2)
Choose 14 crs from the following electives:
HSCI 204 Nutrition (3)
IHS 102 Introduction to Homeopathy (3)
IHS 103 Meditation and Breath: Mind-Body Healing (2)
IHS 115 Introduction to Traditional Chinese Medicine (3)
IHS 116 Introduction to Aromatherapy (3)
IHS 117 Raindrop Technique (1)
IHS 118 Introduction to Integrative Healing (3)
IHS 120 Ayurveda and Energy Healing I (1)
IHS 122 Ayurveda and Energy Healing II (1)
IHS 123 Introduction to Acupressure (1)
IHS 166 Aztec Mexican Healing I (1)
IHS 167 Aztec Mexican Healing II (1)
IHS 208 Holistic Nutrition (3)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHS 255</td>
<td>Introduction to Herbal Medicine (2)</td>
<td></td>
</tr>
<tr>
<td>IHS 257</td>
<td>Herbal Pharmacy (2)</td>
<td></td>
</tr>
<tr>
<td>IHS 264</td>
<td>Therapeutic Touch Techniques (3)</td>
<td></td>
</tr>
<tr>
<td>MAS 110</td>
<td>Improving Your Body Mechanics (1)</td>
<td></td>
</tr>
<tr>
<td>MAS 113</td>
<td>Foot Reflexology (2)</td>
<td></td>
</tr>
<tr>
<td>MAS 115</td>
<td>Introduction to Cranial Sacral Techniques I (1)</td>
<td></td>
</tr>
<tr>
<td>MAS 116</td>
<td>Cranial Sacral Techniques II (2)</td>
<td></td>
</tr>
<tr>
<td>MAS 117</td>
<td>Introduction to Thai Massage (1)</td>
<td></td>
</tr>
<tr>
<td>MAS 119</td>
<td>Traditional Thai Massage I (1)</td>
<td></td>
</tr>
<tr>
<td>MAS 120</td>
<td>Traditional Thai Massage II (2)</td>
<td></td>
</tr>
<tr>
<td>MAS 215</td>
<td>Cranial Sacral Techniques III (1)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CREDITS** 65
DEPARTMENT OF RADIOLOGIC TECHNOLOGY

Associate of Applied Science
RADIOLOGIC TECHNOLOGY

The Radiologic Technology program is a two-year (22-month) program leading to an associate of applied science degree. As a student in this program, you will prepare to meet the health care needs of the community by functioning as a Radiographer in hospitals, clinics, doctors’ offices, and in similar health delivery agencies. Upon completion of the program, you will be eligible to take the examination for National Registration. Passing the National Registry exam fulfills the New Mexico requirements for licensure.

You will be mixing classroom time with time spent in the clinical setting, working and training with technologists in the field. The classroom (didactic) phase will incorporate the formal education process along with laboratory experience giving you a hands-on approach to learning while applying the knowledge currently being learned to practical experience.

Formal application to and acceptance into the program is necessary before you may enroll in any clinical radiography courses. Acceptance is granted for the fall semester of each year. Applications for the program may be obtained from the Radiologic Technology Department at 505-747-2220 or on the Radiography page at www.nnmc.edu.

Pre-requisites
Completion of the following required courses must be done before you apply to the program.
CS 102, ENG 111, HSCI 125, MATH 102N, BIOL 237/L and BIOL 238/L.
You must have current CPR through the American Heart Association by the time clinics begin (mid-term in Fall semester).

Note: Only those accepted into the program may take RAD courses, which are sequential. You are responsible for providing your own transportation to and from clinical sites and must understand that all students will rotate through the individual sites. In the event you are transferring into the program, you will be placed in the program at the appropriate level.

GENERAL EDUCATION (23 crs)

Communications (6 crs)
ENG 111 English Composition I (3)
Choose one of the following three courses:
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (11 crs)
BIOL 237/L Human Anatomy & Physiology I with lab (4)
BIOL 238/L Human Anatomy & Physiology II with lab (4)
CS 102 Computer Literacy (3)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Art (3 crs)
Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Elective (1)
## PROGRAM REQUIREMENTS (63 crs.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSCI 125</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>RAD 108</td>
<td>Basic Patient Care</td>
<td>3</td>
</tr>
<tr>
<td>RAD 135L</td>
<td>Principles of Radiologic Techniques I</td>
<td>3</td>
</tr>
<tr>
<td>RAD 136L</td>
<td>Principles - Radiologic Techniques II</td>
<td>3</td>
</tr>
<tr>
<td>RAD 140L</td>
<td>Radiologic Procedures I</td>
<td>4</td>
</tr>
<tr>
<td>RAD 141L</td>
<td>Radiologic Procedures II</td>
<td>4</td>
</tr>
<tr>
<td>RAD 142L</td>
<td>Radiologic Procedures III</td>
<td>3</td>
</tr>
<tr>
<td>RAD 145L</td>
<td>Clinical Experience I</td>
<td>5</td>
</tr>
<tr>
<td>RAD 146L</td>
<td>Clinical Experience II</td>
<td>5</td>
</tr>
<tr>
<td>RAD 149L</td>
<td>Clinical Experience III</td>
<td>5</td>
</tr>
<tr>
<td>RAD 235</td>
<td>Radiographic Physics</td>
<td>3</td>
</tr>
<tr>
<td>RAD 236</td>
<td>Principles of Radiologic Techniques III</td>
<td>2</td>
</tr>
<tr>
<td>RAD 240</td>
<td>Radiologic Procedures III</td>
<td>3</td>
</tr>
<tr>
<td>RAD 245L</td>
<td>Clinical Experience IV</td>
<td>8</td>
</tr>
<tr>
<td>RAD 246L</td>
<td>Clinical Experience V</td>
<td>8</td>
</tr>
<tr>
<td>RAD 250</td>
<td>Radiologic Pathology</td>
<td>1</td>
</tr>
<tr>
<td>RAD 251</td>
<td>Registry Review</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS**: 87

### Required Sequence of Courses

#### First Year

**Fall Semester**
- RAD 135L (3)
- RAD 140L (4)
- RAD 145L (5)
- *Humanities elective (3)
- RAD 108 (3)

**Spring Semester**
- RAD 136L (3)
- RAD 141L (4)
- RAD 146L (5)
- *Social/Behav. elective (3)

**Sub-total (18)**

**First Summer Session**
- RAD 149L (5)
- RAD 142 (3)

**Sub-total (8)**

#### Second Year

**Fall Semester**
- RAD 235 (3)
- RAD 240 (3)
- RAD 245L (8)
- *HSCI 125 (2)
- *Choose one of following (3)
- ENG 112 (3)
- ENG 116 (3)
- SPCH 130 (3)

**Spring Semester**
- RAD 236 (2)
- RAD 246L (8)
- RAD 250 (1)
- RAD 251 (1)
- *HPER Elective (1)

**Sub-total (17)**

**Sub-total (13)**

* These courses may be taken prior to admission to the program or in any other sequence. Only RAD courses must be taken in sequence.
Northern New Mexico College’s Department of Nursing offers two associate degrees in Nursing (ADN), a certificate in Practical Nursing (PN), and an RN to BSN (Completion Program) at the baccalaureate level.

Formal application and acceptance into the Nursing program is required before students enroll in any NURS-prefixed course listed in the program requirements with the exception of NURS 100 and NURS 100L. Support courses may be taken before entry into the program or during the course of nursing studies.

If you are interested in the Nursing program, please contact the Director of Nursing (505-747-2207) for information, advisement, and an application packet.

PROGRESSION OF NURSING STUDIES

1. Upon successful completion of the first year of nursing studies (Level I) students can progress directly into Level II nursing courses.

2. Successful Level I nursing students are offered the option of enrollment in additional coursework (NURS 119) required for practical nurse (PN) candidacy status.

3. Upon successful completion of the optional PN course work students are awarded a Certificate of Practical Nursing and are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).

4. Upon successful completion of the two year course of nursing studies (Level II), graduates of the nursing program are awarded an Associate Degree in Nursing (ADN) and are eligible to take the National Council Licensure Examination for Registered Nursing (NCLEX-RN).

5. Licensed Practical/Vocational Nurses (LPN/LVN) who are graduates of state approved programs of practical nursing may be admitted directly into Level II of the Nursing program based on individual assessment of transcripts.

PROGRAM POLICIES

Qualified nursing student candidates are accepted into the Nursing program on a tentative basis pending completion of the following requirements:

If accepted into the Nursing program, proof of current immunization status as outlined in the application packet as well as proof of current CPR (American Heart Association, Basic Life Support) must be provided to nursing administration on or before August 1st to ensure student placement. Failure to comply with this regulation will result in forfeiture of the student slot.

If the nursing student candidate is completing required course work during the summer semester it is the candidate’s responsibility to provide nursing administration with summer course work transcripts (grades of a “C” or better are required along with a cumulative GPA of 2.5) as soon as possible. Failure to comply with this regulation will result in forfeiture of the student slot.

Upon acceptance into the Nursing Program nursing students are required to obtain a criminal background check to include fingerprinting and drug screens.

Students can have no disqualifying criminal convictions as determined by the New Mexico Department of Public Health Caregivers Criminal History Screening Program.
If the New Mexico Department of Public Health determines a student has a disqualifying criminal conviction, the student will be notified of the decision by the NM Department of Public Health Review Board. The student then has the option of petitioning said board for reconsideration. During the reconsideration process, the review board must determine the student forgiven of a past criminal record for the student to be allowed to participate in the Nursing program course of studies. Failure to be forgiven will result in forfeiture of the student slot.

Nursing students must test negative on mandatory drug screening. Failure to test negative will result in a review of drug screening results by a private testing entity. The student will be responsible for the expenses incurred in this additional screening process. The private testing company will determine the final student drug screening status.

Once accepted into the program, students must maintain a grade of “C” or better in each required course in order to remain in the program. A grade of “D” or below is not acceptable in the Nursing program. The grading scale for the Nursing program is as follows:

- A = 92-100%
- B = 83-91%
- C = 75-82%
- D = 67-74%
- F = 67%

Once accepted into the Nursing program, it is the professional responsibility of all nursing students to maintain a current immunization and CPR status.

Please refer to the Northern New Mexico College Nursing Education Program Student Handbook for additional policies and information.

The NM State Board of Nursing may deny, revoke, or suspend any license upon grounds that the licensee or applicant violates any of the following actions: is guilty of fraud or deceit in attempting to procure a license; is unfit or incompetent; has been convicted of a felony; is habitually intemperate, is addicted to habit-forming drugs, or is mentally incompetent. Please consider this before applying to this program.

**Prerequisites for Admission Consideration**

1. High School or GED diploma.
2. Cumulative GPA of 2.50 or higher
3. Completion of the following course work with a minimum grade of “C”.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 210/L</td>
<td>Microbiology with Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 237/L</td>
<td>Human Anatomy and Physiology I with Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 238/L</td>
<td>Human Anatomy and Physiology II with Lab</td>
<td>4</td>
</tr>
<tr>
<td>HSCI 204</td>
<td>Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>PSY 105</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 100/L</td>
<td>Nurse Aide with Lab</td>
<td>5</td>
</tr>
</tbody>
</table>

A state-recognized Nurses’ Assistant (Aide) Certificate will be accepted in lieu of NURS 100/L.

**TOTAL CREDIT HOURS** 29

4. Test of Essential Academic Skills (TEAS) taken within the last two years with a minimum score in the 50th national percentile.
### Sequence of Nursing/General Education Courses for Associate Degree in Nursing

#### Year I, Level I

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 113  Nursing Fundamentals (4)</td>
<td>NURS 115  Med/Surg Nursing I (4)</td>
</tr>
<tr>
<td>NURS 113L Nursing Fundamentals Clinical (2)</td>
<td>NURS 115L Med/Surg Nursing I Clinical (2)</td>
</tr>
<tr>
<td>NURS 104 Dosage Calculation (2)</td>
<td>NURS 116 Intro to Maternal/Child (2)</td>
</tr>
<tr>
<td>NURS 105 Pharmacology (4)</td>
<td>HPER Elective (1) **</td>
</tr>
<tr>
<td></td>
<td>Humanities or English Elective (3-6) * **</td>
</tr>
</tbody>
</table>

**Summer Semester**

| NURS 119 Role Transition-PN * (2) |

*Optional  
** Suggested Time Frame

#### Year II, Level II

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 215  Med/Surg Nursing II (4)</td>
<td>NURS 228  Integrated Adult Nursing (4)</td>
</tr>
<tr>
<td>NURS 215L Med/ Surg Nursing Clinical (2)</td>
<td>NURS 228L Integrated Adult Nursing Clin (2)</td>
</tr>
<tr>
<td>NURS 216 Maternal/Child Nursing (4)</td>
<td>NURS 214 Psych/Mental Health Nursing (2)</td>
</tr>
<tr>
<td>NURS 216L Maternal/Child Clinical (2)</td>
<td>NURS 214L Psych/ Mental Health Clinical (1)</td>
</tr>
<tr>
<td></td>
<td>Humanities Elective or English Elective (3-6) * **</td>
</tr>
</tbody>
</table>

* Optional  
** Suggested Time Frame

**Graduation Requirement:**

**ATI-RN PREDICTOR**

Level II nursing students must score a predicted probability of greater than or equal to 95% to be considered as passing the NCLEX-RN predictor.

*For further information regarding this program requirement please refer to the current Northern New Mexico College Department of Nursing Student Nurse Handbook.*
Certificate
PRACTICAL NURSE

GENERAL EDUCATION (21 crs)

Communications (3 crs)
ENG 111 English Composition I (3)

Math/Computers/Lab Sciences (12 crs)
BIOL 210/L Microbiology with Lab (4)
BIOL 237/L Human Anatomy & Physiology I with Lab (4)
BIOL 238/L Human Anatomy & Physiology II with Lab (4)

Social/Behavioral Science (6 crs)
PSY 105 General Psychology (3)
PSY 290 Developmental Psychology (3)

PROGRAM REQUIREMENTS (23 crs)
HSCI 204 Nutrition (3)
NURS 104 Dosage Calculations (2)
NURS 105 Pharmacology (4)
NURS 113 Nursing Fundamentals (4)
NURS 113L Nursing Fundamentals Clinical (2)
NURS 115 Medical/Surgical Nursing I (4)
NURS 115L Medical/Surgical Nursing I Clinical (2)
NURS 119 Intro to Maternal-Child Nursing (2)
NURS 119 Role Transition – PN (2)*

TOTAL CREDITS 44

Sequence of Courses

Year I, Level I

Fall Semester | Spring Semester
---|---
NURS 113 | NURS 115
NURS 113L | NURS 115L
NURS 105 | NURS 116
NURS 104 | NURS 119 *

* May be offered in Spring or Summer
Associate of Applied Science
NURSING (ADN)

GENERAL EDUCATION (27 crs)

**Communications (6 crs)**
ENG 111 English Composition I (3)
Choose one of the following courses:
ENG 112 English Composition II (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)
SPAN 230 Span. for Health Professions

**Math/Computers/Lab Sciences (12 crs)**
BIOL 210/L Microbiology with Lab (4)
BIOL 237/L Human Anatomy & Physiology I with Lab (4)
BIOL 238/L Human Anatomy & Physiology II with Lab (4)

**Social/Behavioral Sciences (6 crs)**
PSY 105 General Psychology (3)
PSY 290 Developmental Psychology (3)

**Humanities and Fine Arts (3 crs)**
Elective (3)

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
Elective (1)

**PROGRAM REQUIREMENTS (44 crs)**
HSCI 204 Nutrition (3)
NURS 104 Dosage Calculation (2)
NURS 105 Pharmacology (4) (within the last 5 years)
NURS 113 Nursing Fundamentals (4)
NURS 113L Nursing Fundamentals Clinical (2)
NURS 115 Medical/Surgical Nursing I (4)
NURS 115L Medical/Surgical Nursing I Clinical (2)
NURS 116 Introduction to Maternal/Child Nursing (2)
NURS 214 Psychiatric/Mental Health Nursing (2)
NURS 214L Psychiatric/Mental Health Nursing Clinical (1)
NURS 215 Medical/Surgical Nursing II (4)
NURS 215L Medical/Surgical Nursing II Clinical (2)
NURS 216 Maternal/Child Nursing (4)
NURS 216L Maternal/Child Nursing Clinical (2)
NURS 228 Integrated Adult Nursing (4)
NURS 228L Integrated Adult Nursing Clinical (2)

TOTAL CREDITS 72
### Sequence of Courses

#### Year I, Level I

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 113</td>
<td>NURS 115</td>
</tr>
<tr>
<td>NURS 113L</td>
<td>NURS 115L</td>
</tr>
<tr>
<td>NURS 105</td>
<td>NURS 116</td>
</tr>
<tr>
<td>NURS 104</td>
<td>HSCI 204</td>
</tr>
</tbody>
</table>

#### Year II, Level II

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>(*NURS 200)</td>
<td>HPER Elective</td>
</tr>
<tr>
<td>NURS 215</td>
<td>NURS 228</td>
</tr>
<tr>
<td>NURS 215L</td>
<td>NURS 228L</td>
</tr>
<tr>
<td>NURS 216</td>
<td>NURS 214</td>
</tr>
<tr>
<td>NURS 216L</td>
<td>NURS 214L</td>
</tr>
<tr>
<td>Comms Elective</td>
<td>Humanities Elective</td>
</tr>
<tr>
<td>Choose one of the following four courses:</td>
<td></td>
</tr>
<tr>
<td>ENG 112</td>
<td></td>
</tr>
<tr>
<td>ENG 116</td>
<td></td>
</tr>
<tr>
<td>SPCH 130</td>
<td></td>
</tr>
<tr>
<td>SPAN 230</td>
<td></td>
</tr>
</tbody>
</table>

(*NURS 200 (Role Transition – RN) is a pre- or co-requisite for Licensed Practical Nurses who completed their programs two or more years ago*)

**Graduation Requirement:** Students must pass the ATI RN Comprehensive Predictor with a score of 60th or greater national percentile in order to graduate from this program.
ASSOCIATE OF SCIENCE
NURSING (ADN)

This degree is designed as an alternative to the Associate of Applied Science degree in Nursing to allow students to more closely meet the baccalaureate requirements of colleges of nursing, such as that at Northern, while completing their requirements to apply for state licensure as an RN.

Upon completion of this program you will be eligible to take the National Council Licensure Examination for Registered Nursing (NCLEX-RN). After completion, you may continue to a baccalaureate degree in Nursing (BSN) program.

GENERAL EDUCATION (39 crs)

Communications (9 crs)

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

Choose one of the following two courses:

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

Mathematics (3 crs)

MATH 150 College Algebra (3)

Laboratory Science (12 crs)

BIOL 210/L Microbiology with Lab (4)
BIOL 237/L Human Anatomy & Physiology I with Lab (4)
BIOL 238/L Human Anatomy & Physiology II with Lab (4)

Social/Behavioral Sciences (6-9 crs) *

PSY 105 General Psychology (3)
PSY 290 Developmental Psychology (3)

If you choose to take a third course in this discipline, it must be from a discipline other than PSY. If you choose a third course from this area, you need only complete two (6 crs) of humanities courses.

ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

Humanities and Fine Arts (6-9 crs) *

You must select courses from at least two different discipline areas from the following list. If you have chosen to take three courses from the social sciences area, you will need two courses from this area, each of which must be from different disciplines.

ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
DANC 240 Dance Appreciation (3)
ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humanity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
Theatre 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor’s approval
You must complete 15 crs between these (*) two areas.

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

PROGRAM REQUIREMENTS (44 crs)
HSCI 204 Nutrition (3)
NURS 104 Dosage Calculations (2)
NURS 105 Pharmacology (4)
NURS 113 Nursing Fundamentals (4)
NURS 113L Nursing Fundamentals Clinical (2)
NURS 115 Medical/Surgical Nursing I (4)
NURS 115L Medical/Surgical Nursing I Clinical (2)
NURS 116 Intro to Maternal/ Child Nursing (2)
NURS 200 Role Transition - RN (2) *

* Required as pre- or corequisite for LPNs who completed two or more years ago.

NURS 214 Psychiatric/Mental Health Nursing (2)
NURS 214L Psychiatric/Mental Health Nursing Clinical (1)
NURS 215 Medical/Surgical Nursing II (4)
NURS 215L Medical-Surgical Nursing II Clinical (2)
NURS 216 Maternal-Child Nursing II (4)
NURS 216 Maternal-Child Nursing II Clinical (2)
NURS 228 Integrated Adult Nursing (4)
NURS 228L Integrated Adult Nursing Clinical (2)

(* NURS 200 is a prerequisite for LPN/ LVN’s who completed their programs two or more years prior to entry into the RN level of training.)

TOTAL CREDITS 84

Graduation Requirement: Students must pass the ATI RN Comprehensive Predictor with a score of 60th or greater national percentile in order to graduate from this program.
RN to BSN
Nursing Completion Program

The RN to BSN Nursing Completion program is designed for and limited to individuals who are licensed as registered nurses (RN) in the United States. This program is designed to articulate with many two-year Associate Degree Nursing (AND) programs. The RN to BSN program prepares registered nurses to assume leadership roles as an integral nurse at the bedside, within an organization, in the community, and in the profession. The program provides a unique and innovative nursing curriculum that is based upon the Theory of Integral Nursing. Through an integrative care focus, this program prepares nurses to provide holistic, intentional, relationship-centered care that addresses individual and collective health.

The program requires 129 semester hours of credit for graduation. Forty-one credits of lower-division courses, to include nursing courses from an Associate Degree in Nursing program, will be applied toward the BSN degree. Students must then complete forty-two credits of upper-division courses, thirty-two of which must be upper-division courses. Twelve additional credits must be completed from elective courses with an Integrative Health Studies (IHS) or Nursing (NURS) prefix.

The program is also designed to meet accreditation standards of the National League for Nursing Accrediting Commission (NLNAC) or the Commission on Collegiate Nursing Education (CCNE).

Application Process
In order to apply to Northern’s RN to BSN program, you must meet the following criteria:
1. Hold a valid license as a registered nurse (RN) in New Mexico or compact state;
2. Have completed an Associate Degree in Nursing (ADN) or a Nursing Diploma;

Once accepted into the program you must:
1. Show evidence of immunity to Rubella, Hepatitis B and Varicella, and freedom from active tuberculosis;
2. Maintain current American Heart Association BLS certification throughout the duration of the program;
3. Maintain current health insurance throughout the program;
4. Provide proof of professional liability insurance throughout the program; and
5. Be proficient in computer skills, to include Internet research, word processing, and email.

Transfer of Credit
1. Graduates of Associate Degree Nursing programs can transfer lower-division credits to Northern. Official transcripts must be sent to the Office of Admission, which will evaluate and accept coursework.
2. Credit earned in a nursing diploma program will be evaluation on an individual basis.
3. Only college-level courses with a grade of C or better will transfer.
4. Graduates of foreign programs who can demonstrate competency through the NLN mobility exam will be eligible to transfer 41 credits.

GENERAL EDUCATION (39 crs)

Communications (9 crs)
ENG 111  English Composition I (3)
SPCH 130  Public Speaking (3)
Choose one of the following two courses:
ENG 112  English Composition II (3)
ENG 116  Technical Writing (3)

Mathematics (3 crs)
MATH 145  Introduction to Probability & Statistics (3)
    or
MATH 150  College Algebra (3)

Laboratory Sciences (12 crs)
BIOL 210/L  Microbiology with Lab (4)
BIOL 237/L  Human Anatomy & Physiology I with Lab (4)
BIOL 238/L  Human Anatomy & Physiology II with Lab (4)
Social/Behavioral Sciences (6-9 crs) *

PSY 105 General Psychology (3)
PSY 290 Developmental Psychology (3)

If you choose to take a third course in this discipline, it must be from a discipline other than PSY. If you choose a third course from this area, you need only complete two (6 crs) of humanities courses.

ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

Humanities and Fine Arts (6-9 crs) *

You must select courses from at least two different discipline areas from the following list. If you have chosen to take three courses from the social sciences area, you will need two courses from this area, each of which must be from different disciplines.

ART 105 Introduction to Art (3)
ART 107 History of Art I (3)
ART 211 History of ART (3)
DANC 240 Dance Appreciation (3)
ENG 270 Children’s Literature (3)
ENG 262 Literature of the Southwest (3)
ENG 265 Native American Literature I (3)
ENG 265 Native American Literature II (3)
ENG 280 Readings in Literature (3)
ENG 290 Study of Literature (3)
ENG 239 Mythology (3)
HIST 101 Western Civilization I (3)
HIST 102 Western Civilization II (3)
HIST 161 History of U.S. to 1877 (3)
HIST 162 History of U.S. from 1877 (3)
HIST 200 History of World Religions (3)
HIST 220 Southwestern Women’s History (3)
HIST 230 Chicano Experience in the US (3)
HIST 250 American Indian History (3)
HIST 260 History of New Mexico (3)
HUM 105 Humanities and the Southwest (3)
HUM 311 Why the Social Sciences Matter ** (3)
HUM 414 Humaity and Creativity ** (3)
HUM 421 History, Literature, Art & Philosophy ** (3)
MUS 102 Theory of Music (3)
MUS 105 Music Appreciation (3)
MUS 130 History of Music (3)
MUS 140 History of Music (3)
PHIL 110 Introduction to Philosophical Problems (3)
PHIL 111 History of Philosophy (3)
PHIL 220 Ethics (3)
PIS 200 Introduction to Pueblo Indian Studies (3)
The 120 Introduction to Theatre I (3)

Plus, topic courses with student advisor's approval

You must complete 15 crs between these (*) two areas.

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

Required Lower-Division Coursework
41 credits of lower-division courses, to include nursing courses from ADN program, will be applied toward the BSN degree.
6 credits of pathophysiology (can be lower- or upper-division courses)

RN to BSN CURRICULUM
A minimum of 42 credits of upper-division courses must be completed, to include 30 credits of required upper-division nursing courses.

NURS 400 Nursing in Transition (1)
NURS 401 Integral Nursing Theory (3)
NURS 410 An Integral Approach to Evidence-Based Practice (3)
NURS 420 Integral Health Assessment (3)
NURS 430 Complementary and Alternative Therapies in Nursing (3)
NURS 440 Health Issues, Policy and Politics in Health Care (3)
NURS 450 Community and Global Health I (4)
NURS 451 Community and Global Health II (4)
NURS 460 Integral Communication and Teaching (2)
NURS 470 Transformational Leadership in Nursing (3)
NURS 480 Integral Nursing Capstone Course (2)
Electives: 12 crs of upper-division electives with an IHS or NURS prefix.

TOTAL CREDITS 129
Includes a total of 135 clinical hours

Suggested course sequencing for part-time students

<table>
<thead>
<tr>
<th>Year One</th>
<th>Year Two</th>
<th>Year Three</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer (3)</strong></td>
<td><strong>Fall (7)</strong></td>
<td><strong>Spring (6)</strong></td>
</tr>
<tr>
<td>NURS 343 (3)</td>
<td>NURS 400 (1)</td>
<td>NURS 440 (3)</td>
</tr>
<tr>
<td>NURS 401 (3)</td>
<td>NURS 410 (3)</td>
<td>MATH 145 (3)</td>
</tr>
<tr>
<td>NURS 344 (3)</td>
<td>NURS 420 (3)</td>
<td>or MATH 150 (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Year Two</strong></th>
<th><strong>Summer (6)</strong></th>
<th><strong>Fall (5)</strong></th>
<th><strong>Spring (7)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 420 (3)</td>
<td>NURS 410 (3)</td>
<td>NURS 450 (4)</td>
<td>Elective (3)</td>
</tr>
<tr>
<td>Elective (3)</td>
<td>NURS 460 (2)</td>
<td>Elective (3)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Year Three</strong></th>
<th><strong>Summer (6)</strong></th>
<th><strong>Fall (6)</strong></th>
<th><strong>Spring (5)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective (6)</td>
<td>NURS 451 (3)</td>
<td>NURS 480 (2)</td>
<td>NURS 470 (3)</td>
</tr>
</tbody>
</table>
The Department of Mathematics and Science offers Bachelor of Science degrees in Biology, Environmental Science, and Mathematics; Associate Degree programs in Biology, Laboratory Biotechnology, Environmental Science, Natural Resources - Range Ecology Management, Pre-Forestry, Radiation Protection, Science, Chemical Technology and Materials Science Technology; and a certificate in Environmental Monitoring.

Many of the courses in the associate programs offered by this department are designed to transfer to four-year colleges and universities, the Associate of Science degree in Science is specifically designed to represent the first two-years of a general four-year science program.

Associate of Science
BIOLOGY

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I (3)</td>
<td></td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking (3)</td>
<td></td>
</tr>
<tr>
<td>Choose one of the following courses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 112</td>
<td>English Composition II (3)</td>
<td></td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing (3)</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics (3 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 150</td>
<td>College Algebra (3)</td>
<td></td>
</tr>
</tbody>
</table>

Laboratory Sciences (8 crs)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 201/L</td>
<td>Introduction to Molecular and Cell Biology with lab (4)</td>
<td></td>
</tr>
<tr>
<td>CHEM 121/L</td>
<td>General Chemistry I with lab (4)</td>
<td></td>
</tr>
</tbody>
</table>

Social/Behavioral Sciences (6-9 hrs) *

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101/L</td>
<td>Physical Anthropology with Lab (4)</td>
<td></td>
</tr>
<tr>
<td>ANTH 102</td>
<td>Intro to Social/Cultural Anthropology (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 110</td>
<td>Indian Culture of the Southwest (3)</td>
<td></td>
</tr>
<tr>
<td>ANTH 207</td>
<td>Cultures of New Mexico (3)</td>
<td></td>
</tr>
<tr>
<td>ECON 200</td>
<td>Macroeconomics (3)</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Microeconomics</td>
<td>(3)</td>
</tr>
<tr>
<td>GEOG 111</td>
<td>World Geography</td>
<td>(3)</td>
</tr>
<tr>
<td>PSCI 110</td>
<td>The Political World</td>
<td>(3)</td>
</tr>
<tr>
<td>PSCI 120</td>
<td>Contemporary Political Issues</td>
<td>(3)</td>
</tr>
<tr>
<td>PSCI 200</td>
<td>American Politics</td>
<td>(3)</td>
</tr>
<tr>
<td>PSCI 210</td>
<td>State and Local Government</td>
<td>(3)</td>
</tr>
<tr>
<td>PSCI 212</td>
<td>The American Presidency</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 105</td>
<td>General Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 210</td>
<td>Theories of Personality</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 229</td>
<td>Adolescent Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 230</td>
<td>Psychology of Adjustment</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 232</td>
<td>Abnormal Behavior</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 270</td>
<td>Social Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>PSY 290</td>
<td>Developmental Psychology</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 213</td>
<td>Deviant Behavior</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 216</td>
<td>Ethnic and Intercultural Relations</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 220</td>
<td>Social Problems</td>
<td>(3)</td>
</tr>
<tr>
<td>SOC 225</td>
<td>Marriage and the Family</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

**Humanities and Fine Arts (6-9 hrs) * **

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>(3)</td>
</tr>
</tbody>
</table>

You must select courses from **one other discipline area** from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>(3)</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td>(3)</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART</td>
<td>(3)</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children’s Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature. of the Southwest</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature II</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 239</td>
<td>Mythology</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women’s History</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter **</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity **</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy **</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>(3)</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>(3)</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>(3)</td>
</tr>
</tbody>
</table>
Plus, topic courses with student advisor’s approval
You must complete 15 credits (*) between the areas of Social/Behavioral Science and Humanities/Fine Arts.

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
Electives (1)

**PROGRAM REQUIREMENTS (35 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 202/L</td>
<td>Genetics with lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 203/L</td>
<td>Ecology and Evolution with lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 204/L</td>
<td>Plant and Animal Form and Function with lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 210/L</td>
<td>Microbiology with lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 122/L</td>
<td>General Chemistry II with lab</td>
<td>4</td>
</tr>
<tr>
<td>MATH 145</td>
<td>Introduction to Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 121/L</td>
<td>Applied Physics I with lab</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives (choose 8 crs from the following):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 160/L</td>
<td>Biotechnology Seminar I with lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 260/L</td>
<td>Biotechnology Seminar II with lab</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 290</td>
<td>Undergraduate Research Experience I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 292</td>
<td>Undergraduate Research Experience II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 210/L</td>
<td>Integrated Organic and Biochemistry with lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 221/L</td>
<td>Quantitative Analysis with lab</td>
<td>4</td>
</tr>
<tr>
<td>ES 112/L</td>
<td>Environmental Science with lab</td>
<td>4</td>
</tr>
<tr>
<td>MATH 155</td>
<td>Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 162</td>
<td>Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS**  71
Bachelor of Science
BIOLOGY

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

Matriculation into this program is dependent upon: 1) your having been granted final regular admission to Northern; 2) your having a cumulative grade point average of at least 2.50 in all coursework attempted at Northern and/or other institutions; 3) your having completed 48 credits of college-level work, including the following required courses: BIOL 151/L, BIOL 201/L, BIOL 202/L, and BIOL 204/L, CHEM 121/L, CHEM 122/L, and MATH 150; and 4) submission of a personal statement to the program director in which you outline your interest in biology and your career goals.

GENERAL EDUCATION (35 crs)

Communications (9 crs)

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

Mathematics (3 crs)

MATH 150 College Algebra (3)

Laboratory Sciences (8 crs)

BIOL 201 Introduction to Cell and Molecular Biology (3)
BIOL 201L Introduction to Cell and Molecular Biology Lab (1)
CHEM 121 General Chemistry I (3)
CHEM 121L General Chemistry I Lab (1)

Social/Behavioral Sciences (6-9 hrs) *
You must select courses from at least two different discipline areas from the following:

ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 100 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220  Social Problems (3)
SOC 225  Marriage and the Family (3)

Plus, topic courses with student advisor's approval

**Humanities and Fine Arts (6-9 hrs)** *

PHIL 220  Ethics (3)

You must select courses from **one other discipline area** from the following:

- ART 105  Introduction to Art (3)
- ART 107  History of Art I (3)
- ART 211  History of ART (3)
- DANC 240  Dance Appreciation (3)
- ENG 270  Children's Literature (3)
- ENG 262  Literature, of the Southwest (3)
- ENG 265  Native American Literature I (3)
- ENG 265  Native American Literature II (3)
- ENG 280  Readings in Literature (3)
- ENG 290  Study of Literature (3)
- ENG 239  Mythology (3)
- HIST 101  Western Civilization I (3)
- HIST 102  Western Civilization II (3)
- HIST 161  History of U.S. to 1877 (3)
- HIST 162  History of U.S. from 1877 (3)
- HIST 200  History of World Religions (3)
- HIST 220  Southwestern Women's History (3)
- HIST 230  Chicano Experience in the US (3)
- HIST 250  American Indian History (3)
- HIST 260  History of New Mexico (3)
- HUM 105  Humanities and the Southwest (3)
- HUM 311  Why the Social Sciences Matter ** (3)
- HUM 414  Humanity and Creativity ** (3)
- HUM 421  History, Literature, Art & Philosophy ** (3)
- MUS 102  Theory of Music (3)
- MUS 105  Music Appreciation (3)
- MUS 130  History of Music (3)
- MUS 140  History of Music (3)
- PHIL 110  Introduction to Philosophical Problems (3)
- PHIL 111  History of Philosophy (3)
- PIS 200  Introduction to Pueblo Indian Studies (3)
- THE 120  Introduction to Theatre I (3)

Plus, topic courses with student advisor's approval

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

Elective (1)

**PROGRAM REQUIREMENTS (81 crs)**

**Biology Core Curriculum (44 crs)**

- BIOL 151  Science and Society with lab (4)
- BIOL 202  Genetics with lab (4)
- BIOL 203  Ecology and Evolution with lab (4)
- BIOL 204  Plant and Animal Form and Function with lab (4)

**Required Seminar and Research Experience (5 crs)**

- BIOL 392  Undergraduate Research Experience (3)
- BIOL 472  Biology Seminar (1)
- BIOL 492  Biology Capstone Project (1)
Choose **two** 300-level courses from the following: (8 crs)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 329</td>
<td>Cellular and Molecular Biology (4)</td>
</tr>
<tr>
<td>BIOL 349/L</td>
<td>Essentials of Anatomy and Physiology with lab (4)</td>
</tr>
<tr>
<td>BIOL 351/L</td>
<td>General Microbiology with lab (4)</td>
</tr>
<tr>
<td>BIOL 360/L</td>
<td>Plant Biology with lab (4)</td>
</tr>
<tr>
<td>BIOL 371L</td>
<td>Invertebrate Biology with lab (4)</td>
</tr>
<tr>
<td>BIOL 386/L</td>
<td>General Vertebrate Zoology with lab (4)</td>
</tr>
</tbody>
</table>

Choose **four** 400-level courses from the following: (15 crs)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 406</td>
<td>Stream Ecology and Field Methods (3)</td>
</tr>
<tr>
<td>BIOL 410</td>
<td>Bioinformatics (3)</td>
</tr>
<tr>
<td>BIOL 412/L</td>
<td>Developmental Biology with lab (4)</td>
</tr>
<tr>
<td>BIOL 416</td>
<td>Cells and Tissues with lab (4)</td>
</tr>
<tr>
<td>BIOL 418</td>
<td>Conservation Biology (3)</td>
</tr>
<tr>
<td>BIOL 422/L</td>
<td>Comparative Vertebrate Anatomy with lab (4)</td>
</tr>
<tr>
<td>BIOL 425/L</td>
<td>Molecular Genetics with lab (4)</td>
</tr>
<tr>
<td>BIOL 426/L</td>
<td>Neurobiology with lab (4)</td>
</tr>
<tr>
<td>BIOL 431</td>
<td>Drugs and Their Actions (3)</td>
</tr>
<tr>
<td>BIOL 435/L</td>
<td>Comparative Animal Physiology with lab (4)</td>
</tr>
<tr>
<td>BIOL 451/L</td>
<td>General Ecology with lab (4)</td>
</tr>
<tr>
<td>BIOL 456/L</td>
<td>Immunology with lab (4)</td>
</tr>
<tr>
<td>BIOL 467</td>
<td>Evolutionary Plant Ecology (3)</td>
</tr>
</tbody>
</table>

**Required Supportive Courses in Math, Chemistry, and Physics (37 crs)**

**Mathematics (14 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 145</td>
<td>Introduction to Probability and Statistics (3)</td>
</tr>
<tr>
<td>MATH 155</td>
<td>Trigonometry (3)</td>
</tr>
<tr>
<td>MATH 162</td>
<td>Calculus I (4)</td>
</tr>
<tr>
<td>MATH 163</td>
<td>Calculus II (4)</td>
</tr>
</tbody>
</table>

**Chemistry (11 crs; CHEM 121/L is included in the General Education sequence)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 122/L</td>
<td>General Chemistry II with lab (4)</td>
</tr>
<tr>
<td>CHEM 210/L</td>
<td>Integrated Organic and Biochemistry with lab (4)</td>
</tr>
<tr>
<td>CHEM 341</td>
<td>Survey of Biochemistry (3)</td>
</tr>
</tbody>
</table>

**Physics (8 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 121/L</td>
<td>Applied Physics I with lab (4)</td>
</tr>
<tr>
<td>PHYS 122/L</td>
<td>Applied Physics II with lab (4)</td>
</tr>
</tbody>
</table>

**MINOR Concentrations**

You may choose **one** of the following minor concentrations (16 crs):

**Mathematics (16 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 264</td>
<td>Calculus III (4)</td>
</tr>
<tr>
<td>MATH 311</td>
<td>Vector Analysis (3)</td>
</tr>
<tr>
<td>MATH 312</td>
<td>Partial Differential Equations (3)</td>
</tr>
<tr>
<td>MATH 314</td>
<td>Linear Analysis with Applications (3)</td>
</tr>
<tr>
<td>MATH 316</td>
<td>Applied Ordinary Differential Equations (3)</td>
</tr>
</tbody>
</table>

**Chemistry (16 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 301/L</td>
<td>Organic Chemistry I with lab (4)</td>
</tr>
<tr>
<td>CHEM 302/L</td>
<td>Organic Chemistry II with lab (4)</td>
</tr>
<tr>
<td>CHEM 311/L</td>
<td>Physical Chemistry with lab (4)</td>
</tr>
</tbody>
</table>

Electives (4 hrs): Choose **four** additional upper-division credits in chemistry.

**Physics (16 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 262/L</td>
<td>General Physics with lab (4)</td>
</tr>
<tr>
<td>PHYS 302</td>
<td>Optics (3)</td>
</tr>
<tr>
<td>PHYS 330</td>
<td>Introduction to Modern Physics (3)</td>
</tr>
</tbody>
</table>
PHYS 331  Thermodynamics and Statistical Mechanics (3)
PHYS 405  Electricity and Magnetism (3)

If you do not choose a minor concentration, you must choose 16 more credit hours (at least 13 crs of which must be in upper-division courses) from additional elective courses in biology, chemistry, mathematics, physics, the humanities, or the social sciences.

TOTAL CREDITS  129
Associate of Applied Science  
CHEMICAL TECHNICIAN

This program provides you with the concepts and practical skills needed for employment as a chemical technician. It is designed to complement training for full-time employment or for students seeking such employment. You may use this program in planning to transfer to related academic programs.

GENERAL EDUCATION (27 crs)

Communications (9 crs)
ENG 111 English Composition I (3)  
ENG 116 Technical Writing (3)  
SPCH 130 Public Speaking (3)

Math/Compute/Laboratory Science (12 crs)
CS 102 Computer Literacy (3)  
MATH 145 Introduction to Probability & Statistics (3)  
MATH 150 College Algebra (3)  
MATH 155 Trigonometry (3)

Social/Behavioral Sciences (3 crs)
SOC 211 Small Group Communications Studies (3)

Humanities and Fine Arts (3 crs)
PHIL 220 Ethics (3)

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

PROGRAM REQUIREMENTS (34 crs)
CHEM 121/L General Chemistry I with lab (4)  
CHEM 122/L General Chemistry II with lab (4)  
CHEM 210/L Integrated Organic & Biochemistry with lab (4)  
CHEM 221/L Quantitative Analysis with lab (3)  
CHEM 260 Standard Laboratory Protocols (4)  
CS 105 Introduction to Databases (3)  
CS 205 Databases (3)  
ES 126 Introduction to Waste Management (3)  
ES 134 OSHA Health and Safety (3)  
ES 138 Environmental & Occupational Law and Regulations (3)  
Elective (3)

TOTAL CREDIT HOURS 62
This program is designed to provide the technical skills which will enable you to competently gather, record, and analyze critical environmental data and perform simple health risk assessment evaluations.

**GENERAL EDUCATION (29 crs)**

**Communications (9 crs)**
- ENG 111 English Composition I (3)
- ENG 116 Technical Writing (3)
- SPCH 130 Public Speaking (3)

**Math/Computers/Lab Sciences (14 crs)**
- BIOL 203/L Ecology and Evolution with lab (4)
- ES 112/L Introduction to Environmental Science with lab (4)
- MATH 145 Introduction to Probability and Statistics (3)
- MATH 150 College Algebra (3)

**Social/Behavioral Sciences (3 crs)**
- SOC 211 Small Group Communications Studies (3)

**Humanities (3 crs)**
- PHIL 220 Ethics (3)

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
- Electives (1)

**PROGRAM REQUIREMENTS (45 crs)**
- BIOL 210/L Microbiology with lab (4)
- CHEM 121/L General Chemistry I with lab (4)
- CHEM 210/L Integrated Organic & Biochemistry with lab (4)
- ES 121 Environmental Air Monitoring (3)
- ES 125 Principles of Physical Hydrology (3)
- ES 203 Introduction to GIS/GPS (3)
- ES 236 Environmental Sampling and Instrumentation (3)
- ES 238 Environmental Law and Regulations (3)
- ES 240 Introduction to Treatment, Storage, and Disposal of Hazardous Materials (3)
- ES 280 Introduction to Toxicology/ Risk Assessment (3)
- RAD 234L Introduction to Radiation Science and Technology (4)
- RAD 238L Introduction to Radiation Protection (4)

Choose one of the following:
- ES 201/L Environmental Physical and Chemical Processes with lab (4)
- or
- CHEM 122/L General Chemistry II with lab (4)

**TOTAL CREDIT HOURS** 74
Certificate
ENVIRONMENTAL MONITORING

This program provides hands-on training in environmental monitoring methods at Los Alamos National Laboratory. It is intended for current employees of the environmental programs of the 4 ACCORD tribes (Santa Clara, San Ildefonso, Jemez, and Cochiti). Those pursuing this specific program are exempt from Northern’s minimum residency requirement.

GENERAL EDUCATION (6 crs)

Communications (3 crs)
ENG 108N Basic English I (3)

Math/Computers/Lab Sciences (3 crs)
MATH 102N Basic Algebra (3) *
Credit value * will increase in Spring 2009 to 4 crs.

PROGRAM REQUIREMENTS (11 crs)
ES 100 Environment, Safety, Health, and Radiation (2)
ES 121 Environmental Air Monitoring (3)
ES 123 Environmental Hydrology & Ecology (3)
ES 260 Environmental Radioactivity (3)

TOTAL CREDIT HOURS 18
Bachelor of Science
ENVIRONMENTAL SCIENCE

In order to be considered for acceptance to this major, you must first have been admitted to Northern, satisfying all requirements for regular status. Second, you must meet the following departmental requirements: 1) have earned a cumulative grade point average of 2.50 for courses to be accepted into the program, which includes up to 35 credits in general education; 2) completion of 24 credits of the GECC Laboratory Science requirements; 3) completion of ES 112 and ES 112L; and 4) submission of a personal essay and two letters of recommendation to the Environmental Science program director.

GENERAL EDUCATION (58 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
SPCH 130 Public Speaking (3)
Choose one of the following:
ENG 116 Technical Writing (3)
ENG 112 English Composition II (3)

Mathematics (10 crs)
MATH 145 Introduction to Probability and Statistics (3)
MATH 150 College Algebra (3)
MATH 162 Calculus I (4)

Laboratory Sciences (24 crs)
Biol 202/L Genetics with lab (4)
Biol 203/L Ecology and Evolution with lab (4)
Biol 210/L Microbiology with lab (4)
Chem 121/L General Chemistry I with lab (4)
Chem 210/L Integrated Organic & Biochemistry with lab (4)
Choose one of the following:
ES 201L Environmental Physical and Chemical Processes with lab (4)
or
Chem 122/L General Chemistry II with lab (4)

Social/Behavioral Sciences (6-9 crs) *
You must select survey courses from at least two different discipline areas from the following list:
ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval

**Humanities and Fine Arts (6-9 crs)** *

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>(3)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>(3)</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td>(3)</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART</td>
<td>(3)</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children’s Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td>(3)</td>
</tr>
<tr>
<td>ENG 239</td>
<td>Mythology</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women’s History</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>(3)</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>(3)</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter</td>
<td>** (3)</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity</td>
<td>** (3)</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy</td>
<td>** (3)</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>(3)</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>(3)</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>(3)</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

Electives (1)

**PROGRAM REQUIREMENTS (36 crs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES 112/L</td>
<td>Introduction to Environmental Sciences I with lab</td>
<td>(4)</td>
</tr>
<tr>
<td>ES 113</td>
<td>Introduction to Environmental Sciences II</td>
<td>(3)</td>
</tr>
<tr>
<td>ES 125</td>
<td>Principles of Physical Hydrology</td>
<td>(3)</td>
</tr>
<tr>
<td>ES 203</td>
<td>Introduction to GIS/GPS and Cartography</td>
<td>(2)</td>
</tr>
<tr>
<td>ES 307</td>
<td>Atmospheric Science</td>
<td>(3)</td>
</tr>
<tr>
<td>ES 320</td>
<td>Environmental Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>ES 338</td>
<td>Environmental Law and Regulations</td>
<td>(3)</td>
</tr>
<tr>
<td>Code</td>
<td>Course Title</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>Watershed Hydrology and Management (3)</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>Community Participation in Environmental Planning (3)</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>Environmental Health and Toxicology (3)</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>Energy and Resource Development (3)</td>
<td></td>
</tr>
<tr>
<td>ES</td>
<td>Senior Capstone - Field Experience (3)</td>
<td></td>
</tr>
</tbody>
</table>

You must **choose one** of the following concentrations:

### Agriculture (34 crs)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>Botany with lab (4)</td>
</tr>
<tr>
<td>ES</td>
<td>Principles of Agricultural Ecology (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Invasive Species (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Plant Pathology (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Principles in Crop Production (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Principles of Sustainable Agriculture (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Soil Testing and Interpretation (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Soil Management and Fertility (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Irrigation and Drainage (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Economics, Food, and Agriculture in Industrial Development (3)</td>
</tr>
</tbody>
</table>

Electives (3 hrs) Upper-division courses as approved by department advisor

### Environmental Science (34 crs)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES</td>
<td>Environmental Air Monitoring (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Environmental Lab Instrumentation (3)</td>
</tr>
<tr>
<td>RAD</td>
<td>Introduction to Radiation Science and Technology (4)</td>
</tr>
<tr>
<td>ES</td>
<td>Technology and the Environment (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Radiation Biology (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Environmental Sampling and Instrumentation (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Environmental Management (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Environment, Economics, and Sustainability (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Soil Testing and Interpretation (3)</td>
</tr>
</tbody>
</table>

Electives (3 hrs) Upper-division courses as approved by department advisor

### Forestry (33 crs)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES</td>
<td>Overview of Forest Measurement (3)</td>
</tr>
<tr>
<td>ES/FOR</td>
<td>Introduction to Forestry (3)</td>
</tr>
<tr>
<td>FOR</td>
<td>Dendrology (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Mensuration and Biometrics (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Rangeland Management (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Silviculture (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Forest Health, Restoration, and Management (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Soil Testing and Interpretation (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Soil Management and Fertility (3)</td>
</tr>
<tr>
<td>ES</td>
<td>Wildland Fire Management (3)</td>
</tr>
</tbody>
</table>

Electives (3 hrs) Upper-division courses as approved by department advisor

**TOTAL CREDIT HOURS** 128
The Laboratory Biotechnology program is designed to train you as a laboratory technician with industrial, medical, or research laboratories. The program provides a practical background and experience with the techniques and instruments used for the isolation and analysis of biomedical and biotechnological samples.

Qualifying students in this program are eligible for paid internships at the Biosciences Division at Los Alamos National Laboratory. This internship program is supported by the National Science Foundations Research Experiences for Undergraduates (NSF-REU) program and recruits an annual cohort of 6-7 students. Students in this program may also participate in other internships with the National Center for Genome Research (NCGR) in Santa Fe or in similar summer institutes at universities throughout the nation.

GENERAL EDUCATION (21 crs)

Communications (6 hrs)

ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)

Math/Computers/Lab Sciences (6 crs)

MATH 145 Introduction to Probability and Statistics (3)
MATH 150 College Algebra (3)

Social/Behavioral Sciences (3 crs)

Elective (3)

Humanities (6 crs)

PHIL 110 Introduction to Philosophical Problems (3)
PHIL 220 Ethics (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)

Electives (1)

PROGRAM REQUIREMENTS (43 crs)

BIOL 201/L Principles of Molecular and Cell Biology with lab (4)
BIOL 202/L Genetics with lab (4)
BIOL 160/L Biotechnology Seminar I (4)
BIOL 210/L Microbiology with lab (4)
BIOL 260/L Biotechnology Seminar II with lab (4)
BIOL 290 Undergraduate Research Experience I (3)
BIOL 292 Undergraduate Research Experience II (3)
CHEM 121/L General Chemistry I with lab (4)
CHEM 122/L General Chemistry II with lab (4)
CHEM 210/L Integrated Organic & Biochemistry (4)
ES 134 OSHA Health/Safety (3)
HSCI 125 Medical Terminology (2)

TOTAL CREDIT HOURS 65
Bachelor of Science
MATHEMATICS

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

GENERAL EDUCATION (35 crs)

Communications (9 crs)
ENGLISH 111 English Composition I (3)
SPCH 130 Public Speaking (3)
Choose one of the following two courses:
ENGLISH 112 English Composition II (3)
ENGLISH 116 Technical Writing (3)

Mathematics (4 crs)
MATH 145 Introduction to Probability & Statistics (3)
or
MATH 150 College Algebra (3)

Lab Sciences (8 crs)
Choose two of the following:
ASTR 110/L Introduction to Astronomy with Lab (4)
BIOL 110/L Current Topics in Biology with Lab (4)
CHEM 110/L Introduction to Chemistry with Lab (4)
ES 112L Environmental Science with Lab (4)
GEOL 101/L Physical Geology with Lab (4)
GEOL 102/L Historical Geology with Lab (4)
PHYS 110/L Introduction to Physics with Lab (4)

Social/Behavioral Sciences (6-9 crs) *
PSY 105 General Psychology (3)
SOC 101 Introduction to Sociology (3)
Choose one survey course from the following list:
ANTH 101/L Physical Anthropology with Lab (4)
ANTH 102 Intro to Social/Cultural Anthropology (3)
ANTH 110 Indian Culture of the Southwest (3)
ANTH 207 Cultures of New Mexico (3)
ECON 200 Macroeconomics (3)
ECON 201 Microeconomics (3)
GEOG 111 World Geography (3)
PSCI 110 The Political World (3)
PSCI 120 Contemporary Political Issues (3)
PSCI 200 American Politics (3)
PSCI 210 State and Local Government (3)
PSCI 212 The American Presidency (3)
PSY 105 General Psychology (3)
PSY 210 Theories of Personality (3)
PSY 229 Adolescent Psychology (3)
PSY 230 Psychology of Adjustment (3)
PSY 232 Abnormal Behavior (3)
PSY 270 Social Psychology (3)
PSY 290 Developmental Psychology (3)
SOC 101 Introduction to Sociology (3)
SOC 213 Deviant Behavior (3)
SOC 216 Ethnic and Intercultural Relations (3)
SOC 220 Social Problems (3)
SOC 225 Marriage and the Family (3)

Plus, topic courses with student advisor’s approval
**Humanities and Fine Arts (6-9 crs)***

Choose two survey courses from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 105</td>
<td>Introduction to Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 107</td>
<td>History of Art I</td>
<td>3</td>
</tr>
<tr>
<td>ART 211</td>
<td>History of ART</td>
<td>3</td>
</tr>
<tr>
<td>DANC 240</td>
<td>Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ENG 270</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 262</td>
<td>Literature of the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 265</td>
<td>Native American Literature II</td>
<td>3</td>
</tr>
<tr>
<td>ENG 280</td>
<td>Readings in Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 290</td>
<td>Study of Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENG 239</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>HIST 101</td>
<td>Western Civilization I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102</td>
<td>Western Civilization II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 161</td>
<td>History of U.S. to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 162</td>
<td>History of U.S. from 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 200</td>
<td>History of World Religions</td>
<td>3</td>
</tr>
<tr>
<td>HIST 220</td>
<td>Southwestern Women’s History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 230</td>
<td>Chicano Experience in the US</td>
<td>3</td>
</tr>
<tr>
<td>HIST 250</td>
<td>American Indian History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of New Mexico</td>
<td>3</td>
</tr>
<tr>
<td>HUM 105</td>
<td>Humanities and the Southwest</td>
<td>3</td>
</tr>
<tr>
<td>HUM 311</td>
<td>Why the Social Sciences Matter **</td>
<td>3</td>
</tr>
<tr>
<td>HUM 414</td>
<td>Humanity and Creativity **</td>
<td>3</td>
</tr>
<tr>
<td>HUM 421</td>
<td>History, Literature, Art &amp; Philosophy **</td>
<td>3</td>
</tr>
<tr>
<td>MUS 102</td>
<td>Theory of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 105</td>
<td>Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUS 130</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 140</td>
<td>History of Music</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 110</td>
<td>Introduction to Philosophical Problems</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 111</td>
<td>History of Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 220</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PIS 200</td>
<td>Introduction to Pueblo Indian Studies</td>
<td>3</td>
</tr>
<tr>
<td>THE 120</td>
<td>Introduction to Theatre I</td>
<td>3</td>
</tr>
</tbody>
</table>

Plus, topic courses with student advisor’s approval

Together * these two areas must account for 15 crs.

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

Elective (1)

**PROGRAM REQUIREMENTS**

**Required Supporting Courses in Physics and Chemistry (8 crs)**

- **CHEM 121/L** General Chemistry I with Lab (4)
- or
- **CHEM 122/L** General Chemistry II with Lab (4)
- and
- **PHYS 121/L** Applied Physics I with Lab (4)
- or
- **PHYS 122/L** Applied Physics II with Lab (4)
- and
- **CHEM 121/L** General Chemistry I with Lab (4)
- or
- **PHYS 121/L** Applied Physics I with Lab (4)

**Required Supporting Course in Computer Science (3 crs)**

- **CS 142** Computer Science I (3)
**Core Curriculum (19 crs)**

MATH 162 Calculus I (4)
MATH 163 Calculus II (4)
MATH 264 Calculus III (4)
MATH 314 Linear Algebra with Applications (3)
MATH 401 Advanced Calculus I (4)

**MAJOR**

**Applied Mathematics (24 crs)**

MATH 311 Vector Analysis (3)
MATH 312 Partial Differential Equations for Engineering (3)
MATH 313 Complex Variables for Engineering (3)
MATH 316 Applied Ordinary Differential Equations (3)
MATH 327 Discrete Structures (3)
MATH 345 Elements of Applied Statistics and Probability Theory (3)
MATH 375 Introduction to Numerical Computing
MATH 466 Mathematical Methods in Science and Engineering (3)

Choose one of the following:

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

Along with your major, you may complete a **minor** if you wish. For the BS in Mathematics, we suggest one of the following four minors. Should you choose not to pursue a minor, you must complete an additional 11 crs of approved upper-division courses in order to fulfill our requirement of at least 42 crs of upper-division coursework.

**General Engineering (21 crs)**

CE 202 Engineering Statics (3)
CE 302 Mechanics of Materials (3)
EE 203L Circuit Analysis (3)
ME 160L Mechanical Engineering Design I (3)
ME 301 Thermodynamics (3)
ME 306 Dynamics (3)
ME 317 Fluid Mechanics (3)

**Information Technology (23 crs)**

IT 150 Unix OS and Scripting (4)
IT 210 Information Technology (3)
IT 220 Network and Server Software (4)
IT 330 Networking (3)
IT 341 Distributed Systems (3)
IT 342 Wireless and Mobil Computing (3)
IT 350 Database Management (3)

**Chemistry (20 crs)**

CHEM 121/L General Chemistry I with Lab (4) *
CHEM 122/L General Chemistry II with Lab (4) *
CHEM 302/L Organic Chemistry II with Lab (4)
CHEM 311/L Physical Chemistry with Lab (4)
CHEM 421/L Biochemistry with Lab (4)

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

**Physics (20 crs)**

PHYS 215/L Engineering Physics with Lab (4)
PHYS 262/L General Physics with Lab (4)
PHYS 301 Thermodynamics and Statistical Methods (3)
PHYS 302 Optics (3)
PHYS 330 Introduction to Modern Physics (3)
PHYS 405 Electricity and Magnetism (3)

In order to fulfill the graduation requirement of 128 credit hours for the program, you will have to enroll in an additional 15-18 credit of approved elective.

TOTAL CREDITS 128
**Associate of Applied Science**

**NATURAL RESOURCES - RANGE ECOLOGY MANAGEMENT**

This program is designed to provide entry-level skills for employment with the national park service or with other state and federal natural resource agencies. In addition, when you complete this program, you will have obtained the necessary courses to transfer to a four-year college or university to further pursue a degree in the field of range ecology.

**GENERAL EDUCATION (47 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENG 116</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 130</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

**Math/Computers/Lab Sciences (29 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 201/L</td>
<td>Principles of Molecular and Cell Biology with lab (4)</td>
<td></td>
</tr>
<tr>
<td>BIOL 202/L</td>
<td>Genetics with lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 121/L</td>
<td>General Chemistry I with lab</td>
<td>4</td>
</tr>
<tr>
<td>ES 112/L</td>
<td>Introduction to Environmental Science I with lab (4)</td>
<td></td>
</tr>
<tr>
<td>GEOL 101/L</td>
<td>Physical Geology with lab</td>
<td>3</td>
</tr>
<tr>
<td>CS 102</td>
<td>Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>MATH 145</td>
<td>Introduction to Probability and Statistics (3)</td>
<td></td>
</tr>
<tr>
<td>MATH 150</td>
<td>College Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

**Social/Behavioral Sciences (6 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

**Humanities and Fine Arts (3 crs)**

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

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

**PROGRAM REQUIREMENTS (20 crs)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES 134</td>
<td>OSHA Health/Safety</td>
<td>3</td>
</tr>
<tr>
<td>ES 120</td>
<td>Forest and Range Ecology</td>
<td>3</td>
</tr>
<tr>
<td>ES 203</td>
<td>Introduction to GIS/GPS and Cartography</td>
<td>3</td>
</tr>
<tr>
<td>ES 210</td>
<td>Soil Management and Fertility</td>
<td>3</td>
</tr>
<tr>
<td>ES 210L</td>
<td>Soil Management and Fertility Lab</td>
<td>1</td>
</tr>
<tr>
<td>ES 217</td>
<td>Rangeland Management</td>
<td>3</td>
</tr>
<tr>
<td>ES 250</td>
<td>Watershed and Hydrology Management</td>
<td>3</td>
</tr>
<tr>
<td>ES 299</td>
<td>Practicum in Environmental Science</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS**

68
Associate of Applied Science
PRE-FORESTRY

This program is designed to provide entry-level skills for employment with the national park service or with other state and federal natural resource agencies. In addition, when you complete this program, you will have obtained the necessary courses to transfer to a four-year college or university to further pursue a degree in the forestry field.

GENERAL EDUCATION (44 crs)

Communications (9 crs)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)
SPCH 130 Public Speaking (3)

Math/Computers/Lab Sciences (29 crs)
BIOL 201/L Principles of Molecular and Cell Biology with lab (4)
BIOL 202/L Genetics with lab (4)
CHEM 121/L General Chemistry I with lab (4)
ES 112/L Introduction to Environmental Science I with lab (4)
GEOL 101/L Physical Geology with lab (3)
CS 102 Computer Literacy (3)
MATH 145 Introduction to Probability and Statistics (3)
MATH 150 College Algebra (3)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Arts (3 crs)
PHIL 220 Ethics (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Electives (1)

PROGRAM REQUIREMENTS (26 crs)
ES/FOR 101 Introduction to Forestry (3)
ES 102 Overview of Forest Measurement (3)
ES 123 Forest and Range Ecology (3)
ES 210 Soil Management and Fertility (3)
ES 210L Soil Management and Fertility Lab (1)
ES 217 Rangeland Management (3)
ES 250 Watershed and Hydrology Management (3)
ES 299 Special Environmental Topics (1)
FOR 113 Dendrology (3)

TOTAL CREDIT HOURS 68
Associate of Applied Science
RADIATION PROTECTION

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

GENERAL EDUCATION (43 crs)

Communications (6 crs)
ENG 111 English Composition I (3)
ENG 116 Technical Writing (3)

Math/Computers/Lab Sciences (32 crs)
BIOL 201/L Principles of Molecular and Cell Biology with lab (4)
BIOL 202/L Genetics with lab (4)
CHEM 121/L General Chemistry I with lab (4)
CHEM 122/L General Chemistry II with lab (4)
CS 102 Computer Literacy (3)
MATH 130 Intermediate Algebra (3)
MATH 145 Introduction to Probability and Statistics (3)
MATH 150 College Algebra (3)
PHYS 121/L Applied Physics I with lab (4)

Social/Behavioral Sciences (3 crs)
Elective (3)

Humanities and Fine Arts (3 crs)
Elective (3)

HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)
Electives (1)

PROGRAM REQUIREMENTS (19 crs)
RAD 233 Radiation Biology (3)
RAD 234L Introduction to Radiation Science & Technology (4)
RAD 238L Introduction to Radiation Protection (4)
RAD 242 Problems in Radiation Protection (4)
RAD 243 Practical Radiological Programs and Sampling Methods (4)

TOTAL CREDITS 64
If you wish to transfer to a four-year college or university and earn a degree in one of the many fields of science, you should follow this degree. The science department provides basic courses in biology, chemistry, engineering, geology, and physics, in addition to courses in computer science, and anatomy & physiology for students wishing to transfer to allied science programs.

**GENERAL EDUCATION (42 crs)**

**Communications (9 crs)**
- ENG 111 English Composition I (3)
- SPCH 130 Public Speaking (3)
Choose one of the following courses:
  - ENG 112 English Composition II (3)
  - ENG 116 Technical Writing (3)

**Mathematics (10 crs)**
- MATH 150 College Algebra (3)
- MATH 155 Trigonometry (3)
- MATH 162 Calculus I (4)

**Laboratory Sciences (8 crs)**
Choose one of the following three two-semester sequences (with lab)
- BIOL 201/L Principles of Molecular and Cell Biology with lab (4)
- BIOL 202/L Genetics with lab (4)
  - or
- CHEM 121/L General Chemistry I with lab (4)
- CHEM 122/L General Chemistry II with lab (4)
  - or
- PHYS 215/L Engineering Physics I with lab (4)
- PHYS 216/L Engineering Physics II with lab (4)

**Social/Behavioral Sciences (6 crs)**
- Elective (6)

**Humanities and Fine Arts (9 crs)**
- PHIL 220 Ethics (3)
- Elective (6)

**HEALTH, PHYSICAL EDUCATION & RECREATION (1 cr)**
- Electives (1)

**PROGRAM REQUIREMENTS (29 crs)**
- CS 102 Computer Literacy (3)
- CS 132 Introduction to Programming (3)
- MATH 145 Introduction to Probability and Statistics (3)
Two additional semesters of lab courses (8 hrs): choose from: BIOL, CHEM, or PHYS
- Approved Electives (12)

**TOTAL CREDIT HOURS** 72
COURSE DESCRIPTIONS

NOTE:

1. Freshman courses are numbered 100-199; sophomore courses are numbered 200-299; junior courses are labeled 300-399; senior courses are numbered 400-499.

   Lower-division topic courses are number 147 and 247; upper-division topic courses are numbered 399 and 499.

2. Courses labeled with an “N” immediately after the course number are considered to be remedial in nature and will not be accepted to fill the requirements for any degree at Northern. Remedial courses will normally not transfer to other colleges.

3. No course with a grade of less than a C or CR (as appropriate) will be accepted for graduation.

4. Any course which is designated as a pre-requisite to another course must be passed with at least a grade of C or CR (as appropriate) in order to proceed to the next level course.

5. Immediately after the course description appears an entry inside parentheses. This number is read in two parts. For example, (3, 1T+2S) is read as: course value = 3 credits; 1 credit of theory, 2 credits of activity/shop/studio. If the course were a laboratory, it might read (1, 0T+1L). Each credit of theory (T) requires the equivalent per week of 50 minutes of instructional time; each credit of activity (S) requires 150 minutes per week. Therefore, an entry of 3, 1T+2S would be scheduled to meet a total of 250 minutes per week of instructional time. These calculations refer to a course offered over a full sixteen-week semester. The amount of time per week for a course offered over a shorter period of time is increased to meet the required time in a shorter period.

6. Courses listed in this catalog are subject to change or deletion through normal academic channels. New courses and changes in existing course work are initiated by the responsible department chairperson, approved by the faculty curriculum committee, the faculty senate, and the Provost.

ADOBE CONSTRUCTION (ADOB)

100 ADOBE CONSTRUCTION BASICS You will cover the design and construction techniques of traditional and modern adobe dwelling and monumental structures of Northern New Mexico from foundation to roof, including passive solar design, with emphasis on the techniques which meet modern building codes. You will also study historical and worldwide techniques. (3, 3T+0S)

101 ADOBE DESIGN AND CONSTRUCTION WORLDWIDE You will cover the history of adobe buildings throughout the world, with emphasis on modern practices that meet existing building codes. You will examine design and construction techniques of homes, monumental structures, and settlements. You will also make adobes and build walls and other building components. Classes are conducted on- and off-campus, and may utilize the Internet and other distance-learning facilitators. (3, 3T+0S)

102 ADOBE WALL CONSTRUCTION You will cover exterior and interior walls and buttresses, foundations, rough bucks, lintels, bond beams; and the installation of doors and windows, including wood frame, and post and beam techniques. Classes are conducted on- and off-campus. (Fall) (4, 2T+2S)

103 ROOF DESIGN AND CONSTRUCTION You will cover traditional Southwest designs of pitched and flat roofs: materials, structure, and plans, including vigas, beams, joists, rafters, trusses, latillas, rough boards, tongue-and-groove, deck sheathing, canales, and parapets. Classes are conducted on- and off-campus. (4, 2T+2S)

104 FLOOR DESIGN AND CONSTRUCTION You will discuss and build (or mock up) traditional and modern floors and floor coverings found in the Southwest, including mud, brick, stone, concrete, tile, and sheet goods. Classes are conducted on- and off-campus. (4, 2T+2S)

105 INTERIOR FINISH PRACTICES You will deal with traditional and modern finishes found in the buildings of the Southwest: mud plaster by hand and trowel, cement and gypsum plasters, exposed adobe bricks, carved adobe, wood trim at doors and windows, baseboards, wainscot, tile work, decorative stone, tin ceilings, nichos, carved columns, corbels, lintels, sheet rock hanging and finishing, and painting and staining. Classes are conducted on- and off-campus. (4, 2T+2S)

106 EXTERIOR FINISH PRACTICES You will deal with traditional and modern finishes found on buildings of the Southwest: mud stabilized mud, cement plasters, elastomeric plasters, insulation, vapor barriers, moisture protection, lath systems, exterior sheathing, patios, portales, vigas, posts, corbels, exposed lintels, wood trim at doors and windows, brick, stone, paint, and tile decoration. Classes are conducted on- and off-campus. (4, 2T+2S)

107 PASSIVE SOLAR HEATING You will learn the passive solar heating systems that work well when integrated into the design of adobe homes, including direct gain systems, Trombe wall (indirect) systems, and greenhouse/sunspaces. You will learn the advantages and disadvantages of each system in order to choose between them for use in different parts of a house or commercial structure. You will cover calculations for appropriate sizing of systems as well as auxiliary back-up systems. (2, 2T+0S)

110 REMODEL THEORY AND PRACTICES You will learn stabilization, restoration, renovation, modernization, remodeling, and additions to existing adobe structures; surveying, estimating cost, historic building requirements, and safety considerations. Classes will be conducted both on-and-off-campus. (Spring) (2, 2T+0S)

111 HORNO DESIGN AND CONSTRUCTION You will study the history and design of horno and mud ovens throughout the world. You will construct a traditional New Mexico horno and do a baking demonstration. Classes will be conducted on-and-off-campus. (1, 0T+1S)

112 ARCHES, DOMES, AND VAULTS You will learn systems to create openings and roofs in adobe structures using masonry materials in situations where wood and steel are not available or not desired. You will discuss and use traditional New Mexican and world-wide techniques. Classes will be conducted on-and-off-campus. (2, 1T+1S)

114 ADOBE CONSTRUCTION BASICS In this course, you will cover the adobe construction process from foundation to roof in a manner that meets adobe construction codes: walls, floors, windows, doors, and plaster, as well as the process of making adobe bricks. Brief mention is given to the best practices for incorporating electrical, plumbing, heating, and communications systems in adobe structures. Discussion will cover passive solar heating opportunities. (2, 2T+0L)
201 ADVANCED TOPICS IN ADOBE CONSTRUCTION This course is designed for you if you have completed the core adobe curriculum or who have construction industry experience and wish to gain skills beyond the entry level. Topics will range across the full curriculum, plus introduce new industry techniques and materials. Individualized learning objectives will be accommodated and research topics may be included. Topics may include computerized heat loss and gain analysis, super-adobe, cast-earth, rammed earth, straw-bale, straw/clay, and puniccerecture construction. If you wish to build skills to establish a business, you might pursue topics such as bidding with architects and designers; establishing credit with banks, suppliers, and subcontractors; and getting paid. May be repeated once for credit. Co-requisite: ADOB 201. (4, 4T+0S)

202 ADVANCED TOPICS PRACTICUM Hands-on experience for ADOB 201 topics, such as actual construction and finishing of full-scale. Field experience could be on-campus or off-campus with a local contractor or with Habitat for Humanity. You might choose to build a home for yourself or actually establish a contracting business. May be repeated once for credit. Co-requisite: ADOB 201. (9, 0T+9S)

ANTHROPOLOGY (ANTH)  
Note: Each course in this department bears a Pre-requisite of ENG 109N or an adequate score on the Course Placement Evaluation.

101 PHYSICAL ANTHROPOLOGY You will cover the principles of human biology applicable to paleoanthropology and organic evolution of primates. Co-requisite: ANTH 101L. (3, 3T+0S)

101L PHYSICAL ANTHROPOLOGY LAB You will apply and demonstrate the principles of primate and human evolution. Co-requisite: ANTH 101. (1, 0T+1L)

102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY You will survey the disciplines of social and cultural anthropology, including culture, language, enculturation, subsistence patterns, economics, marriage, kinship, social groups, political systems, religion, art, and culture change. (Fall only) (3, 3T+0S)

110 INDIAN CULTURE OF THE SOUTHWEST You will study the culture of the indigenous peoples of the Southwest, including cultural patterns relative to agriculture, religion, arts, tribal governance, economics, etc., including both pre- and post-Columbian periods. (3, 3T+0S)

111 LANGUAGE AND CULTURE You will study the historical and descriptive linguistics, with emphasis on linguistic theory and on the interrelationship between language and culture. Pre-requisite: ENG 109N. (3, 3T+0S)

207 CULTURES OF NEW MEXICO (ANTH 2313) You will study the contemporary cultural and ethnic groups of New Mexico, including Native American, Hispanic, Anglo, and others. Pre-requisite: ENG 109N. (3, 3T+0S)

210 SOUTHWESTERN FOLKLORE You will survey the expressive culture systems such as art, music, architecture, religion; space/time orientation of the predominant Southwestern cultures. (3, 3T+0S)

ART (ART)  
Each studio courses in this department may be repeated without penalty, each time counting for credit and toward your cumulative grade point average; however, no course may be counted more than once toward graduation requirements.

100 INTRODUCTION TO BASIC WOODCARVING You will learn the basic techniques of woodcarving and safety through carving one small project. (1, .5T+.5S)

101 INTERMEDIATE WOODCARVING Using more advanced techniques than learned in ART 100, such as hand-tool usage, carving techniques and safety, you will produce two small projects. (2, 1T+1S)

105 INTRODUCTION TO ART You will study basic problems in the understanding and criticism of painting, sculpture, and architecture in Western and non-Western cultures from pre-historic to present time; introduction to basic terminology of the arts and to the language of stylistic criticism; relationships of the arts to each other and their historical background. Includes museum/gallery visits when relevant. Prerequisite: ENG 109N. (3, 3T+0S)

107 HISTORY OF ART I You will study the development of Western art from pre-historic times to the Renaissance through slides, videos, lectures, readings, discussions, and analysis. Prerequisite: ENG 109N. (3, 3T+0S)

110 DRAWING I You will study the basic materials and mechanics of drawing, with an emphasis on the development of descriptive and perceptual skills. You will also study line, value, mass, texture, and shape as applied to still life, landscape, and the human figure. (3, 1T+2S)

115 TRADITIONAL WOODCARVING You will study the basic methods of woodcarving, including the use and care of tools. Layouts, processes, and techniques are demonstrated with an emphasis on traditional New Mexico styles. (3, 1T+2S)

120 PAINTING I You will learn acrylic painting techniques, including color and pictorial space, still life, landscape, figure, and the abstract. (3, 1T+2S)

122 BASIC DESIGN You will study traditional two- and three-dimensional art media: drawing, painting, and sculpture; explore the principles of pictorial structure through studio work; studies problems in black-and-white and color; 3-dimensional form and spatial organization. You will participate in discussions of historic art forms as related to design. May include gallery/museum visits. (3, 1T+2S)

129 BASIC TINSMITHING You will learn the elementary techniques of designing, cutting, punching, and embossing tin in the northern New Mexico style. (1, .5T+.5S)

130 TINSMITHING I You will study the basic techniques of punching, embossing, cutting, and designing in the tradition of northern New Mexico. (3, 1T+2S)

152 TRADITIONAL SPANISH COLONIAL RETABLO MAKING You will look at traditions in iconography: European traditions, New World, and New Mexico styles beginning with hide paintings, oil-on-panel retablos, and works from the colonial periods. You will create retablos based on these various styles. (3, 1T+2S)
157 RETABLO MAKING You will create retablos in the northern New Mexico style by choosing appropriate wood, paint, and hand-made materials such as gesso and pinon varnish. (1, .5T+.5S)

158 BULTO MAKING You will study the basic techniques for carving and painting bultos in the northern New Mexico style. (3, 1T+2S)

160 POTTERY I You will study hand-built and wheel-thrown pottery, learning various hand-building methods for pinch, coil, and slab-constructed ceramic forms. You will also study wheel-throwing methods for making basic utilitarian ceramic items, including glaze decoration and electric kiln firing of stoneware pottery. (3, 1T+2S)

170 PHOTOGRAPHY I You will learn how to use a 35mm camera. You will also learn basic film exposure, film development, and printing of film. (3, 1T+2S)

173 MURAL PAINTING You will use acrylic paints to create murals on interior walls, making preparatory drawings, after group development and discussion of the concepts and ideas for each space. (3, 1T+2S)

180 MICACEOUS POTTERY I You will use micaceous clay to form utilitarian vessels with the coil and scrape method to make bowls, bean pots, pitchers, cups, and lidded jars. You will decorate by incising or appliqué and wood-fire pottery in the traditional manner. (3, 1T+2S)

185 SOUTHWEST CRAFTS You will become familiar with all the crafts from the Southwest, their value and cultural background, the techniques employed in producing such crafts, and the history of their development. (3, 3T+0S)

200 POTTERY GLAZE MAKING AND STUDIO PRACTICES You will learn to make pottery glazes, how to fire a kiln, and how to maintain a production pottery studio. Pre-requisite: ART 160. (1, 0.5T+0.5S)

208 HISTORY OF NEW MEXICO ART AND ARCHITECTURE You will explore the tri-cultural area of northern New Mexico through the history of art and architecture. You will learn about the arts, crafts, and architecture of New Mexico through slides, lectures, field trips, and guest speakers. Prerequisite: ENG 109N. (3, 3T+0S)

211 HISTORY OF ART II Continuation of ART 107 in which you will continue your study of Renaissance art to contemporary art through readings, slides, videos, discussions, and analysis. Prerequisite: ENG 109N. (3, 3T+0S)

221 DRAWING II Continuation of ART 110, in which you will study advanced concepts and technical processes. Prerequisite: ART 110. (3, 1T+2S)

231 TINSMITHING II You will study advanced techniques of punching, embossing, cutting, and designing in the tinsmithing tradition of northern New Mexico. Your projects will include nichos, columns, sculpture, and chandeliers. Pre-requisite: ART 130. (3, 1T+2S)

232 PAINTING II Continuation of ART 120, including advanced study of concepts and technical processes; encourages independent initiative. Prerequisite: ART 120. (3, 1T+2S)

233 PRINTMAKING I You will study the techniques of printmaking used in linocut, woodcut, engraving, dry point, and monotype. You will also study the history of printmaking and presentation of prints. (3, 1T+2S)

235 WATERCOLOR You will study transparent and opaque watercolor media, with emphasis on creative expression and techniques involving varied subject matter. (3, 1T+2S)

237 SCULPTURE You will study sculpture materials; basic consideration of form; technical and compositional exercises in clay, plaster, wood, and stone. (3, 1T+2S)

239 LIFE DRAWING You will draw the human figure from a life model, with emphasis on anatomy, gesture, and movement. Prerequisite: ART 110. (3, 1T+2S)

240 PORTRAIT PAINTING You will study the skills and techniques of portrait painting, with emphasis on facial structure and innovative color composition. Prerequisites: ART 120. (3, 1T+2S)

242 LIFE MODELING You will learn to construct an armature and model from life. (3, 1T+2S)

243 PRINTMAKING II In a continuation of ART 233, you will study more complex techniques for relief and intaglio, through projects including woodcut, etching/aquatint, chin-collé, and printing with color. You will continue your study of the history of printmaking and presentation of prints. Pre-requisite: ART 233. (3, 1T+2S)

246 BOOK ARTS You will study the skills and techniques of book making, with emphasis on calligraphy and styles of format. (3, 1T+2S)

255 MATTING AND FRAMING PICTURES You will develop the skill necessary to mat and frame art work for gallery presentation, including paper mat color selection, mat cutting techniques, and selecting and cutting picture frames. (3, 1T+2S)

260 POTTERY II This is a continuation of ART 160, covering more complex methods for hand-building and wheel-throwing pottery. You will learn to combine building methods, form larger pieces and create more advanced wheel-thrown pottery. In addition, you will explore glazing techniques for stoneware pottery. Pre-requisite: ART 160. (3, 1T+2S)

270 PHOTOGRAPHY II A continuation of ART 170 in which you will study advanced black and white techniques covering exposure, development, various films, and the use of filters, with special emphasis on tonal control through the creative use of the zone system; increased emphasis on personal vision, aspects of design, composition, and perception. Prerequisite: ART 170. (3, 1T+2S)

280 MICACEOUS POTTERY II You will learn micaceous clay pottery in the tradition of northern New Mexico through a continuation of the techniques learned in ART 180. You will also experiment with advanced techniques of hand-building and out-door firing. Pre-requisite: ART 180. (3, 1T+2S)

295 PHOTOGRAPHY III In this continuation of ART 270, which concentrates on advanced black and white printing, you will learn single filter printing, split filter printing, and high key printing. You will use fiber papers and various archival toning processes. Pre-requisite: ART 270. (3, 1T+2S)
296 PHOTOGRAPHY PORTFOLIO To assist you in entering the world of professional photography, you will create your own portfolio with a strong emphasis on editing, content, printing, and presentation. You will engage in discussions on how to market your work to enter graduate schools; includes publications, shows, and galleries. Prerequisite: ART 270. (3, 1T+2S)

298 INTRODUCTION TO ALTERNATIVE PHOTOGRAPHIC PROCESSES This course expands the traditional black and white photographic process. You will learn to use hand-applied emulsions using a variety of surfaces, including canvas. You will make cyanotypes, Van Dyke brown prints, and explore hand-coloring techniques. Pinhole cameras and plastic holgas will be available for creative projects. Prerequisite: ART 270. (3, 2T+1S)

The following courses are offered only at the POEH Cultural Center in Pojoaque and appear in this Catalog for purposes of transfer of credit only.

150 BASIC JEWELRY AND METAL WORKING You will study jewelry and metalworking as they are practiced in New Mexico. (3, 1T+2S)

155 PUEBLO EMBROIDERY You will learn traditional Pueblo embroidery techniques by creating a kilt or table runner. You will also learn to spin yarn, to develop designs, and to use a variety of embroidery techniques after studying the history of Pueblo embroidery and clothing styles. (3, 1T+2S)

156 PUEBLO SASH WEAVING You will study the technique of pueblo sash weaving, including the construction of hand looms, warping, and weaving of a simple design. (3, 1T+2S)

190 TRADITIONAL SILVER SMITHING You will study the basic techniques of silversmithing, including cutting and joining silver, forging, gemstone setting, tufa casting, and sand casting. (3, 1T+2S)

ASTRONOMY (ASTR)

110 INTRODUCTION TO ASTRONOMY You will study the fundamentals of modern astronomy, including coverage of the physical and historical nature of the universe, with emphasis on stellar evolution, the Milky Way galaxy, and our solar system. Prerequisites: ENG 109N and MATH 100N. Co-requisite: ASTR 110L. (3, 3T+0S)

110L INTRODUCTION TO ASTRONOMY LAB Laboratory experience to accompany ASTR 110. You will learn terrestrial and stellar observation, physical science laboratory exercises, and using the World Wide Web for accessing astronomy links. Co-requisite: ASTR 110. (1, 0T+1L)

AUTO BODY REPAIR (ABR)

110 INTRODUCTION TO AUTO BODY REPAIR You will be introduced to a work program consisting of on-the-job training, in which you will be exposed to introductory aspects of auto body repair, including tools, safety, work habits, metal work, framework, and refinishing. Prerequisite: MATH 100N and ENG 108N. (4, 3T+1S)

111 METAL WORK I In this course, you will learn metal work in the auto body field. Emphasis is placed on the different types of mild and high strength sheet metal used in automobile construction; the physical changes that sheet metal undergoes when damaged; classifications of the different types of sheet metal damage; various techniques for straightening sheet metal damage; introduction to the different types of plastic body fillers and their usage; associated hand tools, power tool applications, and personal safety. Prerequisites: ENG 108N and MATH 100N; Co-requisite: ABR 110. (4, 3T+1S)

112 REFINISHING I You will learn the basic skills and knowledge associated with refinishing equipment used in automobile refinishing, with emphasis on how a spray gun works; basic techniques of good spraying vs. bad spraying; surface preparation; recognizing the variables that influence the quality of the spray finish; adjusting the spray equipment to test and develop a good spray pattern; various types of spray coats; cleaning and caring for a spray gun, siphon, gravity, HVLP type spray guns; operation of the spray booth; and personal safety, including respirators and the handling of hazardous materials. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (5, 2T+3S)

113 FRAME REPAIR Through this course you will expand your knowledge of metal work to include minor and major conventional frame repair techniques. You will demonstrate compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (5, 2T+3S)

114 UNITIZED BODY REPAIR You will develop the necessary skills and knowledge associated with repair, replacement, and alignment of components used in unitized construction, placing emphasis on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (5, 2T+3S)

115 ESTIMATION - AUTO BODY REPAIR You will learn the methods and procedures involved in shop estimating of collision damage. You will visually inspect and record physical damage, and prepare and record preliminary information associated with collision damaged vehicles. You will discuss business practices, with emphasis placed on personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ENG 108N and MATH 100N; Co-requisite: ABR 110. (5, 2T+3S)

120 AUTO BODY WELDING METHODS You will develop the basic skills necessary to perform metal inert gas welding (MIG) and oxy-acetylene welding on the high strength steel (HSS) and high strength low-alloy (HSLA) steel components used in modern auto body construction and repair, with emphasis on personal safety, work area safety, welding equipment use, safe handling and operation, welding principles and characteristics. Pre-requisite: ABR 110 and 111. (4, 1T+3S)

211 METAL WORK II In this continuation of ABR 111, you will learn about the preparation of non-structural analysis and damage repair. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, power equipment; and outer body panel repairs. Prerequisite: ABR 111. (4, 1T+3S)
212 REFINISHING II You will continue to develop skills in the application of modern automotive paint systems. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, power equipment; surface preparation, uses and properties of refinishing material; spray gun and related equipment operation; paint measuring and mixing; color matching, and base/clear applications. Prerequisite: ABR 112. (5, 2T+3S)

213 METAL WORK III You will continue to expand your skills in metal work, concentrating on outer body panel repairs, replacements, and adjustments. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ABR 211. (4, 1T+3S)

214 REFINISHING III You will refine your painting skills to include complete refinishing jobs in various types of paint systems, refinishing defects, causes, and cures. Emphasis is placed on demonstrating compliance with personal and environmental safety practices associated with clothing, eye protection, handling of hazardous materials, hand tools, and power equipment. Prerequisite: ABR 212. (5, 2T+3S)

215 SOFTWARE APPLICATIONS You will learn the use of software associated with estimating overall costs for auto body repair jobs. Prerequisite: ENG 108N and MATH 100N. (3, 0T+3S)

AUTOMOTIVE TECHNOLOGY (ATEC)

To enroll in any of these courses, you must have first successfully completed MATH 100N or a higher level math course, or scored above MATH 100N on the Course Placement test, or have permission of the instructor.

100 DEFENSIVE DRIVING This course meets the National Safety Council’s requirements for safe driving by identifying risky attitudes and behavior on the roads that cause problems, explaining the difference between good driving and defensive driving by identifying whether a collision was preventable, recognizing driving hazards, and listing the three basic steps in collision avoidance. Graded CR/NC. (1, .5T+.5S)

101 BASIC SERVICE FUNDAMENTALS You will study the essential automotive skills needed by repair shops that specialize in maintenance and light repair; highlights workplace safety, industry repair procedures, tools and equipment use, and employment skills valued by employers. (4, 2T+2S)

102L ENGINE REPAIR You will study internal combustion theory, engine overhaul procedures and precision tool measuring; includes practice of essential engine testing skills and identification of needed repairs, along with removal and replacement of engines. Pre-requisite: ATEC 101L or instructor permission. (5, 2T+3S)

104L BRAKE SYSTEMS You will study the principles of hydraulic brake operation and practical skills of diagnosis and repair of standard and anti-lock brakes; includes lab activities on bleeding and adjustment, drum and rotor machining, master cylinder overhaul and brake caliper repair. Co-requisite: ATEC 101L. (5, 3T+2S)

105L SUSPENSION AND ALIGNMENT You will study system repairs and adjustments on a variety of modern automotive suspension types; strut replacement, wheel alignment and tire balancing, steering gear repair, and rebuilding of common suspension component, including lab activities using a COATS tire machine, COATS computer balancer, Hunter computer alignment machine, and hydraulic suspension equipment. Co-requisite: ATEC 101L. (4, 2T+2S)

106L MANUAL SUSPENSION You will study the fundamentals of design and operation of front and rear drive manual transmissions, differentials and drive line components; activities include disassembly, measurement, inspection, and reassembly of various transmissions in the car on the on the bench. Pre-requisite: ATEC 101L or instructor permission. (Fall) (4, 2T+2S)

113L SPECIAL TOPICS You will explore changes in automotive industry and different forms of vehicle fuels. Allows for charges toward GPA emission testing and required training to allow for design specific courses as needed by businesses, state and local government toward employee training. Permission of instructor. (Var., 2T+1-4S)

114 SERVICE WRITER/CUSTOMER SERVICE You will learn the basics of customer service, repair order (RO) writing, and the general front-office service process. Permission of instructor. (Fall) (1, 1T+0S)

125 YOU AND YOUR CAR You will study an overview of maintenance and general repair of the complete automobile. (2, 0T+2S)

130 CDL PERMIT PREPARATION Federal regulations require that you obtain a learner’s permit to operate a class A or B (and certain class C) vehicles before applying for a CDL license. In order to obtain a driver’s permit, you must pass the two examinations given by the State MVD, which include general knowledge and air brake tests. To achieve that, you will study the facts, terminology, and regulations needed to pass the learner’s permit testing through reviews and practice testing to acquaint you with the testing procedure. (3, 3T+0-S)

139 A/C RECOVERY/RECYCLE You will study the proper automotive A/C Recovery and Recycling of refrigerants and Federal EPA requirements. You will be required to test and pass the ASE Recovery/ Recycling certification test. Pre-requisite: employment with an Automotive Repair Facility. (1, 1T+0S)

144 BIO-DIESEL FUEL PRODUCTION AND ENGINE REQUIREMENTS In this course, you will cover the history and present methods of producing bio-diesel fuel from soybeans and from recycled cooking oils and other industrial by-products. You will discuss the engine requirements for using bio-diesel fuels and demonstrate options. You will assemble and use a small-scale biodiesel production unit. You will investigate fuels available at pumps and project future possibilities. You will spend time under the hood of a functioning bio-diesel vehicle. Pre-requisites: ENG 108N, MATH 100N, and RE 103. Recommended co-requisite: ELEC 190. Cross-listed as RE 144. (4, 2T+2S)

146 BIO-HYBRID FUEL PRODUCTION AND ENGINE REQUIREMENTS In this course, you will cover the methods of producing bio-diesel fuel for gas engines from corn and from recycled or redirected industrial products and by-products. You will discuss the engine requirements for using bio-hybrid fuels and demonstrate options. You will investigate home production and fuels available at pumps and project future possibilities. You will spend time under the hood of a functioning bio-hybrid vehicle. Pre-requisites: ENG 108N, MATH 100N, and RE 103. Recommended co-requisite: ELEC 190. Cross-listed as RE 146. (4, 2T+2S)
203A AUTOMOTIVE ELECTRICAL AND ELECTRONICS  
You will study critical troubleshooting skills necessary for identifying and correcting problems found in automotive electrical/electronic systems through the use of Digital Voltage Ohmmeter (DVOM) and analog meter use, voltage drop testing, wiring schematic interpretation, and electrical diagnostic routines. You will also study testing and diagnostic skills in more complex automotive systems, including lighting circuits, body computers and sensors, the use of lab scopes and scan tools, and supplemental restraint systems. Pre-requisite: ATEC 101L or permission of instructor. (5, 2.5T+2.5S).

203B AUTOMOTIVE ELECTRICAL AND ELECTRONICS  
You will continue your study of automotive electrical and electronic systems. Pre-requisite: ATEC 203A. (5, 2.5T+2.5S).

206 MANUAL TRANSMISSION AND DIFFERENTIAL  
You will study the fundamentals of design and operation of front and rear drive manual transmissions, differentials, and drive line components. Activities in which you will engage include disassembly, measurement, inspection, and reassembly to various transmissions in the car and on the bench. Pre-requisite: ATEC 101L. (5, 3T+2S)

207 AUTOMATIC TRANSMISSION  
You will study the fundamentals of design and operation of front and rear drive automatic transmissions, differentials, and drive line components. Activities in which you will engage include disassembly, measurement, inspection, and reassembly to various transmissions in the car and on the bench. Pre-requisite: ATEC 101L. (5, 3T+2S)

210A ENGINE PERFORMANCE  
You will study basic fuel and ignition systems along with early emission systems through structured labs permitting in-depth analysis of how these systems affect drivability. You will study fuel, and emission devices in early generation computer systems; diagnostic skills and repair methods including throttle body fuel injection, electronic feedback carburetors, and distributor ignition. Pre-requisite: ATEC 109L and 207. (5, 2.5T+2.5S)

210B ENGINE PERFORMANCE  
You will continue your study of automotive engine performance. Pre-requisite: ATEC 101L; Co-requisites: ATEC 109L and 207. (5, 2.5T+2.5S)

280L PRACTICUM  
At the start of this course, you will be placed in an approved automotive repair facility or automotive service department, working in an internship program involving approval of a special project and demonstration of quality and professional workmanship. The course is designed to allow you to explore your potential as a professional automobile mechanic. Each hour of credit requires 50 clock hours of practicum. Pre-requisite: Permission of instructor. (1-4, 0T+1-4S)

BIOLOGY (BIOL)

110 CURRENT TOPICS IN BIOLOGY  
You will study important current issues in biology, including changes in the biosphere, evolution, genetics, medical advances, and biotechnology. This course is suitable for non-science majors. Co-requisite: BIOL 110L. (3, 3T+0S)

110L CURRENT TOPICS IN BIOLOGY LAB  
Co-requisite: BIOL 110L. (3, 3T+0S)

151 SCIENCE AND SOCIETY  
You will examine the principles and practice of modern science and the relationship between science and technology in society. You will also focus on issues of biological science that relate to current political and social challenges and problems, using current topics as a way of understanding how knowledge and understanding impact on culture and society. This course is suitable for those who plan to major in biology. Pre-requisite: ENG 111; Co-requisite: BIOL 151L. (3, 3T+0L)

160 BIOTECHNOLOGY SEMINAR I  
You will study the eight areas of modern biotechnology: microbial, agricultural, animal, forensic, aquatic, medical, regulatory, and bioremediation, involving discussion on the ethical, legal, and societal issues in biotechnology, as well as modern laboratory techniques. This course is suitable for science majors and non-majors, as well as those interested in career opportunities in the field. Pre-requisites: BIOL 110/L or higher-level BIOL. Co-requisite: BIOL 160L. (Fall) (3, 3T+0L)

160L BIOTECHNOLOGY LAB I  
In this laboratory experience, you will study techniques focusing on proper protocols in record keeping, genomic and plasmid DNA isolation, determining DNA concentration by UV spectroscopy, cloning and sub-cloning, preparation of growth curves, measuring bacterial growth by viable counts and spectroscopy, restriction mapping, enzyme assays, regulation of gene expression, cloning vectors, DBNA sequencing, preparation of DNA probes, and hybridization. Co-requisite: BIOL 160. (Fall) (1, 0T+1L)

The following courses are not taught at Northern. They exist only in terms of enabling posting of incoming credit from other colleges which offer only non-major courses.

136 HUMAN ANATOMY & PHYSIOLOGY I FOR HEALTH SCIENCES  
You will study basic human anatomy and physiology for students in the health science programs. This course covers important biological concepts (including biological chemistry, cells, and tissues) and the integumentary, skeletal, muscular, and nervous systems. (3, 3T+0L)

136L HUMAN ANATOMY & PHYSIOLOGY I LAB FOR HEALTH SCIENCES  
In this lab experience for BIOL 236, you will cover basic biological concepts, cells, tissues, and the integumentary, skeletal, and nervous systems (1, 0T+1L)

137 HUMAN ANATOMY & PHYSIOLOGY II FOR HEALTH SCIENCES  
In this continuation of BIOL 136, you will study the endocrine, cardiovascular, respiratory, digestive, excretory, reproductive systems, and human genetics. (3, 3T+0L)

137L HUMAN ANATOMY & PHYSIOLOGY II LAB FOR HEALTH SCIENCES  
In this lab experience for BIOL 137, you will cover the structure and function of various systems (endocrine, cardiovascular, respiratory, immune, digestive, excretory, reproductive, and human genetics. Co-requisite: BIOL 137L. (1, 1T+1L)

151L SCIENCE AND SOCIETY LAB  
You will gain practical experience in learning about the scientific method with observations, evidence, and testing to address general biological and physical questions through testing assumptions using varied practical approaches and controlling for variability. Co-requisite: BIOL 151L. (3, 3T+0L)

151L SCIENCE AND SOCIETY LAB  
You will gain practical experience in learning about the scientific method with observations, evidence, and testing to address general biological and physical questions through testing assumptions using varied practical approaches and controlling for variability. Co-requisite: BIOL 151L. (3, 3T+0L)
201 PRINCIPLES OF MOLECULAR AND CELL BIOLOGY
Through scientific methods, you will study the role of water in cell biology, carbon and molecular diversity, macromolecules, an introduction to metabolism, tour of cell structures and functions, membrane structure and function, cellular respiration, photosynthesis, cell communication, and the cell cycle. Pre-requisite: CHEM 121/L; co-requisite: BIOL 201L. [Fall only]. (3, 3T+0L)

201L PRINCIPLES OF MOLECULAR AND CELL BIOLOGY LAB
You will experiment with techniques and methods in molecular and cell biology to support concepts in lecture. Co-requisite: BIOL 201. (1, 0T+1L)

202 PRINCIPLES OF GENETICS
You will be exposed to an overview of Mendelian genetics: physical and chemical structure of the hereditary molecules and the role of chromosomes; mitosis, meiosis, and the molecular basis of inheritance; DNA metabolism to include replication, repair, and recombination; genes to proteins; genetic models (viruses and bacteria), eukaryotic genomes, genetic basis of development, and an overview of genomes. Pre-requisite: BIOL 201/L; Co-requisite: BIOL 202L. (Spring only) (3, 3T+0S)

202L PRINCIPLES OF GENETICS LAB
You will experiment in genetics with a focus on bacterial, yeast, plant, and *Drosophila* models, with an emphasis on supporting concepts from the lecture. Co-requisite: BIOL 202. (Spring only) (1, 0T+1L)

203 ECOLOGY AND EVOLUTION
You will study the principles of evolution on the origin of the biosphere and the diversifications of life; the processes of natural selection and the origin of species, and the evolution of populations; evolutionary ecology with emphasis on behavioral, population, and community ecology, along with the impacts on the ecosystem, ecology, and conservation biology. Pre-requisite: BIOL 202 and MATH 150; co-requisite: BIOL 203L. (Fall) (3, 3T+0L)

203L ECOLOGY AND EVOLUTION LAB
You will learn practical applications of the tools and methods used by ecologists and evolutionary biologists to address research questions; an introduction to statistical and sampling techniques used to collect and analyze data on fossils, plants, and animals. Co-requisite: BIOL 203. (1, 0T+1L)

204 PLANT AND ANIMAL FORM AND FUNCTION
You will study plant structure and growth, transport in plants, plant nutrition, plant reproduction and development, control systems in plants, introduction to animal systems, animal nutrition, circulation of gas exchange, immune systems, control of the internal environment, chemical signals in animals, reproduction, development, nervous systems, and sensory and motor mechanisms. Pre-requisites: BIOL 203/L and CHEM 122/L. Co-requisite: BIOL 204L. (Spring) (3, 3T+0L)

204L PLANT AND ANIMAL FORM AND FUNCTION LAB
You will engage in laboratory experiences supportive of BIOL 204. Co-requisite: BIOL 204. (1, 0T+1L)

210 MICROBIOLOGY
You will concentrate on the characteristics of microbes (particularly the bacteria), the influence of microbes on man and his environment and of man on the microbial environment, with a focus on medically significant microbes, physiologic responses to infection, clinical aspects of asepsis, proper procedures in the handling, isolation, and identification of bacteria. Prerequisite: CHEM 110 and 110L. Co-requisite: BIOL 210L. (3, 3T+0L)

210L MICROBIOLOGY LAB
Co-requisite: BIOL 210. (1, 0T+1L)

237 HUMAN ANATOMY AND PHYSIOLOGY I
You will study the structure, function, and chemistry of the human membranes and glands of the integumentary system, skeletal system, muscular system, and muscle and neuron membrane physiology. Prerequisite: CHEM 110 and 110L. Co-requisite: BIOL 237L. (3, 3T+0L)

237L HUMAN ANATOMY AND PHYSIOLOGY I LAB
Co-requisite: BIOL 237. (1, 0T+1L)

238 HUMAN ANATOMY AND PHYSIOLOGY II
Continuation of BIOL 237. Studies fluid and electrolytes, and the following systems: nervous (central and peripheral), circulatory, urinary, respiratory, digestive, and endocrine and reproductive. Prerequisite: BIOL 237/L; Co-requisite: BIOL 238L. (3, 3T+0L)

238L HUMAN ANATOMY AND PHYSIOLOGY II LAB
Co-requisite: BIOL 238. (1, 0T+1L)

260 BIOTECHNOLOGY SEMINAR II
In this continuation of Biotechnology Seminar I, you will discuss current issues in DNA technology and biotechnology applications, explore career options in the biomedical research area. Co-requisite: BIOL 260L. Prerequisites: BIOL 160/L. Co-requisite: BIOL 260L. (Spring) (3, 3T+0L)

260L BIOTECHNOLOGY LAB II
In this laboratory experience, you will develop techniques for PCR, DNA sequencing and analysis, gene expression in phage lambda and E. coli, SDS-polyacrylamide gel electrophoresis, protein assays, and techniques for working with proteins, dialysis, and gel filtration and ion exchange chromatography. Co-requisite: BIOL 260. (Spring) (1, 0T+1L)

290 UNDERGRADUATE RESEARCH EXPERIENCE I
In this laboratory-based experience in biological research, you will learn experimental design, library and internet information searches, research methodology, and how to maintain laboratory notebooks while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on molecular biology, ecology, and environmental science. Prerequisite: permission of department chairperson. Graded on a credit/no credit basis. (3, 3T+0L)

292 UNDERGRADUATE RESEARCH EXPERIENCE II
In this laboratory-based experience in biological research, you will learn experimental design, library and internet information searches, research methodology, and how to maintain laboratory notebooks while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on molecular biology, ecology, and environmental science. Prerequisite: permission of department chairperson. Graded on a credit/no credit basis. (3, 3T+0L)

329 MOLECULAR CELL BIOLOGY
You will learn about basic cellular processes and their control mechanisms, including gene expression, protein synthesis, signal transduction pathways, receptor activation and cell cycle. This course is designed to expand the knowledge base of students who have completed introductory-level courses and to serve as a foundation for 400-level courses in biology. Pre-requisite: BIOL 204/L. (4, 4T+0L)

349 ESSENTIALS OF ANATOMY AND PHYSIOLOGY
You will learn the essentials of anatomy and physiology of humans and
other mammals. Emphasis will be on the study of systems, including nervous, endocrine, cardiovascular, immune, digestive, respiratory, urinary, and reproductive. The course is designed for students majoring in biology or as a refresher course for students in the health sciences who have taken anatomy and physiology in the past. Pre-requisites: BIOL 204/L or BIOL 237/L and 238/L. Co-requisite: BIOL 349L. (3, 3T+0L)

349L ESSENTIALS OF ANATOMY AND PHYSIOLOGY LAB In a laboratory setting, you will learn the essentials of anatomy and physiology of humans and other mammals. Emphasis will be on the study of systems, including nervous, endocrine, cardiovascular, immune, digestive, respiratory, urinary, and reproductive. Co-requisite: BIOL 349. (1, 0T+1L)

351 GENERAL MICROBIOLOGY You will study anatomy, physiology, biochemistry, and ecology of microorganisms and the principles of bacteriological techniques, host-parasites relationships, and infection and immunity. Pre-requisite: BIOL 204/L. Co-requisite: BIOL 351L. (3, 3T+0L)

351L GENERAL MICROBIOLOGY LAB You will engage in laboratory experiences supportive of BIOL 351. Co-requisite: BIOL 351. (1, 0T+1L)

360 PLANT BIOLOGY You will study plant anatomy, physiology, classification, evolution, and ecology as it deals with both higher and lower plants. Pre-requisite: BIOL 204/L. Co-requisite: BIOL 360. (3, 3T+0L)

360L PLANT BIOLOGY LAB You will engage in laboratory experiences supportive of BIOL 360, for which this course is a co-requisite. Co-requisite: BIOL 360. (1, 0T+1L)

371 INVERTEBRATE BIOLOGY You will study the major invertebrate groups with emphasis on evolutionary and ecological relationships, as well as the correlation of structure with function. Pre-requisite: BIOL 204/L; Co-requisite: 371L. (3, 3T+0S)

371L INVERTEBRATE BIOLOGY LAB You will engage in laboratory experiences supportive of BIOL 371. (1, 0T+1L)

386 GENERAL VERTEBRATE BIOLOGY You will study the ecology, behavior, sociology, adaptations, and evolution of the vertebrates. Pre-requisite: BIOL 204/L; Co-requisite: BIOL 386L. (3, 3T+0L)

386L GENERAL VERTEBRATE BIOLOGY LAB You will be engaged in lab experiences dealing with the ecology, behavior, sociology, adaptations, and evolution of the vertebrates. Co-requisite: BIOL 386. (1, 0T+1L)

392 UNDERGRADUATE RESEARCH EXPERIENCE This is a practical faculty-directed research experience for upper-division biology majors. During the regular semester you will perform 8-10 hours per week of work alongside your mentor in a project with a time frame agreed to by both you, the student intern, and the mentor. Arrangements involve all aspects of biological research that can include fieldwork, bench laboratory work, library research, or any combination of these activities. The mentor will actively engage you in sharing the responsibility for the research process. (3, 3T+0L)

406 STREAM ECOLOGY AND FIELD METHODS You will use the scientific method to understand and explain concepts in stream ecology, hydrology, and biology. You will obtain experience in general field methods for stream characterization and sampling in streams of northern New Mexico. Pre-requisites: BIOL 203/L or ES 112/L, or ES 125. (3, 2T+1L)

410 BIOINFORMATICS You will use computers to search biological databases to hunt for genes, discover protein structures, and determine phylogenetic trees from molecular evolution. Pre-requisite: BIOL 203/L. (Fall) (3, 3T+0L)

412 DEVELOPMENTAL BIOLOGY You will study comparative biology of animal development, with emphasis on regulatory mechanisms. Pre-requisites: BIOL 204/L and BIOL 349/L. Co-requisite: BIOL 412L. (Spring) (3, 3T+0L)

412L DEVELOPMENTAL BIOLOGY LAB You will engage in laboratory experiences supportive of BIOL 412. (1, 0T+1L)

416 CELLS AND TISSUES You will study the structure and function of the various types of cells in the body and the tissues that are composed of these cells. Pre-requisite: BIOL 204/L and BIOL 349/L. (Fall) (3, 3T+0L)

416L CELLS AND TISSUES LAB Using the light microscope with histological specimens, you will study the structure of cells and tissues. Co-requisite: BIOL 416. (Fall) (1, 0T+1L)

422 COMPARATIVE VERTEBRATE ANATOMY You will conduct a systematic survey of the homology in structure and function of the vertebrates and related chordates, with emphasis on vertebrate phylogeny and correlated anatomical adaptations in the evolution of the anatomy of vertebrates. Pre-requisites: BIOL 204/L and BIOL 349/L; Co-requisite: BIOL 422L. (Spring) (3, 3T+0L)

422L COMPARATIVE VERTEBRATE ANATOMY LAB You will engage in laboratory experiences supportive of BIOL 422. (1, 0T+1L)

425 MOLECULAR GENETICS You will study the molecular biology of the gene. Pre-requisites: BIOL 204/L and BIOL 329; Co-requisite: BIOL 425L. (3, 3T+0L)

425L MOLECULAR GENETICS LAB You will engage in supportive laboratory experiences. Co-requisite: BIOL 425. (1, 0T+1L)

426 NEUROBIOLOGY You will study the basic structure and function of the nervous system from the level of individual neurons through such complex brain functions as learning and memory, movement, sensation, and personal perception of the environment. Pre-requisites: BIOL 204/L and BIOL 349/L or BIOL 237/L and 238/L; Co-requisite: BIOL 426L. (Spring) (3, 3T+0L)

426L NEUROBIOLOGY LAB During this lab experience, you will use histological slides, gross specimens, and neuro-imaging studies. You will also study neural function using computer-based methods. Co-requisite: BIOL 426. (1, 0T+1L)

431 DRUGS AND THEIR ACTIONS You will study the basic principles of pharmacology, including how drugs exert their effects on the body. You will study the major categories of drugs and their
actions, including antibiotics, anti-inflammatories, hormones, analgesics, and drugs that affect the central nervous system. Pre-requisites: BIOL 204/L, BIOL 329, BIOL 349/L and CHEM 210/L. (3, 3T+0L)

435 COMPARATIVE ANIMAL PHYSIOLOGY You will study the function of organ systems in animals, with emphasis on neuromuscular, cardiovascular, gastrointestinal, and renal physiology. Pre-requisite: BIOL 349/L. Co-requisite: BIOL 435L. (3, 3T+0L)

435L COMPARATIVE ANIMAL PHYSIOLOGY LAB You will engage in laboratory experiences supportive of BIOL 435. (1, 0T+1L)

451 GENERAL ECOLOGY You will cover a comprehensive survey of the ecology of individuals, populations, communities, and ecosystems. Pre-requisite: BIOL 204/L; co-requisite: BIOL 451L. (3, 3T+0L)

451L GENERAL ECOLOGY LAB You will engage in laboratory experiences supportive of BIOL 451. Co-requisite: BIOL451. (1, 0T+1L)

456 IMMUNOLOGY You will study experientially immunoglobin structure, antigen-antibody reactions, immunity, and hypersensitivity. Pre-requisite: BIOL 204/L and BIOL 329. Co-requisite: BIOL 456L. (3, 3T+0L)

456L IMMUNOLOGY LAB You will engage in laboratory experiences supportive of BIOL 456. Co-requisite: BIOL 456. (1, 0T+1L)

467 EVOLUTIONARY PLANT ECOLOGY You will learn evolutionary approaches to the study of plants and plant populations. You will study plant life history strategies, plant population biology and plant reproduction with an emphasis on empirical studies. Pre-requisite: BIOL 151/L. (3, 3T+0L)

472 BIOLOGY SEMINAR You will attend presentations given by faculty and visiting scientists on their research and careers, and students who have conducted research will present their results as well. Graded CR/NC. Pre-requisite: permission of instructor. (1, 1T+0L)

492 BIOLOGY CAPSTONE PROJECT You will have the culminating learning experience of your studies in biology and will have an opportunity to integrate and apply competencies and knowledge gained from coursework and laboratory experiences, and to demonstrate a broad mastery of learning across the curriculum. Graded CR/NC. Pre-requisite: BIOL 15i/L and permission of the instructor. (1, 1T+0L)

BUSINESS ADMINISTRATION (BA)

115 INTRODUCTION TO MS EXCEL Introduction to the electronic spreadsheet, specifically how to use, design, and edit spreadsheets for use in a variety of personal and business applications. (1, 1T+0S)

116 INTRODUCTION TO MS POWERPOINT Introduction to the electronic presentation, specifically how to use, design, and edit presentation graphics for use in a variety of personal and business applications. (1, 1T+0S)

117 BUSINESS MATH Fundamental operations including fractions, decimals, percentages, interest computation, present value, amortization, and accounting math within the context of business-oriented word problems. (3, 3T+0S)

124 BUSINESS FOR MASSAGE PROFESSIONALS Addresses the business needs of wellness professionals with an emphasis on start-up, marketing, and financial management of a massage therapy practice. You will become familiar with general business terminology. A personal finance unit will be included. (2, 2T+0S)

136 PROPERTY MANAGEMENT BASELINE TRAINING You will study property management baseline training, Sunflower database functions, receipt of property, property custodian customer service, and inventories and reviews. (2, 2T+0S)

200 BUSINESS COMPUTER APPLICATIONS You will study the owner/manager approach to the use of microcomputers: systems design, software, business applications, and the Windows environment. (3, 3T+0S)

205 BUSINESS STATISTICS Introduction to the use of statistics in business; techniques for describing and analyzing descriptive and numerical data; estimation, hypothesis testing, t-tests and regression; application to business problems. Pre-requisite: MATH 102N. (3,3T+0S)

210 PRINCIPLES OF FINANCE Introduces you to the current practical and theoretical financial concepts in order to understand the finance function in today’s business firm. Emphasizes the time value of money, investment valuation, and working-capital management; introduces financial analysis. Prerequisites: BA 205. (3, 3T+0S)

220 INTRODUCTION TO BUSINESS Provides an integrated overview of American business and its operations. You will pay special attention to current business, marketing, finance, accounting, and the legal environment of business, and you will complete a small-business plan. Pre-requisite: ENG 109N. (3, 3T+0S)

221 ACCOUNTING PRINCIPLES I This is an introductory course in accounting for both accounting majors and non-majors. It introduces you to the aspects of accounting theory and practice, with the fundamental purpose of providing information for decision making. Provides extensive coverage in preparing, analyzing, and interpreting financial statements. The goal is for you to become an intelligent user of financial as well as non-financial information. Prerequisite: OA 135. (3, 3T+0S)

222 ACCOUNTING PRINCIPLES II This course offers both accounting and non-accounting majors an introduction to managerial accounting. Your attention will be focused on the use of accounting data as a basis for decision by management, stockholders, creditors, and other users of financial statements and accounting reports. Prerequisite: BA 221. (3, 3T+0S)

225 EXCEL Illustrates the features of Microsoft Excel, a spreadsheet program that allows you to organize data, complete calculations, make decisions, graph (chart) data, and develop professional-looking reports. (3, 3T+0S)

226 POWER POINT Microsoft PowerPoint is a complete presentation graphics software program that allows you to produce a professional-looking presentation. PowerPoint teaches you to make informal presentations in a small conference room using overhead
transparencies, to make electronic presentations using a projection device attached to a personal computer, and to make a formal presentation to a large audience using 35mm slides. (3, 3T+0S)

227 ADVANCED EXCEL You will gain a working knowledge of the advanced applications of Microsoft Excel, including topics in advanced formatting, interpreting, and integrating data. This course is required for Microsoft User Certification Specialist (MOS). Pre-requisite: BA 225. (3, 3T+0S)

230 INTERMEDIATE ACCOUNTING I You will continue your study of accounting within a conceptual framework determined by generally accepted accounting principles, financial accounting functions and theory, and recognition and measurement of assets. Pre-requisites: BA 220. (3, 3T+0S)

231 INTERMEDIATE ACCOUNTING II In this course, you will address financial accounting, with an emphasis on external reporting to the investing public in accordance with generally accepted accounting principles. Pre-requisite: BA 230/304. (3, 3T+0S)

232 INCOME TAX ACCOUNTING Latest tax law changes as they apply to individuals; problems in tax computation and reporting for individuals, with some emphasis on taxation in business. Prerequisite: BA 221. (3, 3T+0S)

235 ACCOUNTING FOR NON-PROFIT ORGANIZATIONS Accounting processes unique to the non-profit governmental organization, with emphasis on the uses of data in evaluation of past performance and planning future activities for projects. Prerequisite: BA 231. (3, 3T+0S)

236 COMPUTERIZED ACCOUNTING You will use prepared integrated business software, QuickBooks, on microcomputers for the computerization of accounting principles topics. Prerequisites: BA 221. (3, 3T+0S)

240 PRINCIPLES OF MANAGEMENT An overview of management principles as they apply to the public, private, and tribal sectors. You will pay special attention to techniques of managerial decision making, the planning process, motivation, leadership, and communication skills. Prerequisite: ENG 109N. (3, 3T+0S)

242 BUSINESS INFORMATION SYSTEMS You will study business systems and the information technology that supports them, including systems theory, organizational structure and culture, and the role of information systems in a business environment. (3, 3T+0S)

245 COST ACCOUNTING You will study product-cost determination and cost-control elements as applied to basic job order processes and standard cost systems, using relevant accounting data to improve decision making. Pre-requisites: BA 230 and 231. (3, 3T+0S)

250 BUSINESS COMMUNICATIONS You will develop skills in business writing with an emphasis on the preparation of letters and reports, and on presenting information in a logical, forceful, and acceptable form. Pre-requisite: ENG 111. (3, 3T+0S)

251 PRINCIPLES OF MARKETING This course covers the marketing process from the inception to conclusion of goods and services, including market, product distribution, promotion, and pricing strategies; devotes special attention to analysis of market and consumer behavior. (3, 3T+0S)

258 INDIAN GAMING, ENTREPRENEURSHIP, SOVEREIGNTY, AND CASINOS You will survey games played by Pueblo Indians from earliest times to the present and how the establishment of casinos fits within these traditions. You will study the recent history of gaming from Bingo operations and the tribal court battles to the passage of the federal Indian Gaming Regulatory Act (1988). You will also explore and debate the importance of political and economic issues to Pueblo gaming. Pre-requisite: ENG 111. Cross-listed as PIS 258. (3, 3T+0S)

266 BUSINESS LAW Introduces you to general legal principles, including the creation of laws, contracts, sales, business, insurance, and other related matters. Prerequisites: ENG 109N. (3, 3T+0S)

300 BUSINESS LAW Introduces you to general legal principles, including the creation of laws, contracts, sales, business, insurance, and other related matters. Prerequisites: ENG 109N. (3, 3T+0S)

304 INTERMEDIATE ACCOUNTING I You will continue your study of accounting within a conceptual framework determined by generally accepted accounting principles, financial accounting functions and theory, and recognition and measurement of assets. Pre-requisites: BA 222. (3, 3T+0S)

305 INTERMEDIATE ACCOUNTING II In this course, you will address financial accounting, with an emphasis on external reporting to the investing public in accordance with generally accepted accounting principles. Pre-requisite: BA 304. (3, 3T+0S)

310 PRINCIPLES OF FINANCE Introduces you to the current practical and theoretical financial concepts in order to understand the finance function in today’s business firm. Emphasizes the time value of money, investment valuation, and working-capital management; introduces financial analysis. Prerequisites: BA 205. (3, 3T+0S)

313 ORGANIZATIONAL BEHAVIOR You will study the application of diverse conceptual and theoretical perspectives in organizations, focusing on problems related to perception, motivation, leadership, conflict, stress, influence, decision making, work/family balance, and ethics. Pre-requisite: BA 240. (3, 3T+0S)

315 ORGANIZATIONAL THEORY AND DESIGN You will examine organizational behavior on the “macro” level using case analysis topics covering organizational effectiveness, dimensions of organizational structure, determinants of structure, applications, and contemporary issues. (3, 3T+0S)

324 INCOME TAX ACCOUNTING Latest tax law changes as they apply to individuals; problems in tax computation and reporting for individuals, with some emphasis on taxation in business. Prerequisite: BA 221. (3, 3T+0S)

330 PRINCIPLES OF PROJECT MANAGEMENT You will address the complex and unique issues related to effectively managing projects through emphasis on nine knowledge areas specified by the Project Management Institute (PMI). (3, 3T+0S)

331 PROJECT MANAGEMENT PLANNING PROCESS You will study project planning: development of scope documents, estimates, and schedules for the purpose of planning projects. Pre-requisite: BA 330. (3, 3T+0S)
332 PROJECT MANAGEMENT SYSTEMS: BASELINE DEVELOPMENT You will study systems support used in the development of project plans: database management, scheduling software, and spreadsheets (MS Project, Primavera, Visio). Pre-requisite: BA 331. (3, 3T+0S)

333 PROJECT PLANNING AND EXECUTION You will learn to integrate baseline development, scheduling, bottom-up estimating, and systems, with emphasis on Earned Value Management and performance measurement. Pre-requisite: BA 332. (3, 3T+0S)

345 COST ACCOUNTING You will study product-cost determination and cost-control elements as applied to basic job order processes and standard cost systems, using relevant accounting data to improve decision making. Pre-requisites: BA 304 and 305. (3, 3T+0S)

350 ENTREPRENURSHIP You will examine methods of small business management and business formation, with an emphasis on the traditional business functions in a small setting. (3, 3T+0S)

352 ACCOUNTING INFORMATION SYSTEMS You will analyze current practices and technologies used to design, install, operate, and manage an integrated automated accounting system. In addition, you will examine application controls, information security requirements, and integration with other business information systems. Pre-requisite: BA 305. (3, 3T+0S).

354 E-COMMERCE Techniques, problems, and solutions in eCommerce. You will cover marketing plan considerations, online catalogs, payment methods, security, outsourcing options, and the technologies behind eCommerce web sites. (3, 3T+0S)

360 HUMAN RESOURCES MANAGEMENT Provides you with the basic concepts of Human Resource Management functions and organizational processes. Emphasizes legislation, specialization, job description, job analysis, self-managed teams, profit/gain sharing, health care, medical leave, harassment, diversity, management and/or labor relations, recruitment, and training. Pre-requisite: BA 344. (3, 3T+0S)

405 ACCOUNTING FOR NON-PROFIT ORGANIZATIONS Accounting processes unique to the non-profit governmental organization, with emphasis on the uses of data in evaluation of past performance and planning future activities for projects. Pre-requisite: BA 231. (3, 3T+0S)

411 MANAGERIAL ACCOUNTING You will examine advanced topics in management accounting as they relate to management information needs for planning, control, and decision making. You will study the interpretation of standard cost variances, the application of quantitative techniques, the evaluation of divisional performance, activity-based costing, and the behavioral impact of accounting systems. Pre-requisite: BA 345. (3, 3T+0S)

424 FEDERAL TAX ACCOUNTING II You will address the special tax issues of corporations, partnerships, s-corporations, gift taxes, estates, and trusts. You will use computer applications to research, solve, and analyze tax problems. Pre-requisite: BA 324. (3, 3T+0S)

429 ADVANCED ACCOUNTING You will conduct an advanced study of corporate financial analysis and planning including capital budgeting, cost of funds, and capital structure and valuation. Pre-requisite: BA 424. (3, 3T+0S)

432 STRATEGIC MANAGEMENT You will study the basic concepts, frameworks, and methodologies useful to managers in crafting and executing business strategy, including quality management. Pre-requisite: BA 240. (3, 3T+0S)

434 PROJECT EXECUTION & CONTROL: STRATEGIC MANAGEMENT AND ANALYSIS You will conduct in-depth strategic management and analysis during the execution of projects. Pre-requisite: BA 332. (3, 3T+0S)

436 PROJECT EXECUTION AND CONTROL: SYSTEMS SUPPORT You will focus on the execution, reporting and analysis of projects; database management, scheduling software, and spreadsheets (Primavera, Prisim, and MS Excel). Pre-requisite: BA 434. (3, 3T+0S)

442 ADVANCED COST MANAGEMENT You will study how to present information to management as part of the decision-making process, with an emphasis on resource planning, cost estimating, cost budgeting, and cost control. Pre-requisite: BA 411. (3, 3T+0S)

444 FINANCIAL STATEMENT ANALYSIS You will learn to use the tools and expertise to find, interpret, and analyze available information to determine, perform, and evaluate the firm. Pre-requisite: BA 411. (3, 3T+0S)

446 AUDITING THEORY AND PRACTICE You will study the accepted principles, practices, and procedures used by public accountants for certifying corporate financial statements. Pre-requisite: BA 344. (3, 3T+0S)

452 PROJECT MANAGEMENT CAPSTONE You will study the computer applications that support project management, from baseline development to end-user reporting. Pre-requisite: BA 434. (3, 3T+0S)

460 LABOR RELATIONS You will study labor union history, labor law, collective bargaining, labor-management relations, and the concept of management prerogative with respect to defining jobs, working conditions, and other human resources functions. (3, 3T+0S)

461 ETHICAL AND LEGAL ISSUES IN BUSINESS You will examine current topics in the areas of law, regulatory controls, and ethical issues, focusing discussions on the implications of these legal situations in management. Pre-requisite: BA 300. (3, 3T+0S)

462 INTERNATIONAL BUSINESS AND MANAGEMENT You will explore the nature of international business and environments by covering topics such as the international monetary system, import-export, growing competition and trading relationships in a global community. (3, 3T+0S)

463 TECHNOLOGY TRANSFER – ASIA/USA You will study the technology transfer process between Asia and the United States in the last twenty-five years, the emergence of Asia as a technology center with Foreign Direct Investment (FDI), and the role of multi-nationals, government incentives, and world trade agreements. Pre-requisite: BA 462. (Spring) (3, 3T+0S)
173 CARPENTRY APPRENTICE LEVEL 2A This course covers reading plans and elevations, site layout one, distance measurement and leveling, introduction to concrete and reinforcing materials, and foundations and flatwork. This is the third course in the NCEER four-year program. Pre-requisite: CARP 172, or NCCER admission at this level. (6, 6T+0S)

174 CARPENTRY APPRENTICE LEVEL 2B This course covers concrete forms, reinforcing concrete, handling and placing of concrete, and manufactured forms. This is the fourth in the NCCER program. Pre-requisite: CARP 173. (6, 6T+0S)

175 CARPENTRY APPRENTICE LEVEL 3A This course covers exterior finishing, roofing applications, thermal and moisture protection, stairs, and framing with metal studs. This is the fifth course in the NCCER program. Pre-requisite: CARP 174 or NCCER admission at this level. (6, 6T+0S)

176 CARPENTRY APPRENTICE LEVEL 3B This course covers drywall one, installation, drywall two, finishing, interior finish one, doors, interior finish two, suspended ceilings, interior finish three, window, door, floor, and ceiling trim, interior finish four, and cabinet installation. This is the sixth course in the NCCER program. Pre-requisite is CARP 175. (6, 6T+0S)

177 CARPENTRY APPRENTICE LEVEL 4A This course covers Site Layout Two: angular measurement; advanced roof systems; and advanced floor systems. This is the seventh course in the NCCER program. Pre-requisite: CARP 176 or NCCER admission at this level. (6, 6T+0S)

178 CARPENTRY APPRENTICE LEVEL 4B This course covers advanced wall systems, advanced stair systems, introduction to light equipment, introductory skills for the Crew Leader, with welding and metal buildings as elective modules. This is the last in the NCCER four-year Carpentry Apprenticeship program. Pre-requisite is CARP 177. This course is the seventh course in the NCCER program. (6, 6T+0S)

CHEMISTRY (CHEM)

110 INTRODUCTION TO CHEMISTRY Introductory course to prepare students with no high school chemistry for college level chemistry courses and to familiarize students in health occupations programs with basic concepts of inorganic, organic, and biochemistry in physiology and medicine. Prerequisite: MATH 102N; Co-requisite: CHEM 110L. (3, 3T+0L)

110L INTRODUCTION TO CHEMISTRY LAB Co-requisite: CHEM 110. (1, 0T+1L)

121 GENERAL CHEMISTRY I Chemical and physical behavior of matter. Prerequisite: MATH 130, high school chemistry, or an ACT score of 19 or higher in Natural Science. Co-requisite: CHEM 121L. (3, 3T+0L)

121L GENERAL CHEMISTRY I LAB Co-requisite: CHEM 121. (1, 0T+1L)

122 GENERAL CHEMISTRY II A continuation of CHEM 121. Pre-requisite: CHEM 121/L. Co-requisite: CHEM 122L. (3, 3T+0L)
122L General Chemistry II Lab  Co-requisite: CHEM 122. (1, 0T+1L)

210 Integrated Organic & Biochemistry Introductory course designed to meet the entrance requirements in chemistry for students in allied-health fields in which some knowledge of organic chemistry and bio-chemistry is needed. Pre-requisite: CHEM 110/L or CHEM 121/L; Co-requisite: CHEM 210L. (3, 3T+0L)

210L Integrated Organic & Biochemistry Lab This course provides experiences with the physical properties and laboratory synthesis of organic compounds. Includes exercises in the preparation, separation, isolation, and characterization of biologically derived molecules. Co-requisite: CHEM 210. (1, 0T+1L)

221 Quantitative and Analytical Chemistry Basic theory and techniques of quantitative chemical analysis. Concepts of sampling and separation techniques with an emphasis on precision measurements and statistical analysis in volumetric and gravimetric procedures. Co-requisite: CHEM 221L. Prerequisites: CHEM 122L and MATH 145. (Spring) (2, 2T+0L)

221L Quantitative & Analytical Chemistry Lab Laboratory experiments involving instrumentation emphasis on sampling, statistical, measurement, and separation techniques. You will focus on proper documentation and data analysis. Co-requisite: CHEM 221. Prerequisites: CHEM 121 and 121L. (Spring) (2, 0T+2L)

260 Standard Laboratory Protocols Presents the theory and practice of basic laboratory protocols and analyses as performed in research and/or industrial settings. Emphasizes safety, detailed and accurate record keeping, data handling, and report writing. Beneficial to all majors in Biology, Materials Science, Environmental Management, and other applied science curricula. Prerequisites: CHEM 122 and 122L. (4, 4T+0L)

290 Undergraduate Research Experience I You will learn experimental design, library and Internet information searches, research methodology, laboratory safety, and how to maintain laboratory notes while interacting with peers and faculty. You prepare a technical report, poster, or presentation on your activities. Research questions may vary. Graded CR/NC. Pre-requisites: CHEM 121/L and 122/L, and permission of instructor. (3, 3T+0L)

301 Organic Chemistry I You will study the chemistry of the compounds of carbon. Pre-requisite: CHEM 122/L; Co-requisite: CHEM 301L. (3, 3T+0L)

301L Organic Chemistry I Lab You will engage in laboratory experiences supportive of CHEM 301. Co-requisite: CHEM 301. (1, 0T+1L)

302 Organic Chemistry II In this continuation of CHEM 301, you will continue your study of carbon compounds. Pre-requisite: CHEM 301/L. (3, 3T+0L)

302L Organic Chemistry II Lab You will engage in laboratory experiences supportive of CHEM 302. Co-requisite: CHEM 302. (1, 0T+1L)

311 Physical Chemistry You will study the quantitative principles of chemistry, gases, thermodynamics, quantum systems, equilibrium, kinetics, and spectroscopy. Pre-requisites: CHEM 122/L, 221/L, MATH 163, and PHYS 122/L; Co-requisite: CHEM 311. (3, 3T+0L)

311L Physical Chemistry Lab You will engage in laboratory experiences supportive of CHEM 311. Co-requisite: CHEM 311. (1, 0T+1L)

341 Survey of Biochemistry You will study the biochemistry of metabolic pathways, pH regulation, membranes and receptors, hormonal regulation, bioenergetics, nucleic acids, proteins, and enzymes. Pre-requisite: CHEM 210/L. (Spring) (3, 3T+0L)

421 Biochemistry You will study the fundamentals of general and organic chemistry to understand the complex array of structures and chemical processes that occur in living organisms. Pre-requisite: CHEM 301/L, 302/L, and 311/L; Co-requisite: CHEM 421L. (3, 3T+0L)

421L Biochemistry Lab You will engage in laboratory experiences supportive of CHEM 421 Co-requisite: CHEM 421. (1, 0T+1L)

Civil Engineering (CE)

160L General Engineering Design I Introduces engineering graphics, the design process, computer-aided design, engineering ethics, design economics, and project management. [Cross-listed with ME 160L] Pre-requisite: MATH 160. (3, 2T+1L)

202 Engineering Statics You will study force analysis of particles and rigid bodies in two and three dimensions using vector algebra as an analytical tool; centroids, distributed loads, trusses, frames, friction. [Cross-listed with ME 202] Pre-requisites: PHYS 215/L and MATH 163. (Fall) (3, 3T+0L)

302 Mechanics of Materials You will study stresses and strains in members subjected to tension, compression, torsion, shear and flexure; combined and principal stresses; Mohr’s circle construction; buckling, introduction to statistically indeterminate members. [Cross-listed with CE 302] Pre-requisites: PHYS 216/L and MATH 163. (Fall) (3, 3T+0L)

357 Mechanical Vibrations You will study free and forced vibrations of one and two degrees of freedom systems for both steady state and transient forcing, and vibrations of selected continuous systems and balancing. [Cross-listed with ME 357] Pre-requisites: ME 306 and MATH 316. (Fall) (3, 3T+0L)

Communications (COMM)

111 Business and Professional Communications Studies Practical introduction to the principles and skills needed to communicate effectively for on-the-job success in business and other professional settings. Emphasis is on developing, organizing, and supporting ideas at interpersonal business encounters, groups, and meetings, and platform presentations. Prerequisite: ENG 111. (3, 3T+0S)

300 Professional Communications You will be exposed to the wide range of communications required for IT professionals, learning proven techniques to sharpen writing, speaking, and active listening skills. Pre-requisites: ENG 111 and 116. (3, 3T+0S)
102 COMPUTER LITERACY  Overview of computer hardware, software, and the Windows or Linux environment. You will cover basic computer operating principles, file management, the use of the Internet, along with an introduction to word processors, spreadsheets, and database programs. (3, 3T+0S)

103 INTRODUCTION TO COMPUTER APPLICATIONS I  An introduction to software programs commonly used for personal or professional use. May be repeated for credit. (1, 1T+0S)

104 INTRODUCTION TO COMPUTER APPLICATIONS II  An introduction to software programs commonly used for personal or professional use. May be repeated for credit. (1, 1T+0S)

105 INTRODUCTION TO DATABASES  Through an introduction to database software, you will study basic database table, query, form, and report creation and management. Pre-requisite: CS 102 or IT 101. (3, 3T+0S)

106 INTRODUCTION TO THE INTERNET  Fundamentals of the Internet, including the use of browsers for searches, menus, setting up preferences, bookmarks, and downloading files from the World Wide Web network. Introduction to how to prepare a home-page and linking to other existing web-pages. Also includes an introduction to e-mail. (1, 1T+0S)

132 INTRODUCTION TO PROGRAMMING  You will use a modern high-level programming language to learn the basic concepts and practices of procedural and object-oriented programming. This course is suitable for non-CS majors or those seeking an introduction to CS. Prerequisite: MATH 102N and CS 102 (3, 2T+1S)

142 COMPUTER SCIENCE I  Through program analysis and design using a high-level programming language, you will study the fundamentals of program design, basic programming techniques, and concepts of object-oriented programming. Prerequisites: CS 132 or IT 110, and MATH 130. (3, 2T+1S)

152L COMPUTER PROGRAMMING I  In this introduction to the art of computing intended for engineering students, you will study the relationship between computing and problem solving. Pre-requisite: Knowledge of UNIX. (Fall and Spring) (4, 3T+1S)

167 C PROGRAMMING  You will learn programming in the C Language. Pre-requisite: CS 132. [Fall] (3, 2T+1S)

170 MATHEMATICS FOR COMPUTER SCIENCE  You will study discrete mathematics: the logic of predicates, compound and quantified statements, application to digital logic circuits and computer arithmetic, programming logic, elementary number theory, and methods of proof, mathematical induction, algorithms, and combinatorial reasoning. Pre-requisite: MATH 130. [Spring] (3, 3T+0S)

200 C++ PROGRAMMING  Covers programming using the C++ language, with emphasis on problem solving. Pre-requisite: CS 142. [Spring] (3, 2T+1S)

201 MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE  You will study the formal mathematical concepts of computer science, including such topics as elementary logic, induction, algorithmic processes, graph theory, and models of computation. (Fall) Pre-requisite: CS 152L. (3, 3T+0S)

210 DATABASE DESIGN AND PROGRAMMING  Database theory, design, and programming using Structured Query Language (SQL). Covers database definition and normalization, programming using the industry standard SQL, and server operational considerations. Pre-requisite: CS 105 and 132. [Fall] (3, 2T+1S)

220 ADVANCED JAVA  A graphical approach to object-oriented programming, continuing the exploration of classes, methods, encapsulation, and inheritance introduced in CS 142. Also covers event-driven programming. Pre-requisite: CS 142 and MATH 130. [Offered as needed] (3, 2T+1S)

238L COMPUTER LOGIC DESIGN  You will study binary number systems; Boolean logic: combinatorial, sequential, and register transfer logic; VHDL: arithmetic/logic unit; memories; computer organization; input-output and microprocessors. Pre-requisite: CS 152. [Cross-listed with EECE 238L] (Spring) (4, 3T+1S)

241 DATA ORGANIZATION  You will study data representation, storage and manipulation; memory organization of data storage and its relation to computation and efficiency. Topics include linked versus contiguous implementation, memory management, the use of indices and pointers, and an introduction to issues raised by the memory hierarchy. Pre-requisite: CS 152L. (Fall) (3, 2T+0L)

242 COMPUTER SCIENCE II  A continuation of CS 142, this course introduces algorithms and data structures, including trees, stacks, queues, and linked lists. Also covers basic operations using these structures, such as sorting and searching. Pre-requisites: CS 142 and CS 170. (Spring) (3, 2T+1S)

251 INTERMEDIATE PROGRAMMING  You will study the methods underlying modern program development. Specific topics include object-oriented design and the development of graphical user interfaces. Pre-requisite: CS 152L. (Spring) (3, 2T+0L)

280 GUI/WINDOWS PROGRAMMING  Introduction to event-driven programming and graphical user interfaces (GUI) on a windows platform. The class is taught using TCL/TK or an object-oriented approach using a development environment, such as Visual Studio with VisualBasic. Pre-requisite: CS 132. [Spring] (3, 2T+1S)

295 COMPUTER SCIENCE PROJECT  Individual project using tools and skills developed in previous courses. You will define your own project and its goals. May be repeated for credit to a maximum of 3 credits. Pre-requisite: Three 200-level CS/CT courses, one of which may be taken concurrently. (Cross-listed as CT 295) (3, 3T+0S)

341 INTRODUCTION TO COMPUTER ARCHITECTURE AND ORGANIZATION  You will survey various levels of computer architecture and design; microprogramming and processor architecture, advanced assembly language programming, operating system concepts, and input/output via the operating system. Pre-requisite: CS 238L and 241. (Fall) (3, 3T+0L)

351 DESIGN OF LARGE PROGRAMS  A project course on object-oriented analysis, design, and programming; programming language issues, programming tools and other computer science concepts for the project, such as discrete event simulation and parsing. Pre-requisites: CS 241 and 251. (Spring) (3, 3T+0L)
receive ample practice in filling out forms and using tables, formulas, and software to calculate tax liabilities. Covers the differences in proprietorship, partnership, and corporate requirements and reports; records keeping and bookkeeping requirements. (3, 3T+0S)

155 CONSTRUCTION MATH & BLUEPRINT READING Lumber and materials dimensions; scaling from plans; materials take-off; estimating costs; interpreting construction drawings, specifications, and blueprints; floor plans, elevations, sections, symbols, and notations. (3, 3T+0S)

156 INTERNATIONAL CONSTRUCTION CODE You will learn the use and applications of the International Construction Code (ICC) and the International Residential Code (IRC), with special emphasis on residential regulations. The entire state of New Mexico is covered by the ICC and IRC, except certain jurisdictions which use other codes in whole or in part, or may have addenda to these codes. (2, 2T+0S)

157 SITE DEVELOPMENT AND LAYOUT Planning the layout of a site with regard for codes, covenants, planning and zoning regulations, utility easements, and other requirements; locating homes, outbuildings, wells, septic systems, utilities, and roads using the instruments and measuring devices normally associated with site preparation. Classes will be conducted on-and-off campus. (2, 1T+1S)

158 FOUNDATION THEORY AND CONSTRUCTION Site layout; footing and stem wall construction; flat concrete work; insulation systems; monolithic floor/foundations, foam form, and other alternative systems. Provides theory, laboratory instruction, and hands-on activities. Classes will be conducted on-and-off campus. (2, 1T+1S)

159 MASONRY THEORY AND CONSTRUCTION Theory and practice of concrete, stucco, stone, brick, and block masonry techniques. Classes will be conducted on-and-off campus. (3, 1T+2S)

206 BUILDING CONSTRUCTION Introduces you to building construction, including building codes, construction sequencing, structural systems, construction methods, and estimating. Cross-listed as DRFT 206. Pre-requisites: MATH 100N and ENG 108N. (3, 3T+0S)

207 CONSTRUCTION MATERIALS AND ESTIMATING Introduces you to building materials and the preparation of a building project estimate, including computing and compiling materials and labor costs from working drawings using various techniques common in building construction and in accordance with standard specifications and estimating formats. You will be introduced to the CSI System, along with the use of spreadsheets and estimating software.. Pre-requisites: MATH 100N, ENG 108N, and CS 102, or permission of instructor. (3, 3T+0S)

COSMETOLOGY (COSM)

Pre-requisite for any Cosmetology course is completion of ENG 109N, or adequate score on the Course Placement Evaluation instrument.

111 THEORY I In this course you will receive an over view of the demands of the profession and the self-discipline needed to succeed in the field. It includes developing a professional image, first aid, ethics, and professional standards. (2, 2T+0S)

112 FACIALS You will study the theory and practice associated with performing facials: anatomy and physiology, preparation and
procedures, appropriate products, materials, implements, treatments, and make-up application. Co-requisite: COSM 111. (3, 1T+2S)

114 SHAMPOO, RINSE, AND SCALP TREATMENTS You will study the preparation, procedures and practice, products, materials, physiology, hair analysis, disorders of hair and scalp, related chemistry, client record keeping, and safety. Co-requisite: COSM 112. (3, 1T+2S)

116 HAIRCUTTING You will study the theory and practice related to haircutting, including anatomy and physiology, as well as the preparation and procedures for the use of shears, scissors, razors, and clippers on mannequins. Co-requisite: COSM 114. (6, 2T+4S)

118 HAIRCUTTING AND BEARD TRIMMING Continuing COSM 116, this course covers the preparation, procedures, and practice in shaving of the face, product, materials, and implements. Co-requisite: COSM 114. (6, 2T+4S)

122 CHEMICAL RESTRUCTURING / PERM You will study the theory, preparation, procedures, and practice related to the chemical rearranging (including perms) of hair, including the theory related to anatomy and physiology of hair, as well as common products, materials, and implements. You will consult with clients to analyze hair, perform the chemical procedure, and maintain proper recordkeeping while following approved safety measures. Pre-requisite: COSM 116 or 118. (4, 1T+3S)

160 THEORY II You will study state laws and regulations, chemistry, electricity, professional standards, and retailing in the salon. Pre-requisite: COSM 111. (2, 2T+0S)

162 STERILIZATION AND SANITATION You will study safety, preparation, procedures, practice, products, materials and implements, theory for personal and public safety, methods of sanitation and sterilization, chemical agents, types of bacteria, bacterial growth and infection. (2, 2T+0S)

164 MANICURING / PEDICURING You will study a combination of theory, lab practice, and clinical work in the techniques of manicuring and pedicuring. Co-requisite: COSM 162. (3, 1T+2S)

170 HAIRSTYLING In this course, you will combine the theory and practice of hairstyling to include the safety procedures and styling techniques, including wet styling, blow drying, finger waving, air waving, hair pressing, and client consultation. Pre-requisite: COSM 160. (3, 1T+2S)

212 THEORY III You will study communication skills, complete a review of state laws and regulations, job seeking skills and techniques. Pre-requisite: COSM 160. (2, 2T+0S)

214 CLINICAL PRACTICUM This is the capstone for the cosmetology program. It provides concentrated clinical practice in a supervised lab setting in preparation for the State Board exam. (Var. 3-6, 1T+2-5S)

216 HAIR COLORING / BLEACHING You will explore hair analysis procedures and related chemical actions involved in temporary, semi-permanent, and permanent color applications. Pre-requisite: COSM 170. (3, 1T+2S)

218 PERSONAL AND COMMUNITY HEALTH You will focus on public health issues pertaining to the cosmetology profession, including the condition of the skin, hair, and nails. (2, 2T+0S)

220 DIRECTED STUDY This is an independent clinical practice of all skills and knowledge learned in related courses. It is provided as a means for you to make up missed hours. (1-3, 0T+1-3S)

250 TEACHING THEORY You will study the principles of teaching, professional ethics, student learning styles, and academic advising. (2, 2T+0S)

252 COURSE DEVELOPMENT AND LESSON PLANNING You will study the principles of preparing lesson plans. Co-requisite: COSM 250. (4, 4T+0-S)

258 PRINCIPLES OF TEACHING AND CLASSROOM MANAGEMENT You will focus on developing classroom instruction, including recordkeeping, classroom conditions and maintenance, class supervision and control, classroom problems and solutions, and academic advising. (8, 8T+0S)

260 TEACHING AIDS You will study the utilization of films or videos, charts, mannequins, reference materials, and technology to supplement classroom instruction. (2, 2T+0S)

264 TEACHING METHODS In this course, you will delve deeper into course preparation, presentation, application testing, lecture, demonstration, discussion, projects, and field trips. (4, 4T+0S)

270 LABORATORY OR CLINICAL SUPERVISION You will cover independent clinic supervision, client communications, reception desk, inventory control, effective dispensary procedures, and the supervision of clinic sanitation/client safety. (8, 2T+6S)

274 TESTING AND STUDENT EVALUATION You will study student assessment, diagnosis of student weakness, student motivation, oral and written evaluation, and the development and use of testing/measurement instruments. (2, 2T+0S)

CRIMINAL JUSTICE (CJ)

Note: Each course in this department bears a Pre-requisite of ENG 109N or an adequate score on the Course Placement Evaluation.

111 INTRODUCTION TO CRIMINAL JUSTICE You will study the agencies and processes involved in the criminal justice system, including the legislature, police, prosecutor, courts, corrections, industrial security, personnel security, and loss prevention. (4, 4T+0S)

132 INTRODUCTION TO CRIMINOLOGY You will explore the nature and extent of crime through an interdisciplinary perspective; theories focus on attempt to explain criminality and delinquency. (3, 3T+0S)

201 CRIMINAL LAW You will study the legal definitions of crime and defense; purposes and functions of substantive criminal law; historical foundations; limits of the criminal law; focused approach through case study. (3, 3T+0S)

202 COURTS AND CRIMINAL JUSTICE You will acquire a basic knowledge of the history, organization, and dynamics of the different levels of court systems and their relation to the other entities that include the criminal justice system. You will examine the importance and impact of the courts upon society. (3, 3T+0S)
211 INTRODUCTION TO LAW ENFORCEMENT  You will study the historical settings of law enforcement; police role and career; police discretion; values and culture; organization and control. (3, 3T+0S)

221 CRIMINAL JUSTICE COMMUNITY RELATIONS  You will study problems with citizen relations; treatment of victims, witnesses and jurors; citizen involvement in the criminal justice process; community resources related to criminal justice programming. (3, 3T+0S)

224 INTRODUCTION TO CORRECTIONS  You will study the history, philosophy, legal issues, research, and models of the correction system and the impact of the system on prisoners and society, including the rights of the convicted criminal, the corrections process, the correctional system, community corrections, and other alternative sentencing programs. (3, 3T+0S)

228 FORENSIC INVESTIGATIONS  You will study the fundamentals of crime scenes and criminal investigations, with an emphasis on procedural techniques and technological advancements and how these relate to the collection and documentation of the physical evidence present. Places emphasis on various types of crimes and physical evidence, and how to better assure a more competent successful case closure and courtroom presentation. (3, 3T+0S)

231 CRIMINAL INVESTIGATIONS  You will study the fundamentals of investigations: crime scene, search and recording; collection and preservation of physical evidence, modus operandi, scientific aids, sources of information, interviewing and interrogation, follow-up and case preparation, legal search and types of evidence, and rules governing admissibility. (3, 3T+0S)

233 JUVENILE JUSTICE PROCEDURES  You will explore the causes of juvenile delinquency and philosophy of the juvenile court. In depth instruction in practice of the Juvenile Court, police handling of juveniles, detention and processing, juvenile case disposition, and major juvenile crime problems. (3, 3T+0S)

251 LAW ENFORCEMENT MANAGEMENT  You will study problems in organizational allocation of resources, information systems, determinants of police policy; principles of organizational functions, structures, processes, and behaviors. (3, 3T+0S)

DANCE (DANC)  
Any DANC activity course may be used to satisfy graduation requirements for Health, Physical Education, and Recreation. Each studio courses in this department may be repeated without penalty; each time counting for credit and toward your cumulative grade point average; however, no course may be counted more than once toward graduation requirements.

126 MODERN DANCE  Fundamentals of movement and its application to aesthetic communication. (2, 1T+1S)

139 FOLKLORICO DANCE I  You will study the historical and cultural roots, traditions, and basic techniques and styles of various regional dances: Mexican Folk, Spanish Colonial, and contemporary dances of the Chicano/Latino experience. This course will challenge you to expand your cultural understanding through movement. (2, 1T+1S)

149 BALLET I  Fundamental work in vocabulary, techniques, and styles of ballet for the adult beginner. (2, 1T+1S)

150 HI-HOP AND JAZZ I  You will explore the music and culture of Hip-Hop, focusing on dance techniques and styles of African dance, jazz, and hip-hop. As you learn the hip-hop dance movement, you will strengthen your ability to choreograph and execute a group performance. (2, 1T+1S)

169 FLAMENCO DANCE I  Develops the fundamentals of techniques and styles of Flamenco Dancing. (2, 1T+1S)

172 FLAMENCO TECHNIQUE I  You will focus on flamenco rhythm, technique, and the structure of flamenco dance. Includes an introduction to the rich culture of flamenco. (3, 1T+2S)

211 CHOREOGRAPHY  Selection of dance materials and sound accompaniment for solo and group composition. (3, 1+2S)

212 DANCE IMPROVISATION  You will discover the authentic self in movement; developing skills in group interaction, including the first steps in the use of structure and form in dance composition. Prerequisite: DANC 126; (2, 1T+1S)

214 KINESIOLOGY  Practical applications of concepts and theories of kinesiology, in which you will cover the pathomechanics of injury, injury management, injury prevention, and the kinesiology of ballet, flamenco, and modern dance. (3, 1T+2S)

222 FLAMENCO RHYTHMIC FUNDAMENTALS  You will be introduced to rhythms and meters common in flamenco dance. Includes dancing, percussion playing, singing, and recognition of audio rhythms. (2, 1T+1S)

239 FOLKLORICO DANCE II  In this continuation of DANC 139, you will develop more advanced techniques and styles of Folklorico dancing. Pre-requisite: DANC 139. (2, 1T+1S)

240 DANCE APPRECIATION  You will study forms of dance technique and performance while also exploring dance rituals within different cultures. (3, 3+0S)

250 HIP-HOP AND JAZZ II  In this continuation of DANC 150, you will be exposed to more advanced dance movements and choreography for group performances. Pre-requisite: DANC 150. (2, 1T+1S)

269 FLAMENCO DANCE II  Continues DANC 169, adding the development of techniques and styles at the intermediate level. Prerequisite: DANC 169. (2, 1T+1S)

292 REPERTORY  Professional training in the learning and performing of a new or staged choreography. (1, 0T+1S)

DRAFTING (DRFT)  
100 COMPUTER AIDED DRAFTING I  You will develop basic drafting skills using computer-aided drafting software (AutoCAD), including lettering, scales, line types, line weight, 2- and 3-view orthographic projection, dimensioning, and sectioning. (4, 3T+1S)

101 RESIDENTIAL CAD I  Introduction to residential computer-aided drafting, emphasizing the preparation of residential working drawings using AutoCAD. Pre-requisite: DRFT 100. (4, 1T+3S)
102 MECHANICAL ENGINEERING CAD I Introduction to engineering graphics using AutoCAD. Includes 2 and 3 view orthographic projection, geometric construction and dimensioning. Pre-requisites: DRFT 100. (4, 1T+3S)

103 SURVEYING AND CAD MAPPING I Introduces you to surveying using the transit, theodolite, level, etc. You will then convert the data you collected in the field to site plans/maps using AutoCad. Prerequisites: DRFT 100, MATH 100N, and ENG 108N. (4, 1T+3S)

107 GLOBAL POSITIONING SYSTEM GPS basics, including use of receivers, data collection, and differential correction. Pre-requisite: Familiarity with mapping. (1, 1T+0S)

108 AUTOCAD BASICS I Basics of computer aided drafting using AutoCAD software. (1, 1+0S)

109 ARCVIEW GIS BASICS I Basics of map production using ArcView GIS software. Pre-requisite: must be computer literate. (1, 1T+0S)

110 GIS/GPS Introduction to geographical information systems (GIS) using ArcView and the Global Positioning System (GPS) using hand-held GPS receivers. (3, 2T+1S)

111 COMMERCIAL BUILDING CAD Introduction to commercial building computer-aided drafting, emphasizing the preparation of working drawings using AutoCAD and Architectural Desktop. Pre-requisites: DRFT 101, and MATH 100N and ENG 108N. (4, 1T+3S)

112 MECHANICAL ENGINEERING CAD II Continues DRFT 102 using AutoCAD or Pro-Engineering, including sectional, auxiliary, and isometric/3D views, and advanced dimensioning. Pre-requisites: DRFT 102, MATH 100N, and ENG 108N. (4, 1T+3S)

113 SURVEYING AND CAD MAPPING II Continues DRFT 103 using more advanced surveying and CAD mapping. Pre-requisite: DRFT 103 and MATH 102N. (4, 1T+3S)

118 AUTOCAD BASICS II A continuation of DRFT 108 AutoCAD Basics I. Pre-requisite: DRFT 108. (1, 1T+0S)

119 ARCVIEW GIS BASICS II Continuation of DRFT 109, ArcView GIS Basics I, focusing on more advanced GIS map production. Pre-requisite: DRFT 109 or permission of instructor. (1, 1T+0S)

122 GEOMETRIC DIMENSIONING AND TOLERANCING Principles and practices of geometric dimensioning and tolerancing. Pre-requisite: DRFT 102, or permission of instructor. (3, 3T+0S)

123 SURVEYING BASICS Basics of surveying theory and collection of field data using levels, transits and theodolite. (1, 1T+0S)

126 AUTODESK LAND DESKTOP BASICS I You will study the basics of computer-aided drafting using AutoCAD software. (1, 1T+0S)

132 PRINTED CIRCUIT BOARD DESIGN Introduction to designing printed circuit boards, including the schematics, logic diagrams, and board/component drawing needed to manufacture single- and double-sided printed circuit boards. (4, 2T+2S)

199 JOB SKILLS You will develop resumes, portfolios, job search strategies, and interviewing techniques. Pre-requisite: ENG 109N. (1, 1T+0S)

201 RESIDENTIAL CAD II You will design a residence using AutoCAD and Architectural Desktop, with emphasis on the preparation of the design and working drawings. Pre-requisites: DRFT 101. (4, 1T+3S)

202 MECHANICAL ENGINEERING CAD III You will design and draft, using AutoCAD or ProEngineering, interrelated parts that make up an assembly of prototype product. Pre-requisites: DRFT 112. (4, 1T+3S)

203 CIVIL ENGINEERING CAD You will draft various civil engineering, highway projects, including plan and profile views, cross section and detailing. Pre-requisite: DRFT 113. (4, 1T+3S)

215 COMPUTER-AIDED MACHINING I Introduces you to CAM using the MasterCAM software. Includes part geometry, toolpath creation, and post processing to a CNC mill or lathe. Pre-requisite: DRFT 100 or MT 130. (3, 2T+1S)

216 COMPUTER-AIDED MACHINING II Advanced CAM using the MasterCAM software, including multi-tool programming and 3D toolpaths. Pre-requisite: DRFT/MT 215. (3, 2T+1S)

238 3-D MECHANICAL MODELING You will develop mechanical parts, assemblies and working drawings, using 3-D models created with a 3D parametric modeling, such ProEngineering software. Pre-requisites: DRFT 100 or MT 130. (2, 2T+0S)

299 COOPERATIVE WORK EXPERIENCE You will be employed in an approved work-related experience following individualized on-the-job learning objectives. 48 work hours are required to earn one semester hour of credit. You will responsible for finding employment and you will be evaluated jointly by program faculty and employer on a CR/NC basis. Pre-requisite: permission of instructor. (2-5, 0T+2-5L)

EARLY CHILDHOOD EDUCATION (ECE)

Note: Unless shown otherwise, each course in this department has a pre-requisite of ENG 109N.

202 CHILD DEVELOPMENT This course focuses on the developmental stages, processes, theories of development and learning, and on their implications for developmentally appropriate practice. (3, 3T+0S)

218 HEALTH, SAFETY, AND NUTRITION Focuses on the relationship and interaction of the physical, social, psychological, and cultural factors that influence the healthy development of the child. You will learn to promote good health through educational experiences, appraise and access health conditions, and create and maintain a safe early childhood environment. (3, 3T+0S)

219 INTRODUCTION TO EARLY CHILDHOOD EDUCATION Introduction to the historical, philosophical, and social influences of early childhood education. You will investigate professional careers
and opportunities, a variety of programs, and current trends and issues in early childhood education. (3, 3T+0S)

221 METHODS AND MATERIALS FOR EARLY CHILDHOOD EDUCATION You will focus on developmentally appropriate content learning environments and curriculum implementation for young children, integrating content areas, including the arts, literacy, math, health, science, and social studies, and the development of rich learning environments for infants, toddlers, and preschool children. (3, 3T+0S)

224 LEARNING ENVIRONMENTS Examines the social and physical environment within early childhood settings as an interactive and ongoing process. You will develop skills in implementing stimulating, secure, and enjoyable learning environments that encourage play, exploration, and cooperation. (3, 3T+0S)

226 PARENT/COMMUNITY INVOLVEMENT IN THE SCHOOL SETTING Focuses on establishing collaborative relationships among families, communities, and schools; explores the issues of diversity as they apply to family, community, culture, language, and children with special needs. (3, 3T+0S)

234 FIELD-BASED PRACTICUM I You will experience a supervised field experience with young children, hands-on training, and interaction with children and teachers in such programs as Head Start, child care, kindergarten, elementary grades, family child care homes, etc. You will be required to spend 48 contact hours with children, plus regularly scheduled seminars. (2, 1T+1L)

235 STUDENT TEACHING: INFANT/TODDLER For those who plan to work in programs that serve children ages birth to two years, such as child care, family child care, and home visitors. Topics include setting up safe, healthy, multicultural learning environments; advancing children's physical and intellectual family and community communication and collaboration; program management and professionalism. Requires 100 contact hours with children, plus regularly scheduled seminars. (3, 0.5T+2.5L)

236 STUDENT TEACHING: PRESCHOOL For those who plan to work in programs that serve children ages three to six years, such as Head Start, child care, kindergarten, family child care, and home visitors. Topics include setting up safe, healthy, multicultural learning environments; advancing children’s physical and intellectual development; supporting children’s social and emotional development; intercultural family and community communication and collaboration; program management and professionalism. Requires 100 contact hours with children, plus regularly scheduled seminars. (3, 0.5T+2.5L)

237 STUDENT TEACHING: ELEMENTARY SCHOOL For those who plan to work in programs that serve children ages five to eight years. Topics include setting up safe, healthy, multicultural learning environments; advancing children’s physical and intellectual development; supporting children’s social and emotional development; intercultural family and community communication and collaboration; program management and professionalism. Requires 100 contact hours with children, plus regularly scheduled seminars. (3, 0.5T+2.5L)

285 CHILD GUIDANCE Offers classroom management strategies and developmentally appropriate methods for helping children to become competent, independent, and cooperative learners in a group setting. (3, 3T+0S)

ECONOMICS (ECON)

200 MACROECONOMICS Introduction to the fundamental principles underlying the operation of a market economy on a global scale, mainly with problems of unemployment and inflation. Also discusses related problems of income redistribution and international trade and exchange rates, and economic growth and development. Pre-requisite: ENG 109N. (3, 3T+0S)

201 MICROECONOMICS Focuses on the problems specific to a household, firm, or industry, rather than those of a national or worldwide scale. Topics of concern are household and firm behavior, demand and supply, market structures, labor, and capital. Concentrates on the economics of the consumer, the business firm, the distribution of income, and the efficient allocation of resources. Pre-requisite: ENG 109N. (3, 3T+0S)

EDUCATION (ED)

201 FOUNDATIONS OF EDUCATION This course introduces you to the basics of the teaching profession. It includes societal expectations of teachers, social problems which impact students, essential knowledge needed for teaching, recent reforms in education, historical perspectives on education, the role of schools in today’s society, school governance, and the legal and ethical issues in education. Further, you will be expected to begin to articulate your philosophy of education. Pre-requisites: ENG 111 (3, 3T+0S)

205I. INTEGRATING TECHNOLOGY IN THE K-8 CLASSROOM This course provides an overview of technology as a way of enhancing instruction. You will use the Microsoft Office Suite and a variety of educational websites to become efficient in the classroom. You will create a portfolio that will include, but not be limited to, an e-lesson, presentation, newsletter, webpage, and grade book. (2, 1T+1S)

213 FIELD EXPERIENCE You will do initial observations of classroom environments and determinations of what classroom teacher do. You will participate in seminars and observe 45 hours of classroom instruction in the field. Pre-requisite: ENG 111, or permission of instructor; Co-requisite: ED 201(1, 0T+1L)

220 EDUCATIONAL PSYCHOLOGY Introduces you to psychological principles as they apply to teaching and learning. You will examine the relationships between theory, research, and practice in learning, memory, child development, motivation, and educational assessment for the school setting. You will address cognitive, linguistic, affective, and social development, with particular attention to the K-8 learner. Emphasis is on the integration of theory and practice, with numerous classroom applications of psychological theories and principles. Pre-requisite: ED 201 and PSY 105. (3, 3T+0S)

311 PRACTICUM I This course is designed to supplement ED 326. As assigned by the instructor, you will be engaged in specific responsibilities for 30-38 hours in field and/or lab experiences. Pre-requisite: ED 201; Co-requisite: ED 326. (1, 0T+1S)

313 SCIENCE AND MATH FOR EDUCATORS I This course is aligned to the following concepts and processes: systems, order and organization, evidence, models and explanation; constancy, change, and measurement; evolution and equilibrium, form and function. You will be prepared to understand the development of scientific inquiry and scientific thinking in grades K-4 and to teach the National Science
Education Standard A (Science as Inquiry), Standard B (Physical Science), Standard C (Life Science), Standard D (Earth and Space Science), Standard E (Science and Technology), Standard F (Science in Personal and Social Perspectives), and Standard G (History and Nature of Science). As assigned by your instructor, you will be engaged in specific responsibilities over a sustained period of time in field and/or lab practice. Pre-requisite: ED 201 and MATH 130, and a 4-cr science course w/lab. (Fall) (3, 2T+1S)

322 MATH FOR EDUCATORS I This course is designed to prepare you to teach the National Council of Teachers of Mathematics Standard 1, K-8, Numbers and Operations, and Standard 2, K-8 Algebra, integrated with Standards 6, 7, 8, 9, and 10 Problem Solving, Reasoning and Proof, Communications, Connections, and Representations. You will be assessed based on performance measures designed to demonstrate mastery of mathematical concepts.). As assigned by your instructor, you will be engaged in specific responsibilities over a sustained period of time in field and/or lab practice. Pre-requisite: ED 201 and MATH 130. (Fall) (3, 2T+1S)

326 STRATEGIES FOR SUCCESSFUL CLASSROOMS You will develop a rationale and plan for creating classroom procedures, routines, and structures that lead to increased student learning. You will research and also be presented with learning theories and practices that result in the creation of learning environments which are safe physically and psychologically. You will understand the principles involved in motivating students and overcoming resistance to learning. Pre-requisite: ED 201; Co-requisite: ED 311. (2, 2T+0S).

404 MUSIC AND ART ACROSS THE K-8 CURRICULUM You will learn how rhythm, color, design, texture, and elements of composition in various media can be used across the elementary curriculum to enhance learning and self-expression. You will correlate the application of theory with individual small and large group projects. (2, 2T+0S)

410 TEACHING AND DIAGNOSIS OF READING This course provides you with a conceptual framework for understanding the growth of language development throughout the elementary years. You will be introduced to instructional strategies to build reading, writing, and speaking abilities. The course will address literacy differences through a literature-based approach to instruction, focusing on cognitive, affective, social, and cultural factors that created differences in literacy abilities. State standards and benchmarks are incorporated into this course. You will be required to do field work. Pre-requisite: ED 201 and Passing NMTA. (3, 3T+0S)

411 PRACTICUM II Designed to supplement the Teaching and Diagnosis of Reading (ED 470). As assigned by the instructor, you will be engaged in specific responsibilities for 30-48 hours in field and/or lab experiences. Co-requisite: ED 410. (1, 0T+1S)

420 CREATIVE MOVEMENT FOR THE CLASSROOM You will understand and appreciate the natural tendency of the human body to express feelings, thoughts, and sensations through moving and making sound. Creative Movement as a discipline encourages exploration and discovery of this natural movement impulse. Through this, you will develop learning skills, social skills, self-esteem, and self-expression leading to improved problem solving on all levels. You will correlate course objectives to individual and to small and large group activities. (2, 2T+0S)

422 MATH FOR EDUCATORS II This course is designed to prepare you to teach the National Council of Teachers of Mathematics Standard 3, K-8, Geometry, and Standard 4, K-8, Measurement. You will also address NCTM Standard 5, K-8, Data Analysis and Probability, integrated with NM Standards 6, 7, 8, 9, and 10. Problem Solving, Reasoning and Proof, Communications, Connections and Representations. You will be assessed based on performance measures designed to demonstrate mastery of mathematical concepts. Pre-requisite: ED 201. (Spring) (3, 2T+1S)

423 SCIENCE AND MATH FOR EDUCATORS II This course is aligned to the following concepts and processes: systems, order and organization, evidence, models and explanation; constancy, change, and measurement; evolution and equilibrium, form and function. You will be prepared to understand the development of scientific inquiry and scientific thinking in grades 5-8, and to teach the National Science Education Standard A (Science as Inquiry), Standard B (Physical Science), Standard C (Life Science), Standard D (Earth and Space Science), Standard E (Science and Technology), Standard F (Science in Personal and Social Perspectives), and Standard G (History and Nature of Science). You will also be engaged in specific responsibilities for 30-48 hours in field and/or lab experiences. Pre-requisite: ED 313. (Spring) (3, 2T-1S)

450 PEDAGOGY AND LEARNING In this course, you will review the social, emotional, physical, and cognitive development of children from birth through adolescence, and it critically examines researched methods and theories, enabling you to become an effective practitioner. You will also explore brain-based learning, multi-sensory instruction, developmentally appropriate practice, multiple intelligences, and learning style. Pre-requisite: ED 201. (3, 3T+0S)

460 READING AND WRITING ACROSS THE CURRICULUM (ELEM.) This course provides you with an overview of literacy and language development, and focuses on the development and implementation of an integrated curriculum approach at the elementary level. You will see how the emphasis of the integration of state standards and benchmarks is through a literary approach. (3, 3T+0S)

475 CURRICULUM METHODS AND MATERIALS FOR SPECIAL EDUCATION You will focus on teacher knowledge and application skills in teaching curricula aligned with state content standards and benchmarks. You will explore areas of individualized modifications and/or accommodations when the general education curriculum is not appropriate. You will address instructional strategies in meeting the needs of the special learner with transition as a major component, with emphasis on the application of technology to support teaching and learning. You will address and integrate the Individual Education Plan (IEP) throughout the learning process. Pre-requisite: ED 401 AND 450, and passing NMTA. (Spring) (3, 3T+0S)

479 STUDENT TEACHING This is a full-time assignment during the semester, in conjunction with ED 480 (Student Teaching Seminar). You will be engaged in a minimum of 14 weeks and 420 hours of student teaching. You will follow the daily schedule of the assigned grade, assume regular faculty and out-of-classroom duties, participate in faculty meetings, PTA/PTO meetings, and other appropriate school-community activities. Your final placement in a school is decided by the Education Department, contingent upon your being acceptable to the school in which you will do your teaching. You must have already passed the New Mexico Content Knowledge Assessment of Elementary Education examination (NMTC and NMCK); Co-requisite: ED 480. (9, 0T+9L)
480 STUDENT TEACHING SEMINAR This course provides you interaction with guided discussion on reflections of the student teaching experience. Supplemental requirements include outside readings based upon educational research and corresponding reflective papers. Pre-requisite: Department Permission. Co-requisite: ED 479. (1, 1T+0S)

495 ASSESSMENT AND EVALUATION OF STUDENT LEARNING Explores the construction and utilization of teacher-made and standardized tests. You will learn to gather data, report, and communicate assessment results to students, parents, and administrators in a variety of ways in an effort to meet diverse student needs. You will become familiar with the local school district’s testing program and will develop valid evaluation tools to measure student outcomes. Pre-requisite: passing NMTA. (3, 3T+0S)

EDUCATION -- BILINGUAL EDUCATION (EDBE)
Pre-requisite for these programs is at least 6 credit hours in Spanish as a Heritage Language, or permission from the department.

211 FOUNDATIONS OF BILINGUAL/ESL EDUCATION You will explore and review the historical, legal, philosophical, theoretical paradigms of bilingual/ESL education. (Fall) Co-requisite: EDBE 212. (3, 3T+0L)

212 SECOND LANGUAGE ACQUISITION You will study in-depth how first and second languages are acquired. (Fall) Co-requisite: EDBE 211. (3, 3T+0L)

305 SPANISH LITERACY FOR BILINGUAL EDUCATION You will study the practical implementation of Spanish literacy skills, including reading, writing, listening, and speaking. This course will be taught in Spanish. (Summer) Pre-requisites: EDBE 360 and 361; Co-requisite: EDBE 306. (3, 3T+0L)

306 SPANISH FOR THE BILINGUAL CLASSROOM This course will present the Spanish language as it is applied to school community settings in addition to the classroom setting. It will include both vernacular and formal language. Spanish will be the language of instruction inclusive of student presentations and participation. (Summer) Pre-requisites: EDBE 360 and 361; Co-requisite: EDBE 305. (3, 3T+0L)

360 METHODS OF TEACHING BILINGUAL/ESL You will learn methodological approaches for working with TESOL and bilingual population. Pre-requisites: EDBE 211 and 212; Co-requisite: EDBE 361. (Spring) (3, 3T+0L)

361 INTRODUCTION TO LINGUISTICS You will be exposed to a broad overview of the field of linguistics; principles and practices of linguistic analysis, sociolinguistics, psycholinguistics, and educational linguistics. This course is oriented primarily to the needs of present and prospective teachers. (Spring) Pre-requisites: EDBE 211 and 212; Co-requisite: EDBE 360. (Spring) (3, 3T+0L)

380 APPROACHES TO TEACHING ENGLISH - WRITING SKILLS TO ESL/BILINGUAL STUDENTS As an ESL and/or bilingual teacher or teacher candidate, you will develop the knowledge, experience, and skills you need to assess student writing: developing appropriate assignments and teaching techniques and using technology (e-mail, the Web, etc.) to teach writing. You will also explore research on writing and attitudes toward writing. (Summer) Pre-requisites: EDBE 360 and 361; Co-requisite: EDBE 380. (3, 3T+0L)

381 ENGLISH AS A SECOND LANGUAGE (ESL) IN THE CONTENT AREA You will focus on the theories and practical strategies used to encourage second language development in the content-area classroom. You will pay special attention to sheltered instruction techniques and differentiating instructional practices. You will learn how to modify content, context, and procedures to meet the individual needs of non-native English speakers in the English-speaking classroom. You will explore current vocabulary acquisition theories and their practical classroom applications. You will acquire a variety of vocabulary teaching strategies and techniques. (Summer) Pre-requisites: EDBE 360 and 361; Co-requisite: EDBE 380. (3, 3T+0L)

412 ASSESSING ENGLISH LANGUAGE LEARNERS This course, which is designed to help you understand the principles of second language assessment, as well as assessing second language learners in the content area, will address current issues in assessing English Language Learners (ELLs). You will develop a foundation of assessment theories, practices, and strategies, with particular attention on how to link assessment to instructional activities. You will gain
practical experience in designing, administering, and interpreting assessments, with special attention to assessment instruments used in New Mexico. (Fall) Pre-requisites: EDTE 380 and 381; Co-requisite: EDTE 413. (3, 3T+0L)

413 SPECIAL TOPICS IN TESOL You will address topics on current requests/needs in ESL. (Fall) Pre-requisites: EDTE 380 and 381; Co-requisite: EDTE 412. (3, 3T+0L)

EDUCATION - ALTERNATIVE LICENSURE PROGRAM (ED)
Those enrolled in this program must achieve a minimum grade of ‘B’ for each of the following:

401 FOUNDATIONS OF EDUCATION This course introduces you to the basics of the teaching profession. It includes societal expectations of teachers, social problems which impact students, essential knowledge needed for teaching, recent reforms in education, historical perspectives on education, the role of schools in today’s society, school governance, and the legal and ethical issues in education. Further, you will be expected to begin to articulate your philosophy of education. Pre-requisite: Passing NMTA; Co-requisite: ED 452. (3, 3T+0S)

412 TEACHING AND DIAGNOSIS OF READING (ELEMENTARY) This course provides a conceptual framework for understanding the growth of language development throughout the elementary years. The class provides instructional strategies to build reading, writing, and speaking abilities, and it addresses literacy differences through a literature-based approach to instruction. The class focuses on cognitive, affective, social, and cultural factors that created differences in literacy abilities. State standards and benchmarks are incorporated in this course. Pre-requisite: Passing NMTA. (3, 3T+0S)

452 PEDAGOGY AND HUMAN LEARNING This course reviews the social, emotional, physical, and cognitive development of children from birth through adolescence, and it critically examines researched methods and theories, enabling teachers to become effective practitioners. You will explore brain-based learning, multi-sensory instruction, developmentally appropriate practice, multiple intelligences, and learning style. Pre-requisite: Passing NMTA; Co-requisite: ED 401. (3, 3T+0S)

462 READING AND WRITING ACROSS THE CURRICULUM (SECONDARY) Provides an overview of literacy and language development, and focuses on the development and implementation of an integrated curriculum approach at the secondary level. You will explore and practice alternative reading assessments which focus on teaching strategies incorporating state content and benchmarks. Pre-requisite: ED 401 and passing NMTA. (3, 3T+0S)

464 READING AND WRITING ACROSS THE CURRICULUM (ELEMENTARY) Provides an overview of literacy and language development, and focuses on the development and implementation of an integrated curriculum approach at the elementary level. Also emphasized is the integration of state standards and benchmarks through a literary approach. Pre-requisite: ED 401 and passing NMTA. (3, 3T+0S)

474 METHODS AND MATERIALS IN SECONDARY EDUCATION This course explores the methods and materials appropriate in a secondary learning environment. You will learn teaching strategies, assessments, adaptive teaching for student learning styles, integration of content areas, and block scheduling. Alternatives to lecture are emphasized, with diversity of multiculturalism as a major focus. Pre-requisite: Passing NMTA. (3 3T+0S)

492 ASSESSMENT AND EVALUATION OF STUDENT LEARNING Explores that construction and utilization of teacher-made and standardized tests. You will learn to gather data, report, and communicate assessment results to students, parents, and administrators in a variety of ways in an effort to meet diverse student needs. You will become familiar with the local school district’s testing program, and will develop valid evaluation tools to measure student outcomes. Pre-requisite: ED 401 and passing NMTA. (3, 3T+0S).

493 THE INTEGRATED ELEMENTARY CLASSROOM Explores the historical and theoretical perspectives underlying and supporting the integrated curriculum approach to teaching and learning. You will explore practical approaches to thematic instruction and integration through content areas through incorporating state standards and benchmarks. Components include assessment methods, lesson plans, curriculum planning and development. Pre-requisite: Passing NMTA. (2, 2T+0S)

496 SUPERVISED FIELD EXPERIENCE (ELEM) This course provides an interaction with other students in the elementary field-experience setting. Guided discussions address classroom management, student learning, lesson plans, discipline, school/home communication, and professional development. Additional areas include professional issues and ethics, and portfolio preparation. Pre-requisites: Passing NMTA. (1, 1T+0S)

496L SUPERVISED FIELD EXPERIENCE LAB (ELEM) Provides a field experience in an appropriate elementary classroom setting under the advisement and supervision of a mentor teacher and college supervisor; emphasizes observation of student learning styles, teaching strategies, classroom management, and discipline. Requires 96 or more hours of practicum in the field, which includes 6 hours of seminar. Interaction with students on a one-to-one basis and in small group settings is provided. Pre-requisite: Passing NMTA. (2, 0T+2S)

498 SUPERVISED FIELD EXPERIENCE (SEC) This course provides an interaction with other students in the secondary field-experience setting. Guided discussions address classroom management, student learning, lesson plans, discipline, school/home communication, and professional development. Additional areas include professional issues and ethics, and portfolio preparation. Pre-requisite: Passing NMTA. (1, 1T+0S)

498L SUPERVISED FIELD EXPERIENCE LAB (SEC) Provides a field experience in an appropriate secondary classroom setting under the advisement and supervision of a mentor teacher and college supervisor; emphasizes observation of student learning styles, teaching strategies, classroom management, and discipline. Requires 96 or more hours of practicum in the field, which includes 6 hours of seminar. Interaction with students on a one-to-one basis and in small group settings is provided. Pre-requisite: Passing NMTA. (2, 0T+2S)
ELECTRICAL TECHNOLOGY (ELEC)

110 INTRO TO SOLAR ELECTRICITY You will study the basics of electrical wiring technology found in photovoltaic systems, including direct current (DC) and alternating current (AC) circuits. You will review basic electrical theory and the current National Electrical Code (NEC) requirements. You will be introduced to the components found in grid-tied systems and stand-alone systems and given the opportunity to compare these systems. (1, 1T+0S)

110L INTRO TO SOLAR ELECTRICITY LAB In this course, you will have laboratory experiences which apply to the theoretical material covered in ELEC 110. You will work with AC and DC components, methods, tools, and materials needed to connect photovoltaic systems from collector module wiring to panels to batteries to inverters to grid-tie equipment. Safety in the electrical environment is stressed. (2, 0T+2S)

140 ELECTRICAL THEORY I Basic electrical theory, OHM's Law, series and parallel circuits, electrical symbols, AC and DC circuits. (3, 3T+0S)

141 ELECTRICAL CODE I National Electrical Code (NEC) requirements for single and multi-family dwellings, use of NEC tables and calculations. (3, 3T+0S)

142L RESIDENTIAL WIRING LAB Practical applications and operations in wiring techniques and codes for residential projects; tool safety, hardware use and identification. (6, 0T+6S)

150 ELECTRICAL THEORY II Basic principles of electromagnetic induction as applied to electric motors, transformers, and solenoid coils. (3, 3T+0S)

151 ELECTRICAL CODE II Code interpretation for commercial, industrial, and hazardous locations; load calculations, over-current protection and grounding. (3, 3T+0S)

152L COMMERCIAL WIRING LAB Practical applications and operations using field work: wiring techniques and codes for assigned commercial and industrial projects. (6, 0T+6S)

160 MOTOR CONTROLS Theory in across-the-line starters, solid-state control, programmable control, pilot devices, line and wiring diagrams, troubleshooting, repair techniques. Co-requisite: ELEC 160L. (3, 3T+0S)

160L MOTOR CONTROLS LAB Co-requisite: ELEC 160. (3, 0T+3S)

190 SOLAR AND WIND SYSTEMS IN THE ELECTRICAL CODE Starting with a review of DC electrical circuits, you will cover Sections 690 and 695 of the National Electrical Code, which deals with photovoltaic and wind-generated electrical systems. You will discuss conductor sizes, circuits, outlets, disconnects and over-current protection between the energy source and the service entrance. Recommended co-requisites: RE 207 or 208. (2, 1T+1S)

ELECTRICAL, ELECTRONIC, and COMPUTER ENGINEERING (EECE)

203L CIRCUIT ANALYSIS I You will study basic electrical elements and sources; energy and power; Ohm's and Kirchoff's Laws; resistive networks, node and loop analysis; network theorems; first and second order circuits; sinusoidal sources and complex representations; impedance, phasors' complex power; and three-phase circuits. Pre-requisites: MATH 163 and PHYS 216/L. (Fall) (3, 2T+1L)

213 CIRCUIT ANALYSIS II You will study general transient analysis of electrical circuits; Laplace transform with application to circuit analysis; state-space equations; Fourier series analysis; the network function, convolution, and frequency response. Pre-requisites: MATH 314 and 316, and EECE 203L. (Spring) (3, 2T+1L)

238L COMPUTER LOGIC DESIGN You will study binary number systems, Boolean logic; combinatorial, sequential, and register transfer logic; VHDL; arithmetic/logic unit; memories, computer organization, input-output, and microprocessors. Pre-requisites: MATH 163 and PHYS 216/L. [Cross-listed with CS 238L] (Spring) (4, 3T+1L)

314 SIGNALS AND COMMUNICATION You will study linear system analysis; signal spectra; Fourier series and transforms; modulation and demodulation schemes, sampling theorem, discrete time signals, discrete time Fourier series and transform, elements of z-transform. Pre-requisites: EECE 213 and MATH 163. (Fall) (3, 3T+0L)

321 ELECTRONICS I You will be introduced to diodes, bipolar and field-effect transistors; analysis, design and characterization of linear amplifiers; analysis and design of operational amplifiers and their circuit applications. Pre-requisite: EECE 213. (Fall) (3, 3T+0L)

322 ELECTRONICS II You will study the design of multistage, operational amplifiers and feedback circuits; analysis and design of common digital integrated circuits; gates, flip-flops, and multivibrators. Pre-requisite: EECE 321. (Spring) (3, 3T+0L)

327L ELECTRONICS LAB You will engage in laboratory experiments in analog and digital electronics. Pre-requisite: EECE 321. (Spring) (2, 1T+1L)

340 PROBABILISTIC METHODS IN ELECTRICAL ENGINEERING You will study probability axioms, random variables, mean, variance, characteristic functions, transformation of random variables, confidence intervals, jointly defined random variables, multi-variate Gaussian variables, conditional probability densities, random processes, correlation, power spectrum, white noise, Markov processes and chains, transmission of noise through linear systems. Pre-requisites: EECE 314 and MATH 314. (Spring) (3, 3T+0L)

344L MICROPROCESSORS You will study computers and microprocessors; architecture, assembly language programming, input/output and applications. Pre-requisite: EECE 322. (Fall) (4, 3T+1L)

360 ELECTROMAGNETIC FIELDS AND WAVES You will study Maxwell's equations, plane wave propagation, waveguides and transmission lines, transient pulse propagation and elementary dipole antenna. Pre-requisite: EECE 213, PHYS 216/L, and MATH 163. (Spring) (3, 3T+0L)

371 MATERIALS AND DEVICES You will be introduced to quantum mechanics, crystal structures, insulations, metals, and semiconductor material properties, bipolar field effect, and light emitting devices. Pre-requisite: PHYS 216/L. (Fall) (4, 3T+1L)
390 POWER SYSTEMS You will study mechanical and electrical properties of machinery for power generation or deployment; network or grid design of distribution of power; sources of electric power and their characteristics of energy conversion efficiency, cost, and environmental impact; introduction to electric energy storage. [Cross-listed with ME 390] Pre-requisites: ME 306, 317, and EECE 203L. (Spring) (3, 3T+0L)

441 INTRODUCTION TO COMMUNICATION SYSTEMS You will study modulation methods – amplitude, phase, frequency and pulse dimensional, sideband shaping, synchronous and asynchronous mod/demod, timing recovery, phase-lock loops, equalizers – fixed and self-adjusting, linear and nonlinear impairments, effects of noise, spread spectrum by code or frequency hopping. Pre-requisites: EECE 314 and 340. (Fall) (3, 3T+0L)

452 POWER CONTROLLERS You will study power supply design, DC-DC and DC-AC conversion devices, electric power measurement devices, frequency and power level stabilizers; regulators, smart metering. Pre-requisite: EECE 321. (Spring) (3, 2T+1L)

453 ELECTRIC ENERGY STORAGE DEVICES You will study electrochemical, electrostatic, and electromechanical processes for storage of electrical energy; design of storage systems; storage efficiency measures. Pre-requisite: EECE 321 and PHYS 216/L. (Fall) (3, 2T+1L)

472 PHOTOVOLTAIC DEVICES You will study photovoltaic effect in semiconductors; electrical and mechanical design of photovoltaic cells, panels, and systems; use of lenses and mirrors in PV systems; manufacturing methods of PV devices. Pre-requisite: EECE 322 and 371. (Fall) (3, 3T+0L)

490 CAPSTONE IN EECE I (4, 2T+2L)
491 CAPSTONE IN EECE II (3, 3T+0L)

ENGINEERING (ENGR)

110 INTRODUCTION TO ENGINEERING TECHNOLOGY Problem-solving using concepts from applied science. Emphasis on: communication of ideas and information, presentation of physical concepts, hypothesis testing, data acquisition and analysis, analytical modeling, and computational methods. Tools used include scientific calculators and computers. Topics are chosen from: work, force, rate, and resistance. Prerequisite: MATH 102N, or better or permission of instructor. (4, 4T+0S)

160L GENERAL ENGINEERING DESIGN I Introduces engineering graphics, the design process, computer-aided design, engineering ethics, design economics, and project management. [Cross-listed with ME 160L] Pre-requisite: MATH 160. (3, 2T+1L)

ENGLISH (ENG)

106N BASIC READING AND WRITING Studies grammar, simple sentence structure, and reading improvement skills; develops abilities in critical thinking. Pre-requisite: adequate score on Course Placement Evaluation; Co-requisites: Personal Development courses per direction of advisor. (4, 4T+0S)

108N BASIC ENGLISH I Developmental course for those unprepared for ENG 109N and/or ENG 111, and for those whose program requires it. Stress is on basic communications skills with instruction and guided practice in grammar, punctuation, and usage concentrating on paragraphs and the short essay, as well as in critical reading. Pre-requisites: ENG 106N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

109N BASIC ENGLISH II Developmental course building on skills mastered in ENG 108N. Stress is on basic communications skills concentrating on an understanding of the writing process and increasing ability to write the short essay and to read critically. Pre-requisite: ENG 108N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

111 ENGLISH COMPOSITION I Involves instruction and practice in expository writing and critical reading; reviews grammar and stresses vocabulary development. Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

112 ENGLISH COMPOSITION II Involves analytic writing, reading, and discussion of imaginative literature. Pre-requisite: ENG 111. (3, 3T+0S)

114 INTRODUCTION TO MASS COMMUNICATIONS Covers the functions and organization of the mass media system in the United States; analyses the cultural, social, and political impact of mass media, especially TV, on US society. Pre-requisite: ENG 111. (3, 3T+0S)

115 WRITING FOR THE MASS MEDIA I Introduces you to journalistic writing, including conventions of journalism, and the gathering and writing of news articles for print and broadcast media. Pre-requisite: ENG 111. (3, 3T+0S)

116 TECHNICAL WRITING This course covers the preparation of written reports of a scientific and/or technical nature, with emphasis on formal and informal reports, instructions, abstracts, technical articles, scientific and technical terminology and vocabulary, formats, tables, graphs, charts, and audio-visual and oral presentation techniques. Pre-requisite: ENG 111. (3, 3T+0S)

117 GRANT WRITING Provides you with an overview of the grant writing process, development of an idea, determining a need statement, evidence of need (statistics, etc.), defining the objective of the grant, story boarding and designing a program. Includes information on where and how to locate grants. (1-3, 1-3T+0S)

221 CREATIVE WRITING Involves the analysis and criticism of student-produced poetry or fiction (focus varies by semester). May be taken twice for credit. (3, 3T+0S)

260 THE BIBLE AS LITERATURE You will study and discuss the narratives and poetry found in the English Bible, with emphasis on the literary qualities of the readings. Pre-requisites: ENG 111. (3, 3T+0S)

262 SOUTHWEST LITERATURE You will learn to appreciate and analyze Southwest literature through reading, discussing, and writing. The literature chosen will be from a cross-section of cultures, genders, and genre (fiction, poetry, non-fiction). Pre-requisite: ENG 112. (3, 3T+0S)
102  OVERVIEW OF FOREST MEASUREMENT  You will use the forest, meadows, and streams of the Carson National Forest as a natural laboratory for this class in which you will explore, by direct investigation and quantitative analysis, the structure and function of this complex ecosystem in order to understand how it changes in space and through time. Pre-requisite: FOR 113. (3, 3T+0L)

112  INTRODUCTION TO ENVIRONMENTAL SCIENCE I  You will study environmental science through the structure and function of ecosystems and the various levels of living organisms. You will define and analyze ecological principles which determine the sustainability of ecosystems, including energy use, nutrient recycling, balance, natural resources, resilience, and biodiversity. (Fall only) Co-requisite: ES 112L. (3, 3T+0L)

112L  INTRODUCTION TO ENVIRONMENTAL SCIENCE I LAB  In this field-work companion to ES 113, you will work as part of a team, concentrating on a detailed investigation and analysis of a specific environmental problem or case. Co-requisite: ES 112. (Spring only) (1, 0T+1L)

113  INTRODUCTION TO ENVIRONMENTAL SCIENCE II  In this continuation of ES 112, you will apply ecologic principles to human societies with a focus on population, growth, natural resource depletion, pollution, and global environmental issues to more thoroughly comprehend how human interaction affects and threatens the environment. Pre-requisite: ES 112. (3, 3T+0L)

120  FOREST AND RANGE ECOLOGY  Identification of native southwestern range plants, ecosystems and their relation to associated ecosystems, soil types and moisture zones as they affect the range; studies grazing by both wild and domestic animals and its effect on plant communities, and man and his effect on the range. (3, 3T+0S)

121  ENVIRONMENTAL AIR MONITORING  Explores fundamentals and techniques of monitoring the environment with an emphasis on the air pathway, including the nature of gases and the atmosphere, the oxygen and carbon cycles, Stokes law, the gas laws, Gaussian plume models, source pathways of pollutants, and the use of state-of-the-art equipment to measure pollutants and meteorological variables. Pre-requisite: ES 112/L. (3, 3T+0S)

123  ENVIRONMENTAL HYDROLOGY AND ECOLOGY  Explores fundamentals and techniques of monitoring the environment with an emphasis on the water pathway, including the periodic table, ions, bonds, pH, phase changes, fluid flow, Stokes law, hydrostatic pressure, eco-toxicology, the food chain, and the use of state-of-the-art equipment to measure pollutants in soils, and in surface and ground water. You will experience hands-on work with LANL staff and technicians. Pre-requisite: MATH 102N. (3, 1T+2S)

125  PRINCIPLES OF PHYSICAL HYDROLOGY  In this course, you will be exposed to a qualitative introduction to the dynamics of watersheds and groundwater flow from an intuitive perspective, laying the foundations for understanding the physical mechanisms by which water is transported throughout a hydrologic system.  Pre-requisites: ES 112/L. (3, 3T+0L)

134  OSHA HEALTH AND SAFETY  Overview of the accepted technologies to protect the health and safety of personnel handling hazardous waste. Meets OSHA 29 CFR 1910.120 requirements for Hazardous Waste Operations. Graded CR/NC. (3, 3T+0S)
201 ENVIRONMENTAL PHYSICAL AND CHEMICAL PROCESSES You will study basic general, analytical, organic, and polymer chemistry from an environmental perspective: the pollutants of air, water, and land; the rudiments of toxicology, and an introduction to green chemistry. You will learn about chemical processes in industry and nature, physical transport, risk, and aspects of human impacts and policy. Pre-requisites: BIOL 201/L and CHEM 121/L; Co-requisite: ES 201/L. (3, 3T+0L)

201L ENVIRONMENTAL PHYSICAL AND CHEMICAL PROCESSES LAB You will study the basic techniques for chemical analysis of environmental samples including air, water, and soil. You will also learn to use electronic data acquisition systems and further develop your scientific writing skills. Co-requisite: ES 201. (1, 0T+1L)

203 INTRODUCTION TO GIS/GPS AND CARTOGRAPHY You will evaluate the characteristics, uses, and limitations of computer applications in natural resource management including application programs in statistical analysis, computer modeling, geographic information systems (GIS), global positioning systems (GPS), and database management systems (DBMS). Cross-listed as DRFT 110. Pre-requisite: permission of instructor. (2, 2T+0L)

210 SOIL TESTING AND INTERPRETATION You will become acquainted with soil composition and classification; relationship of soil to plant growth and animal health; use of fertilizers, erodion and control. You will study the four general components of soil testing: a) soil sampling and handling, b) analytical methodology involved in nutrient extraction from the soil by various tests, c) interpretation of the analytical results, and d) recommendations for the correction of soil nutritional problems, including acidity, deficiencies, imbalances, and excess levels. Pre-requisites: ES 112/L and ES 201/L; Co-requisite: ES 210/L. (3, 3T+0L)

210L SOIL TESTING AND INTERPRETATION LAB Soil morphology and development. Field analysis and characterization of soil profiles, impact of weather, drainage, agricultural, industrial, and man-made factors on edaphic characterization. Co-requisite: ES 210. (1, 0T+1L)

217 RANGELAND MANAGEMENT You will study both the broad concepts of planning and the variety of planning approaches that are frequently used in rangeland planning on public and private land. You will also take an in-depth look at the management of grazing resources, including ecology, economics, burning, brush and weed control, grazing systems, and complementary grazing crops. You will address related topics, such as job satisfaction and leadership, communications, professionalism, ethics, and problem-solving. Pre-requisites: ES 112/L, ES 120, and BIOL 203/L. (3, 3T+0L)

225 PRINCIPLES OF AGRICULTURE ECOLOGY You will be introduced to ecology in the analysis of agriculture and sustainable alternatives, with an emphasis on the fundamentals of agriculture: soils, seeds, and water, and the geographical and cultural context of farming systems. You will study topics in traditional agriculture, farm development and design, and sustainable farm practices. Pre-requisites: ES 112/L and BIOL 203/L. (3, 3T+0L)

236 ENVIRONMENTAL SAMPLING AND INSTRUMENTATION You will study the fundamental standards of environmental monitoring, such as the application and use of site assessment, monitoring wells, permeability testing, soil vapor extraction and air sparging pilot installations. You will employ principles such as obtaining a representative sample; sample containment; design, installation site assessment, monitoring wells, permeability testing, soil vapor extraction and air sparging pilot installations. You will employ principles such as: obtaining a representative sample; sample containment; design, installation, testing and monitoring of wells; design, establish, and collect data from permeability testing, groundwater contour maps, soil vapor extraction, and air sampling systems, and pilot tests. Pre-requisites: ES 112/L, ES 134, ES 201/L or CHEM 122/L, and MATH 145. (3, 3T+0L)

237 POLLUTION PREVENTION AND WASTE MINIMIZATION Covers pollution prevention and hazardous waste minimization, with emphasis on techniques and implementation strategies. (3, 3T+0S)

238 ENVIRONMENTAL LAW AND REGULATIONS You will study the basic laws and regulations for the management of solid and hazardous wastes, as well as those regulations impacting national forests and agriculture. Supplemental courses will follow in the concentration areas. Pre-requisite: ES 112/L. (3, 3T+0L)

250 WATERSHED AND HYDROLOGY MANAGEMENT You will integrate concepts of physical hydrology, geomorphology, and water quality of watersheds with problem-based emphasis on managing natural resources and the effects of management activities on hydrologic and geomorphic processes. You will focus on the amount and timing of water yield, storm flow, water quality, and sedimentation through examination of water and sediment budgets, riparian systems, and hillslope/watershed hydrological processes. Pre-requisites: ES 112/L, ES 123, BIOL 203/L, and CHEM 121/L. (3, 3T+0L)

260 ENVIRONMENTAL RADIOACTIVITY You will explore the fundamentals and techniques of monitoring the environment with an emphasis on radioactivity, including electrons, protons, neutrons, photons, ionization, fission, units, the Chart of the Nuclides, half-life, spectroscopy, and the use of hand-held detectors (TLDs, NEWNET, and AIRNET) to measure radionuclides in the environment. You will experience hands-on work with LANL staff and technicians. Pre-requisites: MATH 102N and ES 100. (3, 1T+2S)

299 PRACTICUM IN ENVIRONMENTAL SCIENCE Learning experiences while employed in the field of environmental management. Forty-eight work hours are required to earn one semester hour of credit. You may earn up to four credit hours and will be evaluated jointly by program faculty and by employers on a Credit/No Credit basis. Prerequisite: permission of advisor. (1-4, 0T+1-4L)

307 ATMOSPHERIC SCIENCE You will study how the climate system works, how climate has changed in the past, and how it is now being changed by human activity. You will develop the skills needed to analyze and critically evaluate public discussions of climate issues and written and oral communication skills in the context of climate and Earth system science. Pre-requisites: ES 112/L, BIOL 203, CHEM 121/L, and MATH 162. (3, 3T+0L)

308 INVASIVE SPECIES You will evaluate the role and scope of introduced species as well as their impact; conduct an overview of the problem and discuss how modes of exotics spread both historically and currently, as well as discussing terminology and political impacts. You will evaluate the common characteristics of successful invasive species, epidermics and epizootics, and describe the role of invasive species and the disruption of the normal ecosystem function by exotics. Pre-requisites: ES 112/L and BIOL 203/L (3, 3T+0L)
112/L, BIOL 203/L, and CHEM 121/L. Pre-requisites: ES FOR 101, ES 112/L and BIOL 203/L. (3, 3T+0L)

311 PLANT PATHOLOGY You will study the historical foundation of plant pathology and will evaluate the current and future nature of plant disease and its causal agents (fungi, bacteria, viruses, nematodes, environmental/chemical agents) and of symbionts and their effect on plant health and disease resistance, epidemiological considerations on disease spreading and major outbreaks, and disease control and management techniques. Pre-requisites: ES 112/L and BIOL 203/L. (3, 3T+0L)

315 TECHNOLOGY AND THE ENVIRONMENT You will gain a basic understanding of the role of technology in the natural environment and the interplay between the use of such technologies and their environmental and societal impact. ES 112/L, ES 201/L, and BIOL 203/L. (3, 3T+0L)

316 FIRE MANAGEMENT AND RESTORATION You will study the concepts fire management, which involves predicting fire behavior and effects, as well as making decisions appropriate to natural resource management objectives. You will also study fire management options, which vary greatly, and may include fuels management and education, fire suppression, wildland fire use, and igniting and managing a prescribed fire, and post-fire rehabilitation. Pre-requisites: ES 112/L, ES 203, and BIOL 203/L. (3, 3T+0L)

317 RANGELAND MANAGEMENT You will study both the broad concepts of planning and the variety of planning approaches that are frequently used in rangeland planning on public and private land. You will also take an in-depth look at the management of grazing resources, including ecology, economics, burning, brush and weed control, grazing systems, and complementary grazing crops. You will address related topics, such as job satisfaction and leadership, communications, professionalism, ethics, and problem-solving. Pre-requisites: ES 112/L, ES 120, and BIOL 203/L. (3, 3T+0L)

318 SILVICULTURE You will study the physical, biological, social, historical, and economic forces shaping past and present forest structure and composition in the various regions of the United States, and you will learn how silvicultural practices have been adapted to address specific management problems. You will also evaluate silvicultural alternatives for addressing present and anticipated future forest management-related problems and issues. Pre-requisites: ES 112/L, ES 201/L, and BIOL 203/L. (3, 3T+0L)

320 ENVIRONMENTAL ETHICS You will study values systems underlying human relations to the natural environment with emphasis on issues that arise when these values conflict, beginning with a discussion of our current environmental crises, different approaches to solving these crises, and issues of environmental justice and how science and knowledge affect decisions. (3, 3T+0L)

330 PRINCIPLES OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH You will study the basics of environmental and occupational hazard assessment, how policies and programs are designed to protect communities and workers from health risks posed by chemical, biological, and physical agents. Pre-requisites: ES 112/L, BIOL 203/L, and CHEM 121/L. (3, 3T+0L)

333 RADIATION BIOLOGY Survey of radiobiology: effects of differing types of radiation on matter, different radiations and their properties; detailed modes of action of radiation on biochemical and biophysical systems with emphasis on the large macromolecules of living tissue; nature of radiation damage to long-chain nucleic acid molecules; potential problems from indiscriminate use of radiation therapy and diagnostic x-rays, and nuclear facility accidents; effects of low-level radiation exposure. Cross-listed as RAD 233. Prerequisite: permission of instructor. (Spring only) (3, 3T+0L)

336 ENVIRONMENTAL SAMPLING AND INSTRUMENTATION You will study the fundamental standards of environmental monitoring, such as the application and use of site assessment, monitoring wells, permeability testing, soil vapor extraction and air sparging pilot installations. You will employ principles such as: obtaining a representative sample; sample containment; design, installation site assessment, monitoring wells, permeability testing, soil vapor extraction and air sparging pilot installations. You will employ principles such as: obtaining a representative sample; sample containment; design, installation, testing and monitoring of wells; design, establish, and collect data from permeability testing, groundwater contour maps, soil vapor extraction, and air sampling systems, and pilot tests. Pre-requisites: ES 112/L, ES 134, ES 201/L or CHEM 122/L, MATH 145, and BIOL 203/L. (3, 3T+0L)

338 ENVIRONMENTAL LAW AND REGULATIONS You will study the basic laws and regulations for the management of solid and hazardous wastes, as well as those regulations impacting national forests and agriculture. Supplemental courses will follow in the concentration areas. Pre-requisites: ES 112/L. (3, 3T+0L)

340 PRINCIPLES OF CROP PRODUCTION You will focus on the ecological principles underlying crop production systems, evaluating cropping systems, tillage methods, planting and harvesting methods, and crop growth patterns. You will examine crop production in the context of management approaches, environmental resources and constraints, and socioeconomic considerations. Pre-requisites: ES 112/L, ES 201/L, and BIOL 203/L. (3, 3T+0L)

350 WATERSHED AND HYDROLOGY MANAGEMENT You will integrate concepts of physical hydrology, geomorphology, and water quality of watersheds with problem-based emphasis on managing natural resources and the effects of management activities on hydrologic and geomorphic processes. You will focus on the amount and timing of water yield, storm flow, water quality, and sedimentation through examination of water and sediment budgets, riparian systems, and hillslope/watershed hydrological processes. Pre-requisites: ES 112/L, ES 123, BIOL 203/L, and CHEM 121/L. (3, 3T+0L)

365 PRINCIPLES OF SUSTAINABLE AGRICULTURE You will study food production resources (soils, crops, and climates), with emphasis on the scientific principles of management that conserve or renew those resources for a continuing benefit to society. You will participate in field trips which stress hands-on experience with soils, crops, and descriptive climatology. Pre-requisites: ES 112/L and BIOL 203/L. (3, 3T+0S)

399 FIELD PROBLEM Topic developed between student and advisor. Var. 1-6, (1-6T)

400 ENVIRONMENTAL MANAGEMENT You will integrate the principles of regulatory, social, and ecological concern in order to critically discuss and evaluate existing and proposed environmental
management systems. By the end of this course, you will be able
to design environmental management strategies which reduce
environmental impacts, optimize resource use, promote waste reduction
and recycling, prevent pollution, and involve public stakeholders,
leading to superior environmental and bottom-line performance. Pre-
requisites: ES 112/L and BIOL 203/L. (3, 3T+0L)

401 COMMUNITY PARTICIPATION IN ENVIRONMENTAL
PLANNING You will study the ethical and regulatory implications
for community involvement, participating in at least one community-
related environmental initiative. You will evaluate methods for
integrating community values and perspectives in overall decision
making. Pre-requisites: ES 112/L, ES 320, BIOL 203/L, and SPCH
130. (3, 3T+0L)

402 ENVIRONMENT, ECONOMICS, AND SUSTAINABILITY
You will be involved in critical thinking regarding societal
environmental consciousness and technological impact. You will
evaluate the fundamentals of economics: scarcity, choice, and
opportunity cost. Pre-requisites: ES 112/L, ES 320, and BIOL 203/L. (3, 3T+0L)

404 FOREST HEALTH, RESTORATION, AND MANAGEMENT
You will study the basic roles of natural disturbance agents, such as
diseases, insects, fire, exotic organisms and their interactions in natural
forest ecosystems. You will study how restoring and maintaining the
health of forests has become an internationally recognized goal for
resource management agencies, public conservation organizations,
and society in general. Pre-requisites: ES 112/L, ES 201/L, and BIOL
203/L. (3, 3T+0L)

410 SOIL TESTING AND INTERPRETATION You will become
acquainted with soil composition and classification; relationship of
soil to plant growth and animal health; use of fertilizers, erodion and
control. You will study the four general components of soil testing:
a) soil sampling and handling, b) analytical methodology involved in
nutrient extraction from the soil by various tests, c) interpretation of
the analytical results, and d) recommendations for the correction of
soil nutritional problems, including acidity, deficiencies, imbalances,
and excess levels. Pre-requisites: ES 112/L, ES 201/L, and BIOL
203/L; Co-requisite: ES 410L. (3, 3T+0L)

410L SOIL TESTING AND INTERPRETATION LAB Soil
morphology and development. Field analysis and characterization of
soil profiles, impact of weather, drainage, agricultural, industrial, and
(1, 0T+1L)

411 SOIL MANAGEMENT AND FERTILITY You will apply fundamental, unifying soil science principles in sustainable
management of forested, agricultural and urban or constructed
ecosystems, evaluating the relationships between nutrient response and
chemical, physical, and biological properties of soil, and proposing
the least impacting methods for remediation of contaminated soils and
the reintroduction of nutrients and biota. Pre-requisite: ES 410/L. (3,
3T+0L)

412 ENVIRONMENTAL HEALTH AND TOXICOLOGY You will
study the relationship between human health and environmental
toxicants from an interdisciplinary perspective. You will become
familiar with a broad range of concepts, including the nature of
hazards, epidemiological study design, exposure assessment,
toxicology microbiology, risk assessment, risk perception, and risk
management. You will learn to draw the links among human health
and sustainability, urbanization, energy production, and relevant
ethical issues. Pre-requisites: ES 112/L, ES 201/L, and BIOL 203/L.
(3, 3T+0L)

414 WILDLAND FIRE MANAGEMENT In this course, you will
focus on fire in restoration ecology and the effects of fire on plants,
animals, soils, water, and air, with an emphasis directed toward fire
as an ecological process in wildland ecosystems. You will study how
to characterize and predict fire effects over time and space, as well as
how to apply this to restoration ecology. Pre-requisites: ES 112/L, ES
201/L, and BIOL 203/L (3, 3T+0L)

415 ENERGY AND RESOURCE DEVELOPMENT You will study a wide variety of topics in energy and resource conservation and
development, from a global scale to those of industry, buildings, and
products, with emphasis on the evaluation of systems with particular
attention given to dynamic and efficient systems and input/output
models. Topics you will study include experimental and theoretical
research in energy technology; development, application, and
evaluation of methods and tools for the analysis of technical systems,
with respect to the environment, sustainable development, and energy.
(3, 3T+0L)

416 IRRIGATION AND DRAINAGE You will participate in
the design, management, and evaluation of irrigation and drainage
systems, addressing the concepts and processes of system design, soil-
water-plant relationships, evapo-transpiration and water requirements,
effective water use, irrigation scheduling, infiltration, and irrigation
systems planning. Pre-requisites: ES 112/L and MATH 162. (3,
3T+0L)

457 ECONOMICS OF FOOD AND AGRICULTURE IN
INDUSTRIAL DEVELOPMENT You will survey recent research
in the economics of how people meet their food needs and on the role
of agriculture in economic development, addressing the transitioning
diets of traditional populations of the southwest region, and through
observance of diet trends on a national and international basis. Pre-
requisites. ES 112/L, ES 201/L, and BIOL 203/L. (3, 3T+0L)

480 SENIOR CAPSTONE This will be the culminating experience
for you, as an environmental science student. You will work with an
academic advisor who will serve as your mentor in overseeing your
final student internship with a government agency, environmental
organization, or private company. In your fieldwork, you will search
for solutions to real problems while working with professionals,
acquiring important experience, and making connections with
potential employers. You must identify a capstone field mentor who
will provide on-site student support and who will periodically and
ultimately evaluate your performance. (3, 0T+3L)

499 PROBLEM Topic developed between student and advisor (Var.
1-6 (1-6T).

Environmental and Food Science

Professional Certification Test Preparation (ES)

Note: These courses are test-preparation courses; their completion
does not guarantee a passing score on an associated CHMM, CHMP,
NEHA, or NRA exam.

351 ENVIRONMENTAL SANITARIAN This is a preparation
course for the Registered Environmental Health Sanitation/Registered
Sanitarian (REHS/RS) for the National Environmental Health
Association (NEHA) Exam. (1, 1T+0S)
352 PROFESSIONAL FOOD SAFETY This is a preparation course for the Certified Food Safety Professional (CFSP) for the National Environmental Health Association (NEHA) Exam. (1, 1T+0S)

353 INTRODUCTION TO APPLIED ENVIRONMENTAL HEALTH This is a preparation course for the Certified Environmental Health Technician (CEHT) for the National Environmental Health Association (NEHA) Exam. (1, 1T+0S)

354 HAZARDOUS SUBSTANCES I This is a preparation course for the Registered Hazardous Substances Specialist (RHSS) for the National Environmental Health Association (NEHA). (1, 1T+0S)

355 HAZARDOUS SUBSTANCES II This is a preparation course for the Registered Hazardous Substances Professional (RHSP) for the National Environmental Health Association (NEHA). (1, 1T+0S)

356 ENVIRONMENTAL TECHNICIAN This is a preparation course for the Registered Environmental Technician (RET) for the National Environmental Health Association (NEHA). (1, 1T+0S)

357 ONSITE WASTEWATER TREATMENT SYSTEMS This is a preparation course for the Certified Installer of Onsite Wastewater Treatment Systems (CIOWTS) for the National Environmental Health Association (NEHA). (1, 1T+0S)

358 RADON MEASUREMENT This practical 16-hour course is designed to prepare radon measurement personnel to perform radon measurements, communicate radon behavior and risk to clientele, and to respond to technical questions as preparation for the associated NEHA Exam. (1, 1T+0L)

359 SAFE FOOD HANDLING Through the use of the National Restaurant Association Education Foundation (NRAEF) ServSafe® Coursework, you will be provided with up-to-date, comprehensive food safety training preparatory to certification. (1, 1T+0S)

460 IHMM NATIONAL OVERVIEW COURSE® This is a preparation course for the CHMM exam. Additionally, those who have already earned the CHMM® designation can take the NOC to obtain annual Credential Maintenance Points (CMPs). The NOC is designed as a broad introduction to the industry and provides instruction about laws and regulations, as well as about technologies and practices. It highlights topics and information which hazardous materials managers need to know to better perform their jobs. (1, 1T+0S)

FIBER ARTS (FA)

100 INTRODUCTION TO WEAVING An introduction to design work using basic shuttle techniques; an introduction to warping the loom and understanding how the loom works. You will be required to complete a minimum of one weaving. (Var. 1-3, ) (1, .5T+.5S) or (2, 1T+1S) or (3, 1T+2S)

101 WEAVING I Design work of quality textile, warping the loom, weaving special projects using different warps, wefts, techniques, and proper finishing methods. You will weave several rugs. Co-requisite: FA 101L. (Fall only) (1, 1T+0S)

101L WEAVING I LAB Practical application of warping looms and weaving. Five projects incorporating one, two, and three-shuttle techniques. Co-requisite: FA 101. (Fall only) (6, 0T+6S)

102A KNITTING PART 1 You will study the basics of knitting. Graded CR/NC. (1, .5T+.5S)

102B KNITTING PART 2 You will learn how to write, modify, and finish patterns while mastering knitting techniques and advanced patterns. Pre-requisite: FA 102. (1, .5T+.5S)

103 SPINNING I You will prepare fleece for spinning; including washing, carding, and blending of different fibers. You will spin on drop spindles and three different types of spinning wheels. (3, 1T+2S)

103A SPINNING I PART 1 You will learn how to prepare fleece for spinning by washing and carding. You will study the basics of spinning on drop spindles. Graded on a CR/NC basis. (1, .5T+.5S)

103B SPINNING I PART 2 You will learn how to spin on drop spindles and three different types of spinning wheels. Pre-requisite: FA 103A. Graded on a CR/NC basis. (1, .5T+.5S)

103C SPINNING I PART 3 You will polish your proficiency in spinning for specific projects using single and plied yarns. Pre-requisite: FA 103B. Graded on a CR/NC basis. (1, .5T+.5S)

106A WARP PAINTING PART 1 Using Lanaset dyes, you will create a painted warp for a woven scarf made of protein fibers such as wool or silk. Graded on a CR/NC basis. (1, .5T+.5S)

106B WARP PAINTING PART 2 Using the painted warp created in FA 106A, you will weave a scarf on a four-harness loom. Pre-requisite: FA 106A. Graded on a CR/NC basis. (1, .5T+.5S)

107 TEXTILE COLOR AND DESIGN You will explore elements of design and color theory. Emphasizes personal work with a focus on designing textiles. (2, 1T+1S)

107A COLOR THEORY FOR TEXTILES You will explore the principles of color theory and their application to textile design. This is 1/2 of FA 107. Graded on a CR/NC basis. (1, .5T +.5S)

107B DESIGN FOR TEXTILES You will explore the principles of design and its application to textiles. This is the second 1/2 of FA 107. Pre-requisite: FA 107A. Graded on a CR/NC basis. (1, .5T +.5S)

109 LOOM BUILDING You will learn loom parts and how to maintain and repair any problem that may arise with a loom by constructing a two-harness or four-harness treadle loom. At the time you enroll for this class, you will be assessed a special materials fee to cover the cost of the lumber needed in constructing your loom. (1, .5T+.5S)

110 HISTORY OF TEXTILES History of world textile with emphasis on the southwest. (2, 2T+0S)

112 VEGETAL DYES: IDENTIFICATION & SELECTION Identification and selection of various dye plants and materials available during prime season. You will learn techniques of dyeing, and explore the possible colors obtained from local plants, roots, and barks, as well as from ancient historical dyes. You will dry and preserve materials, keep records of dye samples, and recipes for future use. Fall only. (5, 1T+4S)
113A NATURAL DYES: LOCAL PLANTS You will dye wool using locally available plants by first going on gathering excursions to identify and collect dye plants in their natural environment, and then learn how to process the plants and how to dye with them, including preparation of the wool yarn, mordanting procedures, dye bath procedures, finishing the yarn, and record keeping. Graded on a CR/NC basis. (1, .5T + .5S)

113B NATURAL DYES: ANCIENT DYES You will learn to use natural dye stuffs that have been used historically around the world, learning the unique properties of cochineal, madder, logwood, alkanet, brazilwood, cutch, and osage orange. You will dye larger quantities with each material. In addition, you will learn to prepare an indigo vat and learn techniques for dyeing with indigo. You will review mordanting, safety procedures, and record keeping. Graded on a CR/NC basis. Pre-requisite: FA 113A. (1, .5T + .5S)

113C NATURAL DYES: COLOR COMBINATIONS You will build on your knowledge of natural dyes to combine dyestuffs in varying proportions and over dye yarn with indigo to create a much larger range of colors. You will explore gradation, in which the color changes in increments from one hue to another. You will also learn how to shift colors with different modifiers, including pH and iron, to further expand the variety of colors you are able to produce. Graded on a CR/NC basis. Pre-requisite: FA 113B. (1, .5T + .5S)

116 QUILTING Beginning students will learn the techniques of piecing a quilt together, preparing the top of the quilt and sandwiching, and they will explore the traditional designs and contemporary styles. Advanced students will learn strip piecing, simple patchwork, hand and machine appliques, and more advanced traditional piecework. Each student will design and finish a quilt. This class may be repeated twice for credit. (2, 1T+1S)

202 SPINNING II Selection of fibers, and processing and spinning techniques appropriate for the end use of yarn. Emphasizes controlling yarn size and twist; fibers such as silk, cotton, and alpaca will be introduced and you will practice various plying techniques. Pre-requisite: FA 103 or permission of instructor. (Fall only) (2, 1T+1S)

202A SPINNING II PART 1 Through a combination of lecture, demonstrations, ad hands-on activities, you will prepare fiber for spinning and develop a personal portfolio in your mastery of hand-spinning techniques. This represents 1/2 of FA 202. Pre-requisite: FA 102 or FA 102C. Graded on a CR/NC basis. (1, .5T+.5S)

202B SPINNING II PART 2 In this second half of FA 202, you will prepare fiber for spinning, using cotton, silk, and other exotic fibers. Pre-requisite: FA 202A. (1, .5T+.5S)

208 MARKETING OF WOVEN GOODS You will create a marketing plan for selling to the occasional retail customer or for running a full-time retail or wholesale business with employees; emphasis on pricing, consignment, and mail order. Pre-requisite: MATH 100N with a grade of “C” or better. (2, 2T+0S)

210 WEAVING II Introduces you to basic tapestry techniques, including vertical and diagonal designs. Co-requisite: FA 210L. (1, 1T+0S)

210L WEAVING II LAB Practical application of vertical and diagonal designs. Weaving of samplers incorporating all geometric shapes. You will design and weave your own textile. Co-requisite: FA 210; Pre-requisites: FA 101 and 101L with grades of “C” or better, or instructor permission. (6, 0T+6S)

213 WEAVING III Study of color gradation with applied skills. Co-requisite: FA 213L. (1, 1T+0S)

213L WEAVING III LAB You will design and weave a free form or pictorial tapestry. Co-requisite: FA 213. Prerequisites: FA 101 and 101L, FA 210 and 210L, or permission of instructor. (6, 0T+6S)

216 RUG RESTORATION Covers the basic materials and techniques employed in the restoration of hand-woven textiles, including Navajo, Mexican, Rio Grande, Chimayo, and Oriental Kilns; evaluation of damage, warp replacement, weft reweaving, design study, and color matching through dyeing with natural and annaline dyes. You will work on your own textiles or on those provided by the instructor. (2, 1T+1S)

218 RAG RUG WEAVING History of rag rugs in the United States and the Southwest; emphasizes using a variety of cloth materials (rags) and the process of preparing materials. You will incorporate your own design and weave a rug or pictorial tapestry for display. (2, 0T+2S)

225 FOUR HARNESS WEAVE Application of four harness weaves which include twills, double weaves, and overshot, as well as a comprehensive understanding of reading drafts and treadling. Pre-requisite: FA 101, or permission of instructor. (4, 1T+3S)

225A FOUR HARNESS WEAVE 1: WEAVING STRUCTURES: You will study the theory and applications of weaving on a four harness loom. You will cover drafting and basic weaving structures, such as twills, in addition to project planning and the mechanics of weaving on four harness. Graded on a CR/NC basis. (1, .5T + .5S)

225B FOUR HARNESS WEAVE 2: JERGA You will study the jerga, a traditional 2/2 twill woven in wool. Graded on a CR/NC basis. (1, .5T + .5S)

225C FOUR HARNESS WEAVE 3: SPECIAL PROJECTS You will read a pattern draft to determine the threading, tie up, and treading for your project. Graded on a CR/NC basis. May be repeated up to 2 crs. (1, .5T + .5S) or (2, 1T + 1S).

227 SYNTHETIC DYES You will learn to create a color rotation atlas which is defined by the three attributes: hue, value, and chroma, which respectively represents the color family (lightness, darkness, and color strength) by the mixing of dyes. Color theory arranges the color points on a huge triangle based on the four variable physical qualities of the color family, and the rotation system gives the dye formula for each color point. You will work on special projects and will also create your own color atlas from which the dye formula for any desired color can be determined. Prerequisite: MATH 100N. (3, 1T+2S)

227A SYNTHETIC DYES PART 1 You will learn the basic techniques of dyeing wool using acid dyes (Lanaset) while following step-by-step instructions on yarn preparation, dye methods, and finishing methods. You will create yarn samples of each Lanaset hue and learn about the three characteristics of color hue, value, and chroma. This is 1/3rd of FA 227. Graded on a CR/NC basis. (1, .5T+.5S)

227B SYNTHETIC DYES PART 2 Building on the basic dye techniques studied in FA 227A, you will explore color relationships
through color samples. You will study gradation techniques which will allow you to produce a color atlas as a reference for future dyeing. Graded on a CR/NC basis. Pre-requisite: FA 227A. (1, .5T+.5S)

227C SYNTHETIC DYES PART 3 Building on the basic dye techniques in FA 227A and with the help of the color atlas you created in FA 227B, you will learn how to creatively apply your knowledge of the dye process and how to create any color you wish using Lanaset dyes. You will primarily focus on methods of experimentation with color and the effects that can be created by changing very small parts of the dye formula. You will choose from various techniques for a final project. Graded on a CR/NC basis. Pre-requisite: FA 227B. (1, .5T+.5S)

228L SPECIAL PROJECTS You will work on individual special projects, with minimal assistance, with permission of the instructor. Pre-requisite: FA 101 and 101L. (3, 0T+3S)

229A GRADATION DYEING PART 1 Using Lanaset dyes and protein fibers, you will create a gradation which can be used as the warp for a woven scarf or as the weft for a tapestry. Graded on a CR/NC basis. (1, .5T+.5S)

229B GRADATION DYEING PART 2 Using the gradations dyed in FA 229A, you will weave a scarf on a four-harness loom. Graded on a CR/NC basis. Pre-requisite: FA 229A. (1, .5T+.5S)

230 WEAVING PRACTICUM You will have hands-on experience in a weaving studio, gallery, workshop, or classroom setting following individualized learning objectives prearranged between yourself and the program director. The director and gallery/workshop staff will work closely together on your work and/or activities. Forty-eight work hours are required to earn one semester hour of credit. Graded on a CR/NC basis. Pre-requisite: Permission of program advisor. (4, 0T+4S)

231 BASKETRY: COILING, TWINING, AND PLAITING Covers the techniques of coiling pine needles, sumac, and grasses to make small baskets; twining round, reed, willow, and man-made materials to make woven baskets; and plaiting flat reed cane and splints to make traditional woven baskets. (Spring only) (3, 0T+3S)

234 FUNDAMENTALS OF IKAT You will design and create a geometric weft IKAT; history of IKAT weaving. (1, 0T+1S)

235 PICTORIAL WITH IKAT You will design and create a weft IKAT weaving with simple pictorial designs as seen in historical textiles of the American Southwest and Central America. (1, 0T+1S)

236 ADVANCED IKAT Creation of warp and weft IKAT weaving through applied knowledge and skills; exploration of more advanced techniques for freer expression. (Spring only) (1, 0T+1S)

FILM TECHNICIAN TRAINING (FTT)

101 INTRODUCTION TO DIGITAL VIDEO PRODUCTION You will study digital media and documentary story telling, with an emphasis on the fundamentals of videography with a broad exploration of basic camera skills and novice non-linear editing techniques with Windows Movie Maker 2 and iMovie. Your final assignments will be one short film project. (4, 1T+3S)

102 INTRODUCTION TO DIGITAL AUDIO DOCUMENTARY You will study basic digital studio and field production techniques and the procedures necessary for gathering aural history for the production of documentary radio/web broadcast. You will learn how to select and edit excerpts from your interviews to produce radio vignettes. You will study Pro Tools, basic audio field recording with digital technology, the practice of aural history, and the art of sound collage. (4, 1T+3S)

103 FILM CREW I You will study set etiquette, jargon and terminology, film history, basic equipment handling in all the craft areas, and OSHA training. In addition to classroom instructions, job shadowing, and hands-on applications, you will be spending a significant time investment outside of class. (Fall) (9, 6T+3S)

104 FILM CREW II As you continue your training, you will begin to specialize in the film/studio crafts based on demonstrated skills and interest. You will work on group projects within the class and on outside film projects, with processional mentors as available. You will also mentor high school students. You will be spending a significant time investment outside of class. Pre-requisite: FTT 103. (Spring) (9, 6T+3S)

105 FILM CREW III - INTERNSHIP In the final course in this program, you will take on 100% of the duties necessary to produce professional quality film/television content. You will work with union mentors on professional NM Film Office FTTP projects throughout the state. Pre-requisite: FTT 104. (Summer) (6, 0T+6S)

106 ADVANCED DIGITAL VIDEO PRODUCTION You will study advanced camera functions from a technical standpoint including maintaining optimum picture quality while filming, achieving higher caliber sound fidelity, and multi-camera shooting procedures. Pre-requisite: FTT 101. (4, 1T+3S)

107 DIGITAL MEDIA LITERACY You will create a personal web page which will serve as the foundation for exploring communication and web publication/syndication in the modern world. (4, 1T+3S)

FORESTRY (FOR)

101 INTRODUCTION TO FORESTRY You will study forest resources and their management, including a history of forestry in America, an introduction to forest growth and development, the multi-use concept of forest management control of damaging agents, measurement, and wildlife. Cross-listed as ES 101. (3, 3T+0S)

113 DENDROLOGY You will focus on the identification of forest tree and shrub species, with emphasis on identification of trees by cone, bark, needle, and wood. Teaches use of keys with emphasis on species found in the southern Rocky Mountain region. Involves some field work. (3, 3T+0S)

123 FOREST ECOLOGY You will study forest ecosystems, assemblages of trees and their communities and the environments in which they live; introduction to silvics and the study of silviculture. (3, 3T+0S)

GEOGRAPHY (GEOG)

111 WORLD GEOGRAPHY Geography of the major land forms, environments, ethnic cultures, population and resources of the world, and the inter-relationships among them. (3, 3T+0S)
101 PHYSICAL GEOLOGY Materials composing the earth and the work of agencies modifying its surface. Co-requisite: GEOL 101L. (3, 3T+0L)

101L PHYSICAL GEOLOGY LAB Chemical and physical characteristics of rocks, gems, and minerals. Includes field trips to discuss local area geomorphologic, stratigraphic, and sedimentation sites and geologic process involved in their creation. Co-requisite: GEOL 101. (1, 0T+1L)

102 HISTORICAL GEOLOGY History and evolution of the earth; rise and succession of various forms of life. Prerequisite: GEOL 101; Co-requisite: GEOL 102L. (3, 3T+0L)

102L HISTORICAL GEOLOGY LAB Detailed Study of sedimentary rocks and fossils. Interpretation of geologic maps and cross-sections. Field trips to areas of sedimentary geology. Co-requisite: GEOL 102. (1, 0T+1L)

HEALTH, PHYSICAL EDUCATION, AND RECREATION (HPER)

101 CONDITIONING EXERCISES Various exercises designed to promote endurance, strength, flexibility, and general physical fitness. (1, 0T+1S)

102 AEROBICS I Exercise and movements for general physical fitness. (1, 0T+1S)

103 TENNIS Instruction and participation in the basic skills, rules, and equipment of the game of tennis. Both singles and doubles games will be taught. (1, 0T+1S)

104 STEP AEROBICS I Exercise and movements for developing strength, endurance, and flexibility, with a combination of general physical fitness. (1, 0T+1S)

105 BASKETBALL Instruction and participation in the game of basketball, including rules, skills, shots, and strategies. (1, 0T+1S)

106 GOLF Focuses on the development of knowledge and skill competencies necessary to play golf; emphasis is placed on skill progressions, practice opportunities, and error diagnosis and correction. (1, 0T+1S)

107 WALKING/RUNNING FOR FITNESS Designed for all levels, including walkers, joggers, race walkers, and competitive marathon runners. (1, 0T+1S)

110 SWIMMING A course for those who can swim, not for those who want to learn the basics. It involves supervised lap swimming, including some instruction in swimming for fitness. (1, 0T+1S)

111 WATER AEROBICS Exercises and movements in waist-high water, and usually performed to music, to promote general fitness and health. This course is self-paced and non-competitive, and the ability to swim is not required but preferred. (1, 0T+1S)

112 WEIGHT TRAINING Skill training for developing strength and endurance with free weights and machines, emphasizing knowledge of equipment, lifting safety, and theories of training. (1, 0T+1S)

113 RACQUETBALL I Through actual play, you will learn the basic skills, rule, and strategies of racquetball. (1, 0T+1S)

114 BEGINNING VOLLEYBALL Teaches you the basic skills and rules of volleyball, emphasizing learning basic bump, set, and spike which are the fundamentals of volleyball skills. (1, 0T+1S)

115 SOFTBALL Instructs you in the basic skills, strategies, and rules of softball. (1, 0T+1S)

116 AIKIDO I Basic philosophy, history, and movements of the martial art AIKIDO. (1, 0T+1S)

117 INTRODUCTION TO KUNDALINI YOGA Introduces you to Kundalini Yoga techniques and postures, emphasizing meditation and breathing. (1, 0T+1S)

118 COUNTRY WESTERN DANCE Introduces you to Country and Western two-step and line dance. (1, 0T+1S)

119 HATHA YOGA An integrative approach to Hatha Yoga, exploring philosophy, physical and energetic systems, asanas, pranayama, and yoga therapy. (1, 0T+1S)

120 DOWNHILL SKIING Designed for all levels of downhill skiing. (1, 0T+1S)

121 CROSS-COUNTRY SKIING Designed for all levels of downhill skiing. (1, 0T+1S)

122 BOWLING Introduction to and practice in the basic skills of bowling. (1, 0T+1S)

124 KICKBOXING AEROBICS An intense aerobic workout using the moves of kickboxing to achieve better coordination and balance. (1, 0T+1S)

125 POWER CONDITIONING I A conditioning course emphasizing aerobics, weight training and cardiovascular conditioning. (1, 0T+1S)

126 ART OF KARATE Based on standards of the Japan Karate Association and the International Shotokan Karate Federation, through this course you will develop self-discipline, self-control, self-esteem, and self-defense. This course includes all aspects of Karate training, including calisthenics, training in basic Karate techniques, basic sparring drills, and Kata, including self-defense techniques. It will be an excellent cardio-vascular exercise class as well as muscle toner and conditioner. (1, 0T+1S)

127 TAI CHI CHUAN I Includes an introduction to the basic principles and background of Tai Chi, the practice of Qigong exercises, and the study of the Yang style long form. Graded on a Credit/No Credit basis. (1,0T+1S)

128 TAI CHI CHUAN II Continuation of the study of the Yang style long form began in HPER 127; further develops an understanding and practice of the basic principles of Tai Chi and Qigong. Graded on a Credit/No Credit basis. (1,0T+1S)

129 PILATES You will learn the basic concepts and skills in the Pilates method of non-impact mat conditioning designed to increase core strength and stabilization, muscle tone, balance, coordination,
and flexibility which develop whole body awareness and control, and which can be modified to various fitness levels. (1, 0T+1S)

130 INTERMEDIATE SWIMMING  Designed for individuals with a swimming background, this course begins with a review of beginning techniques and continues on five swimming strokes, with an introduction to the butterfly. Emphasis is on building endurance in preparation for Lifeguard Training course. May be repeated once for credit. Prerequisite: Must have swimming background and familiarity with basic swimming strokes. (1,0T+1S)

132 LIFE-GUARDING TODAY  You will learn to recognize hazardous situations and prevent injury, with an emphasis is on supervising swimmers, minimizing dangers, preparation of facility records and reports. You will learn rescue skills with a concentration on preventive life-guarding. When you successfully complete this course, you will acquire certification in Life-guarding Training, which includes Professional CPR. Prerequisite: You must know all strokes (free style, breaststroke, sidestroke, and back-crawl) and be able to swim 500 yards of each stroke. (2, .5T+1.5S)

134 WOMEN'S SELF DEFENSE  You will learn to use your strength against a perpetrator’s weaknesses to end physical threat by using your mind and body as defensive measures against an attacker. (1, 0T+1S)

135 LEADERSHIP SKILLS IN MOVEMENT EDUCATION FOR ELEMENTARY SCHOOL STUDENTS  With a group setting, you will plan and participate in physical movement activities with elementary school students in their local schools, thus integrating leadership skills, physical and movement education, and service learning. (1, 0T+1S)

202 AEROBICS II  Continuation of Aerobics I, with emphasis on greater endurance. Prerequisites: HPER 102. (1, 0T+1S)

204 STEP AEROBICS II  You will learn exercise and movements for developing strength, endurance, and flexibility, with a combination of general physical fitness. Pre-requisite: HPER 104. (1, 0T+1S)

213 RACQUETBALL II  In this continuation of HPER 113, you will put more emphasis on more advanced skills and strategies. Pre-requisite: HPER 113. (1, 0T+1S)

216 AIKIDO II  Continuation of Aikido I, with emphasis on greater skills. Pre-requisite: HPER 116 or permission of instructor. (2, 0T+2S)

223 INTERMEDIATE VOLLEYBALL  Volleyball competition and play. Focus will be on using skills to learn and develop strategies for competitive play. (1, 0T+1S)

225 POWER CONDITIONING II  This is an advanced cardiovascular conditioning course, utilizing weight training, aerobics, and exercise equipment. Prerequisite: HPER 125. (1, 0T+1S)

250 TECHNIQUES OF COACHING BASKETBALL  You will develop the knowledge and skill competencies you need for coaching, with an emphasis on skill progressions, practice opportunities, and error diagnosis and correction. Prerequisite: basic basketball skills. This course does not satisfy HPER requirements for graduation. (2, 1T+1S)

HEALTH SCIENCE (HSCI)

102 AMERICAN HEART ASSOCIATION CPR  The gross anatomy and physiology of the heart, electrical pathway, and respiratory system are discussed in preparation for CPR. Includes primary assessment and evaluation of ABCs. Successful completion of this course will result in American Heart Association CPR certification. (0.5, 0.5T+0L)

109 AMERICAN RED CROSS CPR/FIRST AID  Covers basic emergency/first aid procedures which include shock, bleeding, poisoning, burns, musculoskeletal injuries and other medical emergencies. Includes proper basic life-saving techniques used in aiding victims of heart attack, suffocation, drowning, electrocution, and airway obstruction. Successful completion of this course will result in CPR and First Aid certification according to the American Red Cross Standards. (0.5, 0.5T+0S)

110 ANATOMY & PHYSIOLOGY I FOR MASSAGE THERAPISTS  You will cover the gross anatomical structures of the human body and the normal physiological functions of the musculoskeletal system, nervous systems, and the integumentary system. If you are taking into the Nursing Program or intending to transfer, do not take this course: take instead BIOL 237 and 237L. Prerequisites: ENG 109N and MATH 100N. (Fall only) (4, 4T+0L)

111 ANATOMY & PHYSIOLOGY II FOR MASSAGE THERAPISTS  In a continuation of HSCI 110, you will cover the gross anatomical structures of the human body and the normal physiological functions of the endocrine, cardiovascular, respiratory, lymphatic, gastrointestinal, urinary, and reproductive systems. If you are tracking into the Nursing Program or intending to transfer, do not take this course: take instead BIOL 238 and 238L. Pre-requisite: HSCI 110. (3, 3T+0L)

112 PATHOLOGY FOR MASSAGE THERAPISTS  In order to practice safely, as a massage therapist you will need a basic understanding of pathological processes. This course, therefore, will introduce you to the types of disorders that occur in each body system and provide you with more specific knowledge of the signs and symptoms of selected disorders and the ability to recognize if massage is indicated or contraindicated. Prerequisites: HSCI 110 or BIOL 237 and 237L, and BIOL 238 and 238L. (3, 3T+0L)

114 KINESIOLOGY FOR MASSAGE THERAPISTS  Introduces you to methods of evaluation and bodywork that use a specialized type of muscle testing and various forms of massage and bodywork for corrective procedures. Prerequisites: HSCI 110 or BIOL 237 and 237L, and BIOL 238 and 238L. (2, 2T+0L)

125 MEDICAL TERMINOLOGY  Covers medical terminology used by health care professionals, including medical word construction and use; spelling, pronunciation of terms, common medical abbreviations, and the use of a medical dictionary. Pre- or Co-requisite: ENG 109N. (2, 2T+0L)

150 PERSONAL GROWTH AND SELF-HEALING  Personal development of one’s mental, emotional, and physical state. Introduces and discusses therapeutic interventions such as nutrition, stress management, problem solving, exercise, and life-style analysis. Pre- or Co-requisite: ENG 109N. (3, 3T+0S)

152 LEGAL AND ETHICAL ISSUES IN MASSAGE THERAPY  Presents the legal and ethical standards currently existing in the field.
of Massage Therapy. Topics include the professional codes of ethics, informed consent, confidentiality, ethical principles of autonomy, justice, and truth telling, and the ethics of touch therapies. (Fall only) Prerequisite: ENG 109N. (2, 2T+0S)

158L FIRST RESPONDER Trains you to perform a basic primary assessment and maintain the individual until help arrives. Appropriate for law enforcement officers, members of fire or rescue services, or company employers. Prerequisite: Current American Heart Association BLS CPR certification or HSCI 102. (2, 1T+1L)

159L EMT-BRIDGE Designed for certified First Responders who wish to advance to the level of EMT-B. The Bridge course builds on the training of the First Responder and provides an intensive version of the EMT-B curriculum condensed into 80 hours. To be eligible you must have completed the First Responder training within the past 2 years, although exceptions will be considered on a case-by-case basis. Upon successful completion of the course, you will be eligible to take the state licensing exam for EMT-B. You must be at least 18 years old to register for the state licensing exam. (5, 4T+1S)

160 EMERGENCY MEDICAL TECHNICIAN - BASIC (EMT-B) A U.S. D.O.T. EMT-B course designed for individuals who have an interest in working in the pre-hospital setting. Trains ambulance and rescue personnel to recognize and stabilize patients with life-threatening emergencies at the scene and to transport using specialized items of equipment. When you complete this course you will be eligible to take the state licensing exam which is required to become an EMT in New Mexico. Co-requisite: HSCI 160L; Prerequisite: HSCI 102, or current American Heart Association CPR certification. You must be at least 18 years of age to register for the state board exam; however, high school students are eligible for concurrent enrollment with permission from the department. In general, those 17 years of age may take the course and apply for licensure; however, such applicants must meet special criteria (check with Northern’s Health Science department). In order to register to take the state board exam to become a licensed EMT-B, you must earn 80% or better in this course and pass HSCI 160L. Pre-requisite: permission of instructor or department chair. (5, 5T+0L)

160L EMERGENCY MEDICAL TECHNICIAN - BASIC (EMT-B) LAB Skills lab for HSCI 160 utilizing specialized items of equipment necessary for pre-hospital care and transport of the ill or injured. Co-requisite: HSCI 158. (2, 0T+2L)

161 EMERGENCY MEDICAL TECHNICIAN - COMBO REFRESHER Provides you with an update in new protocols, skills, and medical information to already licensed EMT’s. Required every two years to maintain state or national certification. Prerequisite: Certification as First Responder. (1.5, 1.5T+0L)

163 EMT - INTERMEDIATE This course, in combination with EMT-Intermediate Lab and Practicum, consists of 200 hours of instruction (lecture, lab, and practicum), covering the EMT-B review and intermediate curriculum, which consists of assessment of trauma and medical patients, airway management, shock, respiratory emergencies, fluids and electrolytes, adult and pediatric IV therapy, intraosseous therapy, inhalation therapy, obstetrical emergencies, pediatric emergencies, IV and subcutaneous medication administration, cardiovascular emergencies, toxicological emergencies, diabetes management, and medicolegal issues. You must earn 80% or better in HSCI 163, receive “credit” for both HSCI 163L and 164L to be eligible to register to take the state board exam to become an EMT-Intermediate. Prerequisites: EMT-Basic licensure with current CPR card. Co-requisites: HSCI 163L and HSCI 164L. (4, 4T+0L)

163L EMT - INTERMEDIATE LAB You will learn under direct supervision, to initiate IV therapy, inhalation therapy, IV administration, and subcutaneous injections on fellow students. You will also learn, in a supervised environment, medical assessment, trauma assessment, and medication administration. You must successfully complete HSCI 163, 163L, and 164L to be eligible to register to take the state board exam to become an EMT-Intermediate. Prerequisites: EMT-Basic licensure with current CPR card. Co-requisite: HSCI 163 and 164L. (2, 0T+2L)

164L EMT - INTERMEDIATE PRACTICUM You will complete a minimum of 72 hours of on-site clinical experience with documented, supervised assessment, IV initiation, and medication therapy. Optional skills may include subcutaneous injections and other skills under the EMT-I scope of practice. You must successfully complete HSCI 163, 163L, and 164L to be eligible to register to take the state board exam to become an EMT-Intermediate. Prerequisites: EMT-Basic licensure with current AHA CPR card. Co-requisite: HSCI 163 and 163L. (2, 0T+2L)

165 EMT - INTERMEDIATE REFRESHER Provides you with an update in new protocols, skills, and medical information to already licensed EMT’s. Required every two years to maintain state or national certification. Prerequisites: HSCI 163 and 163L. (2, 2T+0S)

166 WILDERNESS FIRST RESPONDER You will learn to deal with medical emergencies when help is miles away and dialing 911 is not an option. You will be taught to deal with emergency situations involving prolonged patient care, severe environments and improvised equipment. If you successfully complete this course, you will receive a certificate valid for three years from Wilderness Medical Association and also a two-year American Heart CPR card when you complete this course. (4, 3T+1S)

200 FIVE ELEMENT ACUPRESSURE You will explore the ancient Taoist Five Element theory translated through the 12 organ meridian energies through study of the 55 acupoints and organ meridian energies. You will gain insight into the balancing or the energy of the body, mind, and spirit and will develop assessment skills for each of the 12 organ systems. (3, 3T+0L)

204 NUTRITION Introduces you to the basic concepts of nutrition with an emphasis on health promotion and disease prevention and/or control. You will study nutrition across the life cycle including special needs of individuals, families, and cultures; concepts of diet care planning, including diet assessment, planning, implementation, and evaluation. This course will encourage you to practice sound nutritional practices in your daily life. Prerequisite: BIOL 110/L or CHEM 110/L. (3, 3T+0L)

280 RN FIRST ASSIST Provides the experienced perioperative nurse with the advanced preparation necessary to assume the role of the first assistant. The nursing process is used as the basis for providing nursing care to clients requiring surgical intervention. This course is based on the Core Curriculum for the RNFA. You must complete both theory and clinical to be eligible to take the RN First Assist certification exam. Prerequisite: Permission of the instructor. (Fall and Summer only) (3, 3T+0L)
280L RN FIRST ASSIST CLINICAL Provides you with the clinical learning experiences for the perioperative nurse who will function in the expanded role of the RNFA. The clinical experience will be supervised and mutually planned by a physician preceptor and RNFA students. Your physician preceptor will assist you in learning the interdependent, intra-operative behavior necessary for the RNFA role, including tissue healing, suturing and knot tying, providing hemostasis and exposure, and use of surgical instruments. The internship consists of 120 hours specific to the role of the RNFA. You must complete both theory and clinical with a grade of ‘C’ or better to be eligible to take the RN First Assist certification exam. Prerequisite: Permission of the instructor; Co-requisite: HSCI 280. (Fall and Summer only) (3, 0T+3L)

HISTORY (HIST)
Note: Each course in this department bears a Pre- -requisite of ENG 109N or an adequate score on the Course Placement Evaluation.

101 WESTERN CIVILIZATION I Social, political, and economic development from ancient times to 1648. (3, 3T+0S)

102 WESTERN CIVILIZATION II Social, political, and economic development from 1648 to the present. (3, 3T+0S)

161 HISTORY OF THE UNITED STATES TO 1877 Economic, political, social, and intellectual development to 1877. (3, 3T+0S)

162 HISTORY OF THE UNITED STATES FROM 1877 Economic, political, social, and intellectual development from 1877. (3, 3T+0S)

200 HISTORY OF WORLD RELIGIONS You will explore the history of major religions of the world: where they came from and how they evolved into their present forms; examines the similarities and differences between them. [Cross-listed as HUM 200] (3, 3T+0S)

220 SOUTHWESTERN WOMEN’S HISTORY You will explore the women’s involvement in Southwestern history, including politics, economics, and culture. (3, 3T+0S)

230 CHICANO EXPERIENCE IN THE U.S. You will analyze and examine historical, cultural, political, and economic conditions of Chicanos in the U.S. (3, 3T+0S)

250 AMERICAN INDIAN HISTORY You will study the history of Indians of North America, both pre-Colombian and post-Columbian: social and political structures, cultural patterns, and the sequence of relationships both with other Indian groups and with the U.S. government. (3, 3T+0S)

260 HISTORY OF NEW MEXICO Survey from the explorations of Cabeza de Vaca to the present: the borderlands, Spanish, Indian, and Anglo contributions. (3, 3T+0S)

301 HISTORY OF JUDEO-CHRISTIAN MUSLIM RELATIONS You will examine the nature of Judeo-Christian Muslim relations in different contexts and years of world history, with focus ranging from the Crusades to modern experiences in the world. You will concentrate on historical and societal dimensions rather then theology. (3, 3T+0S)

310 INDIGENOUS PERSPECTIVES OF NEW MEXICO HISTORY AND CULTURE Who and what is New Mexico? Inhabited for thousands of years, New Mexico and its peoples have a complex and wondrous history. From the earliest native inhabitants a steady stream of peoples and cultures, from the Anasasi, Pueblo, Spanish, and the United Stated to the National Laboratories, have shaped New Mexico and its environs. The student will thoughtfully engage in who and what is New Mexico, its arts, politics, economics, history, and, and society through various readings. [Cross-listed as HUM 310] Pre-requisite: ENG 112. (4, 4T+0S).

HONORS (HON)

200 HONORS TOPIC This is an interdisciplinary exploration of specific topics designed to demonstrate the inter-connectedness of academic disciplines. May be repeated 4 times for credit. With permission of department chairperson, you may use this course to satisfy graduation requirements in the humanities or social/behavioral science general education core requirements, depending on the topic direction. Pre-requisite: ENG 112 and a minimum 3.2 cumulative GPA. (3, 3T+0S)

HOSPITALITY, TOURISM, AND RESTAURANT MANAGEMENT (HTRM)

130 INTRODUCTION TO MANAGEMENT IN THE HOSPITALITY INDUSTRY You will explore and analyze management opportunities, functions, methods, and concepts in various segments of the hospitality industry. Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

133 CASINO MANAGEMENT You will study the historical and current perspectives of the gaming industry as those apply to management principles for casino operations, including coordination with traditional hospitality services. Pre-requisite: HTRM 130. (3, 3T+0S)

135 HOTEL MANAGEMENT You will study rooms management, including front office, housekeeping, security, and engineering with emphasis on operations, coordination, and communication within and between departments. Pre-requisite: HTRM 130. (3, 3T+0S)

140 FOOD AND BEVERAGE SERVICE MANAGEMENT You will study food and beverage service management systems in the hospitality field. You will learn to analyze cost control and quality control techniques. This course requires a work site practice location. Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

142 RESORT AND CASINO MARKETING AND MERCHANDISING You will study merchandising and marketing as a system concerned with motivating consumers to purchase hospitality products and services. Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

210 INTERNSHIP You will be involved in supervised off-campus non-group instruction including field experiences, practice, or internships with a requirement that you provide written and oral critiques of the activities required. Pre-requisite: prior approval of proposed assignment by instructor and completion of all other courses. (3, 0T+3S)
HUMANITIES (HUM)

101 HUMANITIES I Comparative study of religion, philosophy, art, metaphysics, ethics, and aesthetics (?B.C.E. to 1500 C.E.). Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

102 HUMANITIES II Comparative study of religion, philosophy, art, metaphysics, ethics, and aesthetics (1500 C.E. to present.). Pre-requisite: ENG 109N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

105 HUMANITIES AND THE SOUTHWEST This course emphasizes local and regional history, anthropology, ecology, art and folklore as a familiar, verifiable bridge into the universe of human experience; local solutions of universal human problems; the human place in the natural and cultural environment of the Southwest; the human capacity for expression, creativity, and the nature and transmission of knowledge. Involvement is primarily based on personal investigative assignments. Pre-requisite: ENG 109N. (3, 3T+0S)

200 HISTORY OF WORLD RELIGIONS You will explore the history of major religions of the world: where they came from and how they evolved into their present forms; examines the similarities and differences between them. [Cross-listed as HIST 200] (3, 3T+0S)

204 HISPANIC FEMINIST STUDIES You will be introduced to the interdisciplinary field of Chicana Studies, including historical research on labor, political involvement, cultural studies, and feminism. (3, 3T+0S)

202 LEADERSHIP DEVELOPMENT This course is taught by instructors certified by Phi Theta Kappa, the International Honor Society for Two-Year Colleges, which own the course. The course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their leadership skills. You will integrate readings from the humanities, experiential exercises, films, and contemporary reading on leadership to gain a basic understanding of the concept of leadership theory while developing a personal philosophy of leadership and an awareness of the moral and ethical responsibilities of leadership. Pre-requisite: ENG 109N. (3, 3T+0S)

220 SURVEY OF BIOETHICS You will examine ethics within the fields of medicine, research, and holistic health care practice through such topics as informed consent, confidentiality, truth-telling, death and dying, mental illness, human experimentation, stem cell research, resource allocation, and justice in health care. You will study a selection of classic historical and contemporary case studies reflecting your pre-professional and personal interests. Cross-listed as HHS 220. (3,3T+0S)

246 TOURISM AND THE ARTS IN NEW MEXICO PUEBLOS As tourism and art production have become principal means for the Pueblo peoples of New Mexico to support their families and communities, you will study this course through a multi-lens perspective of this economic, cultural, and aesthetic reality using historical readings, short films, and visits to local museums and Pueblo artists’ galleries. Pre-requisite: ENG 111. Cross-listed as PIS 246. (3, 3T+0S)

281 SPIRIT OF PLACE, NATIVE SENSES OF PLACE You will examine the meaning of place in your life and its particular importance to understanding Native identity and culture. You will focus on how to relate place with examples of how Native writers, poets, artists, storytellers, and other performers convey a “sense” or “spirit” of place in their work. Pre-requisite: ENG 111. Cross-listed as PIS 281. (3, 3T+0S)

310 INDIGENOUS PERSPECTIVES OF NEW MEXICO HISTORY AND CULTURE Who and what is New Mexico? Inhabited for thousands of years, New Mexico and its peoples have a complex and wondrous history. From the earliest native inhabitants a steady stream of peoples and cultures, from the Anasasi, Pueblo, Spanish, and the United Stated to the National Laboratories, have shaped New Mexico and its environs. The student will thoughtfully engage in who and what is New Mexico, its arts, politics, economics, history, and, and society through various readings. [Cross-listed as HIST 310 and HSS 310] Pre-requisites: ENG 112. (4, 4T+0S).

311 WHY SOCIAL SCIENCES MATTER Who are we? How are we connected? Humans have been asking these questions throughout history, but the social sciences offer a more contemporary approach to these ideas. Our culture can define our humanness, and power and politics may influence our beliefs and define our social structures. We are separate but bound together by different groupings including but not limited to culture, family, religion and government. Human behavior may be seen on an individual basis, but must been understood in the context of many structures. You, the student, will reflect and contemplate these ideas through the integrated readings in anthropology, political science, sociology, and psychology. [Cross-listed as HSS 311, PSY 311, and SOC 311] Pre-requisite: ENG 112. (4, 4T+0S).

414 HUMANITY AND CREATIVITY Petroglyphs on a rock wall, a Bach Sonata, Hip Hop, Our Lady of Guadalupe retablo, Gone With the Wind, a Laura Gilpin photograph, the Egyptian Pyramids, Sherman Alexis poetry, a beautiful carved tool, a Navajo weaving, a Michelangelo statue, a Georgia O’Keefe painting are contributions of art to humanity. Since the beginning of time humans have been creating art and enriching civilization. This course will explore human creativity through the arts and challenge students to explore creativity and the effect it has on our lives. [Cross-listed as ART 414 and HSS 414] Pre-requisite: ENG 112. (4,4T+0S)

421 HISTORY, LITERATURE, ART, AND PHILOSOPHY Who are you? Who are we? How did we become what and who we are? What role did we play in shaping the world and ourselves? Different cultures and different interpretations of who we are and what we value and how we represent them. How does the study of the “Humanities” guide use in these explorations? Using the “tools” of the humanities including expression, beliefs and traditions, you will be challenged to reflect deeply on these questions, which will be discussed through the integrated readings in history, literature, arts and philosophy. [Cross-listed as HIST 421, HSS 421, and PHIL 421] Pre-requisite: ENG 112. (4, 4T+0S).

HUMANITIES AND SOCIAL SCIENCES (HSS)

222 TEACHING IN DIVERSE COMMUNITIES In today’s world, teaching only those students who share a teacher’s or a community’s background is neither desirable nor likely to happen. Diversity in an educational setting requires teachers to develop a framework for understanding how issues of culture, class and language impact the educational institution and relevant socio-cultural and to practice socioeconomic pedagogy that affirms and legitimizes the diversity of
students. Our hope is to prepare “transformative teachers” by not only critically examining self and education, but implementing classroom practices that promote equity and justice and rigorous academic achievement for all students. Pre-requisite: ENG 109N. (3, 3T+0S)

310 INDIGENOUS PERSPECTIVES OF NEW MEXICO HISTORY AND CULTURE Who and what is New Mexico? Inhabited for thousands of years, New Mexico and its peoples have a complex and wondrous history. From the earliest native inhabitants a steady stream of peoples and cultures, from the Anasasi, Pueblo, Spanish, and the United Stated to the National Laboratories, have shaped New Mexico and its environs. The student will thoughtfully engage in who and what is New Mexico, its arts, politics, economics, history, and, and society through various readings. [Cross-listed as HIST 421 and HUM 421] Pre-requisite: ENG 112. (4, 4T+0S).

311 WHY SOCIAL SCIENCES MATTER Who are we? How are we connected? Humans have been asking these questions throughout history, but the social sciences offer a more contemporary approach to these ideas. Our culture can define our humanness, and power and politics may influence our beliefs and define our social structures. We are separate but bound together by different groupings including but not limited to culture, family, religion and government. Human behavior may be seen on an individual basis, but must been understood in the context of many structures. You, the student, will reflect and contemplate these ideas through the integrated readings in anthropology, political science, sociology and psychology. [Cross-listed as HUM 311, PSY 311, and SOC 311] Pre-requisite: ENG 112. (4, 4T+0S).

320 GENESIS OF MATH AND SCIENCE Why is a petal on a rose pink? Why is the light so beautiful in New Mexico? How do I arrange my garden to maximize its beauty? Who am I? If you have ever “wondered” then you have studied math and science. Through your curiosity, questioning, and thoughtful exploration, the student will seek to understand as well as find the beauty in math and science. On your own terms and in reflection with others, you will challenge and question your own beliefs and feelings about math and science. You will also explore the relationships between math, science, and humanity. This seminar will allow you to struggle as well as find the “magic” in why? [Cross-listed as HUM 320] Pre-requisites: ENG 112. (4, 4T+0S)

410 SENIOR SEMINAR: TEACHING THE HUMANITIES You will focus on integrating the different aspects of the humanities education by teaching the humanities in an educational setting. Pre-requisites: HUM or HSS 222, 310, 311, 320, 414, and 421. (1, 0T+1S)

414 HUMANITY AND CREATIVITY Petroglyphs on a rock wall, a Bach Sonata, Hip Hop, Our Lady of Guadalupe retablo, Gone With the Wind, a Laura Gilpin photograph, the Egyptian Pyramids, Sherman Alexis poetry, a beautiful carved tool, a Navajo weaving, a Michelangelo statue, a Georgia O’Keefe painting are contributions of art to humanity. Since the beginning of time humans have been creating art and enriching civilization. This course will explore human creativity through the arts and challenge students to explore creativity and the effect it has on our lives. [Cross-listed as ART 414 and HUM 414] Pre-requisite: ENG 112. (4,4T+0S)

421 HISTORY, LITERATURE, ART, AND PHILOSOPHY Who are you? Who are we? How did we become what and who we are? What role did we play in shaping the world and ourselves? Different cultures and different interpretations of who we are and what we value and how we represent them. How does the study of the “Humanities” guide us in these explorations? Using the ‘tools’ of the humanities including expression, beliefs and traditions, you will be challenged to reflect deeply on these questions, which will be discussed through the integrated readings in history, literature, arts and philosophy. [Cross-listed as HUM 421, HUM 421, and PHIL 421] Pre-requisite: ENG 112. (4,4T+0S).

INFORMATION TECHNOLOGY (IT)

105L MICROCOMPUTER SYSTEMS You will study microcomputer modules, installation of microcomputer software, and configuration tables; troubleshooting hardware and software problems. Pre-requisite: ENG 109N. (Fall, Spring) (4, 4T+1L)

130 NETWORKING FUNDAMENTALS You will study the basic components of IT systems, including LANs, WANs, Ethernet standards, wireless principles, switches and routers, TCP/IP protocols, utilities, and services. You will install network hardware and operating systems to build a network that demonstrates the principles of the course. Pre-requisite: CS 132. (3, 2T+1S)

210 INFORMATION TECHNOLOGY SYSTEMS You will study the basic components of IT systems, including networking, web systems, databases, system administration and maintenance, scripting, and system integration. Pre-requisites: CS 152. (3, 2T+2S)

220 NETWORK AND SERVER SOFTWARE By the end of this course, which includes an overview of networking architecture, services, and features covering hardware requirements, software installation, and system administration through an exploration of server software based on an organization’s needs, you will install and configure a variety of software, primarily Linux and Free/Open Source projects. Pre-requisites: IT 130. (4, 2T+2S)

330 NETWORKING You will study computer networking fundamentals with an emphasis on higher-level protocols and function, including network design considerations, software design and layering concepts, interface design, routing and congestion control algorithms, internetworking, transport protocol design, end-to-end communication, session and application protocols. Pre-requisites: IT 130. (3, 2T+1S)

342 WIRELESS AND MOBILE COMPUTING You will gain an understanding of the principles and concepts of radio and optical communication as these apply to wireless data networking for local area networks and peripherals. You will examine the modulation techniques, measurement standards, nomenclature, equipment, and theory behind transmissions in this portion of the electromagnetic spectrum. Pre-requisites: IT 330 and 350 (3, 2T+1S)

350 DATABASE MANAGEMENT You will study current trends in data management., studying topics which include database theory and architecture, normalization, query languages, security and Web applications, focusing primarily on a study of database structures and design, hierarchical and relational models, and database access using Oracle SQL. Pre-requisite: CS 241L. (3, 2T+1S)

410 INFORMATION ASSURANCE AND SECURITY You will study the background of information systems-security fundamentals and tool, emphasizing the role of general and application systems controls in protecting data and computing resources, the identification
of threats, and the administrative and technological tools and techniques used to audit and monitor access and access control. Pre-requisites: IT 330, and 350. (3, 2T+1S)

447 ROUTING AND SWITCHING You will learn how to connect together computers in a network and how to connect the separate networks together to form an inter-network, through examination and implementation of bridging, switching concepts, and routing protocols and algorithms. Pre-requisite: IT 330. (3, 2T+1S)

490 IT CAPSTONE I In this project course, you will exercise your knowledge of information technology, network design, and associated coursework. Pre-requisite: senior standing. (4, 2T+2S)

491 IT CAPSTONE II In this project course, you will exercise your knowledge of information technology, network design, and associated coursework. Pre-requisite: IT 490. (4, 2T+2S)

INTEGRATIVE HEALTH STUDIES (IHS)

102 INTRODUCTION TO HOMEOPATHY You will study the basic concepts of homeopathy including common remedies as well as the use of homeopathy in first-aid. (3, 3T+0L)

103 MEDITATION AND BREATH: MIND-BODY HEALING You will study meditation and breathing exercises (pranayam) for personal spiritual development and self-care, and utilization by healthcare providers. You will review research on the physiologic aspects of meditation and its effects on health and mood. (2, 2T+0L)

115 INTRODUCTION TO TRADITIONAL CHINESE MEDICINE You will study the basic theories of Chinese medicine to understand the concept of energetic imbalance, including the Eight Principles and Five Elements theory, basic meridian pathways, Yin / Yang, Exogenous and Endogenous causes of disease, the Six Eternal Pathogens and the Seven Emotions. (3, 3T+0L)

116 INTRODUCTION TO AROMATHERAPY You will explore traditional and modern Egyptian, German, French, and English concepts of the chemistry of essential oils on body, mind, and spirit. You will also explore how oils are made, how they work, and what constitutes a good quality oil. (3, 3T+0L)

118 INTRODUCTION TO INTEGRATIVE HEALING You will undertake a comprehensive comparison of Western medicine, Native American healing traditions, Traditional Chinese medicine, Ayurveda, and other healthcare belief systems. (3, 3T+0L)

120 AYURVEDA AND ENERGY HEALING I Ayurvedic Polarity Therapy for self-healing. Integrates Ayurvedic practices and principles from ancient India with the energy work of Polarity Therapy. Demonstrates simple techniques to improve energy, digestion, relaxation, and self-healing. (1, 1T+0L)

121 INTRODUCTION TO AYURVEDA: ANCIENT SCIENCE OF LIVING You will be introduced to the fundamental principles of the 5000+ year old healing tradition of India. You will focus on applying Ayurvedic principles in your daily life to gain a deeper understanding of yourself and self-healing. (3, 3T+0L)

122 AYURVEDA AND ENERGY HEALING II In a continuation of HSCI 120, you will learn how to integrate your previous learning of Ayurvedic healing practices and principles including marma therapy, with the modern energy work of Polarity Therapy, learning specific techniques on how to work with food and digestion. Pre-requisite: HSCI 120. (1, 1T+0S)

123 INTRODUCTION TO ACUPRESSURE You will begin the study of the ancient healing art of Japanese acupressure,. The healthy body needs a free flow of the life force (Qi). In this class, you will develop tools to give relaxing neck and shoulder treatments, open the chest to facilitate deeper breathing, and release muscular tension and pain through the simulation of acupoints. (1, 1T+0L)

124 AYURVEDA AND ENERGY HEALING III Directly applies ancient Ayurvedic energetic anatomy in simple pressure point routines (marma points). Teaches that specific points are integrated in a back rub to revitalize all tissues. Works with sound (manguruarjantra), breath, and touch. Bodywork is done clothed. (1, 1T+0L)

130 COMMUNICATION SKILLS FOR HEALING An experiential course introducing basic communication skills for therapeutic relationships. You will learn how communication fosters patient satisfaction, compliance, and improved outcomes. Based on the Recreation of the Self and Body-centered Psychotherapy. (1, 1T+0L)

161 HEALTHY LIVING LOCALLY I You will be involved in an experiential course “taught” in the neighborhood and at the grocery store: how to live and eat healthily, given everyday choices and availabilities. (1, 1T+0L)

162 NUTRITION FOR DIABETES A class for both the practitioner and for the general public. You will focus on the many aspects of self-care for the diabetic and pre-diabetic patient. (2, 2T+0L)

163 HEALTHY LIVING LOCALLY II In this continuation of IHS I, you will conduct further exploration of how to live and eat healthily given everyday choices. (2, 2T+0L)

164 HEALTHY LIVING LOCALLY TUTORIAL TRAINING This special course will prepare you to practice and teach the lessons mastered in IHS 161 and 163. Pre-requisite: IHS 163. (3, 3T+0L)

166 AZTEC MEXICAN HEALING I In this experiential course, you will be introduced to traditional and ancient Aztec practices of healing by an active practitioner of the system. (1, 1T+0L)

167 AZTEC MEXICAN HEALING II In this course, you will expand and deepen your understanding and practice of these techniques. Pre-requisite: IHS 166. (1, 1T+0L)

201 ACCUPRESSURE FACIAL: RADIANCE OF SHEN Using the 40 acupoints, releasing tension and aiding circulation of Qi flowing in the face, head, and neck, you will both give and receive acupressure facial treatments. (1, 1T+0L)

208 INTRODUCTION TO HOLISTIC NUTRITION This course introduces the concept of using food as a medicinal tool. You will learn to identify foods associated with disease and healing for several of the most common disease processes in western society. You will explore the state of optimal health through the use of whole foods and learn to become educated consumers in the emerging field of holistic and whole foods nutrition. (3, 3T+0S)
218 MOVEMENT & ALIGNMENT: MUSCULO-SKELETAL
HEALTH You will study in depth the fundamental musculoskeletal
mechanics applied to healing. Pre-requisites: IHS 118 and BIOL
238/L. (3, 3T+0S)

255 INTRODUCTION TO HERBAL MEDICINE Introduces
health personnel to basics of herbal medicine in order to gain a greater
understanding of this form of alternative medicine. Specific indications,
physiological action, dosage, possible side effects, contraindications,
and practical usage or herbs are discussed addressing nine body
systems. Co-requisite: IHS 257. (2, 2T+0L)

257 HERBAL PHARMACY In this course you will build on the
information learned in IHS 255, including hands-on practice in
making salves, tinctures, liniments, teas, etc. Co-requisite: IHS 255.
(2, 2T+0L)

258 FALL HERBAL FIELDWORK In this field-oriented class,
you will explore medicinal plants of mountains, desert, forest, riparian
and canyon habitats of the four corners region, as available in the fall.
You will focus on identifying, harvesting, and making medicines in the
field. Pre-requisites: IHS 255 and 257. (1, 0T+1L)

259 SUMMER HERBAL FIELDWORK In this field-oriented class,
you will explore summer-time medicinal plants of mountains, forests,
riparian and canyon habitats from the Four Corners region, focusing
on identifying, harvesting, and compounding herbal medicines. Pre-
requisites: IHS 255 AND 257. (1, 0T+1L)

264 THERAPEUTIC TOUCH TECHNIQUES This is a beginning
course which covers theory, research, and clinical application with on-going integration of theory and practice, including imagery and
meditation, the chakras, and energy balance using therapeutic touch.
Focus will be on one’s own pain relief, relaxation, and on health
restoration and promotion. (3, 3T+0L)

270 ENERGY BODYWORK FOR INTEGRATIVE HEALING
You will develop a conscious, disciplined understanding and comfort
with the body as the foundation for all modalities of integrative
healing. (2, 2T+0L)

280 HEALTH CARE TRADITIONS OF THE SOUTHWEST In
this course, your study will focus on the two main traditional forms
of health care in the Southwest -- Indigenous and Hispanic. You will
study the oral and written traditions of each culture and the roles of
plant medicine and ceremony. Pre-requisite: IHS 118, 255, and 257.
(2, 2T+0L)

305 HISTORICAL DEVELOPMENT OF HEALTH CARE
PARADIGMS You will review major paradigms in healthcare and the
possibility of integration among them. You will cover a brief
history of medicine and recent developments in alternative medicine.
Pre-requisite: ENG 112 and IHS 118. (2, 2T+0L)

320 INTRODUCTION TO THE FIVE ELEMENTS AND
THE TWELVE CHANNELS You will explore the ancient Taoist
Five Element theory translated through the twelve organ channels
(meridians), creating an opportunity to explore the emotional and
physical symptoms which accompany energy imbalances. (2,
1T+1L)

322 MYOFASCIAL ARMORING, OPENING DIAPHRAGM,
FIRE ELEMENT You will focus your study at the level of the chest
and heart to explore acupressure’s potential to affect the “primordial
child,” the childlike innocence of the person before he was touched by
psychological wounding. Pre-requisites: IHS 320. (1, 1T+0L)

324 MYOFASCIAL ARMORING, OPENING DIAPHRAGM,
WOOD ELEMENT Focusing on the diaphragm and solar plexus,
you will explore the emotions of anger, frustration, hopelessness,
resignation, and depression, and present tools to open the free flow of
Qi to allow one to more clearly envision direction in life and realize
one’s potential. Pre-requisite: IHS 320. (1, 1T+0L)

325 ENERGETIC BLOCKS TO HEALING You will conduct an
in depth study of energetic blocks which may prevent healing or a
person’s lack of response to treatment, regardless of the therapeutic
intervention. Pre-requisites: IHS 115 and 123. (2, 1T+1L)

326 THERAPEUTIC TECHNIQUE: CUPPING, MOXAA, AND
GUÀ SHA In a practical, hands-on class, you will learn adjunctive
therapies to add to your practice, whether acupressure or massage
therapy. Pre-requisites: IHS 115 and 123. (1, 1T+0L)

327 WINDOWS OF THE SKY Using acupoints to create
“windows” of opportunity, people can change their pattern of thought
and behavior to express their authentic selves. You will learn to open
the neck to see the broad overview, connect with the spirit, and gain a
spiritual perspective. Helps re-establish circulation of Qi between the
upper and lower body. Pre-requisite: IHS 123. (1, 1T+0L)

328 ACUPRESSURE: THE EXTRAORDINARY VESSELS You
will conduct an in depth study of the Extraordinary Vessels which
correspond to and enhance physiological and energetic homeostasis –
the innate wisdom of our bodies to come into balance. Pre-requisite:
IHS 123. (2, 1T+1L)

329 ASSESSMENT: THE PULSE IN ORIENTAL MEDICINE
You will learn to assess health through the ancient oriental practice
of palpating the radial artery to diagnose energetic imbalances in the
body as a whole. Pre-requisite: IHS 123. (1, 1T+0L)

330 CHEMISTRY OF ESSENTIAL OILS You will study in-
depth hydrocarbons and terpenoids found in essential oils, including
contraindications, synergistic chemistry, evaluation of therapeutic
actions, laboratory study of chromatographic readings, and the actions
of essential oils on biological agents. Pre-requisites: IHS 116 and 118;
Co-requisite: CHEM 110/L.. (2, 1T+1L)

331 SPIRITUALITY AND ESSENTIAL OILS You will explore
the use of essential oils for spiritual health. Pre-requisites: IHS 116
and 330. (2, 2T+0L)

332 ENHANCING CREATIVITY WITH ESSENTIAL OILS
You will explore essential oils to enhance art endeavors, to understand
the role of the brain’s limbic system to magnify the infusion of energy
into art and techniques enhancing the creative process. Pre-requisites:
IHS 116 and 330. (2, 1T+1L)

345: HOMEOPATHY II You will expand on your knowledge of
the basic concepts to include chronic and acute remedies for more
developed medical problems. Pre-requisites: IHS 102 and 118. (3,
3T+0S)

352 YOGATHERAPY: MIND-BODY HEALING You will explore
the philosophy and understanding of yoga, its origins and history, and
the traditional health practices and applications of yoga in healing. Pre-requisite: IHS 103. (2, 2T+0L)

353 FOOD AND SUPPLEMENTS: HOME MEDICINE You will understand the principles of Functional Medicine through diet and the appropriate use of supplements. You will examine the effects of nutrition on the bio-pathways of body systems. (2, 2T+0L)

357 HERBAL MEDICINE II In this continuation of Herbal Medicine I, you will explore more advanced methods and specific uses of herbal preparations. Pre-requisites: IHS 255 and 257. (2, 2T+0L)

381 TRADITIONAL REMEDIOS OF NORTHERN NEW MEXICO I In this course, you will learn to synthesize the traditional herbal knowledge of two cultures, the Pueblo Indians and the first Spanish settlers. You will see the native herbs of the Southwest come alive as you explore their uses, historical methods of harvesting, and the preparation and environments in which they grow. Pre-requisites: IHS 255 and 257. (2, 2T+0L)

382 TRADITIONAL REMEDIOS OF NORTHERN NEW MEXICO II In this continuation of IHS 382, you will explore Traditional Remedies, weaving history and folklore through time and place -- past, present and future. You will discuss the effects of modernization, cultural diversity, and technology on traditional herbal practices in northern New Mexico. Pre-requisite: IHS 381. [Fall] (2, 2T+0L)

390 CAM: LEGAL ISSUES AND SCOPE OF PRACTICE You will explore in-depth botanical materia medica (the properties and actions of herbs) via a body systems approach. You will learn botanical names of the herbs and their active chemical constituents. Pre-requisite: ENG 112 and SPCH 130. (2, 2T+0L)

408 BOTANICAL MATERIA MEDICA You will explore in-depth botanical materia medica (the properties and actions of herbs) via a body systems approach. You will learn botanical names of the herbs and their active chemical constituents. Pre-requisite: IHS 357. (2, 2T+0S)

410 HOMEOPATHIC MATERIA MEDICA III You will study more advanced concepts of homeopathy, including chronic and acute remedies for more developed medical problems. You will be exposed to guest speakers. Pre-requisite IHS 345. (3, 3T+0S)

411 HOMEOPATHIC MATERIA MEDICA IV You will study even more advanced concepts of homeopathy dealing with more developed medical problems. You will be exposed to guest speakers. Pre-requisite: IHS 410. (3, 3T+0S)

412 HERBAL PRACTICUM You will focus on the practical application of herbal business and marketability by bringing together all the components of the herbal tract of the IHS program through community-oriented internships with regional herbalists and visits to a variety of herbal businesses and health food stores. Pre-requisite: permission of instructor. (1, 0T+1L)

418 SOFT TISSUE REBALANCING You will have a unique opportunity to explore hands-on rebalancing of the physical and emotional bodies using touch and very gentle movements to correct imbalances. Pre-requisites: IHS 118 and 218, and BIOL 238/L, or permission of instructor. (3, 3T+0L)

422 ADVANCED FIVE ELEMENTS: CONSTITUTIONAL TYPES I You will focus on identifying the Constitutional Type that is the expression of a primary energetic imbalance through the personality of an individual. Pre-requisite: IHS 115 and 320. (2, 1T+1L)

423 ADVANCED FIVE ELEMENTS: CONSTITUTIONAL TYPES II You will continue with the associated correspondences of the Five Elements, studying emotional and spiritual qualities alongside physical features. You will explore the relationships of the inner organ systems in relation to nature's seasonal and life cycles. Pre-requisite: IHS 422. (2, 1T+1L)

428 ACUPRESSURE PRACTICUM You will practice in a supervised, supportive environment the techniques which you have learned to allow people to experience the healing benefits of acupressure. Pre-requisites: IHS 115 and 320, and permission of instructor. (2, 0T+2L)

431 INTEGUMENTARY APPLICATION OF ESSENTIAL OILS You will study experientially the application of therapeutic-grade essential oils to the integumentary system of the body, including physical assessment of structural anatomy and physiology, reasons for the use of each oil, and contraindications for use. Pre-requisite: IHS 330. (1, 0T+1L)

434 ESSENTIAL OILS FOR RELIEVING ADDICTIONS You will study the use of essential oils in relieving substance abuse and other addictions. Pre-requisite: IHS 330. (2, 2T+0L)

438 PRACTICAL APPLICATION OF ESSENTIAL OILS You fill focus in this final division course on specific case studies and choose specific essential oils and lifestyle changes to help return the body to a state of balance. Pre-requisite: HIS 330. (2, 2T+0L)

445 ACUPRESSURE CONSTITUTIONAL ASSESSMENT You will learn to approach treatment through a more constitutionally based analysis of the whole person, which means a more in-depth consultation regarding a person's life and health history, including details of significant life-changing events which may have been the catalyst for energetic imbalances affecting their health today. Pre-requisites: IHS 422 and 423. (2, 2T+0L)

455 ADVANCED HERBAL FORMULATIONS Building on previous herbal courses, you will refine your knowledge and mastery of herbal formula making. Upon completion of this course, you will be able to formulate specific remedies useful for a wide range of conditions. Pre-requisites: IHS 225, 257, and 357. (2, 2T+0L)

480 EVOLUTION OF CROSS-CULTURAL HEALING In this overview of cultural and anthropological influences on health beliefs with an emphasis on New Mexico. You will examine “lay” or “folk” understanding of the causes and management of disease. You will discuss traditional approaches to health and healing (e.g., shamanism, curanderismo). Pre-requisite: ENG 112 and IHS 118. (3, 3T+0L)

481 HEALTH: THE ROLE OF ENVIRONMENT AND ECOLOGY You will study the changing relationship of health and disease to environment. You will explore the complex interweaving of health and ecology, employing historical analysis to demonstrate how human-induced environmental change alters disease patterns and health. Pre-requisites: ENG 112, BIOL 238/L, CHEM 210/L, MATH 145, and IHS 118. (3, 3T+0L)
490 SMALL GROUP INDEPENDENT STUDY This course will provide you one-on-one tutelage in an area of specialized interest in the field of Integrative Health Studies. Pre-requisites: ENG 112, SPCH 130. May repeat to a maximum of 2 credits. (1-2, 1-2T+0L)

495 RESEARCH IN COMPLEMENTARY/ ALTERNATIVE MEDICINE You will study the use and organization of databases and research materials to examine evidence-based criteria evaluating the risks and benefits of alternative and complementary medicine in treating selected conditions. Pre-requisites: ENG 112, SPCH 130, IHS 118, MATH 145 and 150. (3, 3T+0L)

LAW ENFORCEMENT (LE)

The following courses are not taught at Northern. They exist only in terms of enabling posting of incoming credit from other colleges which offer these courses.

130 PATROL, COMMUNICATIONS, AND INVESTIGATIONS You will learn the functions of a patrol officer as that job relates to law enforcement. You will study effective communication skills, professional writing skills, and effective investigative skills associated with being the first responder at a crime scene. (6, 6T+0S)

235 TRAFFIC, ENFORCEMENT AND ACCIDENT INVESTIGATION In this course, which encompasses that part of your training standards mandated by the New Mexico Law Enforcement Academy, you will gain the knowledge and skills necessary to recognize and properly enforce traffic laws in the State of New Mexico. (3, 3T+0S)

236 FIRST RESPONDER FOR LAW ENFORCEMENT You will complete American Red Cross courses in standard first aid, CPR, emergency childbirth, and the care and handling of injured persons. (1, 1+0S)

237 POLICE PROFICIENCY I In this course, which encompasses that part of your training standards mandated by the New Mexico Law Enforcement Academy, you will learn the basic investigative skills with regard to solving criminal activities, such as auto theft, burglary, robbery, sex crimes, narcotics recognition, child abuse, and stalking. (3, 3T+0S)

238 POLICE PROFICIENCY II I In this course, which encompasses that part of your training standards mandated by the New Mexico Law Enforcement Academy, you will continue your study of investigative techniques and evidence gathering begun in LE 237. (3, 3T+0S)

239 POLICE PROFICIENCY III I In this course, which encompasses that part of your training standards mandated by the New Mexico Law Enforcement Academy, you will study defensive tactics, the use of force and firearms training Pre-requisite: LE 238. (3, 3T+0S)

LIBRARY TECHNOLOGY (LT)

Note: Unless otherwise noted, each course in this department bears a co-requisite of ENG 109N. Classes are normally scheduled for Saturdays only.

201 CATALOGING Current practices in cataloging, classification, and processing of print and non-print material. You will become familiar with AACR2, Library of Congress and Dewey Decimal classification systems, and Sears and LC subject headings. You will be introduced to MARC tagging and automated cataloging techniques, including copy cataloging and ALA filing rules. (3, 3T+0S)

202 TECHNICAL SERVICES - ACQUISITIONS Techniques of selecting, ordering, and receiving library materials; collection development policies, intellectual freedom, copyright and automated acquisitions programs. (3, 3T+0S)

205 PUBLIC SERVICES Public services in all types of libraries, the role of the library technician, and the place of libraries in society; circulation, reference services, ILL, programming, and public relations; includes an introduction to automated library programs related to public services. (3, 3T+0S)

207 BASIC REFERENCE Evaluation and use of about 100 basic reference sources used in libraries as well as electronic resources. (3, 3T+0S)

209 MEDIA SERVICES Survey of processes necessary for the acquisition, use, and maintenance of the equipment common to media centers; includes some production work. (3, 3T+0S)

213 SPECIAL LIBRARIES Philosophy and organization of a special library, covering all aspects of operation; includes an introduction to automated library systems relative to special libraries. Prerequisites: LT 201, 202, 205, and 207. (3, 3T+0S)

215 PUBLIC LIBRARIES Philosophy and organization of a public library, including all aspects of operation; includes an introduction to automated library systems relative to public libraries. Prerequisites: LT 201, 202, 205, and 207. (3, 3T+0S)

217 SCHOOL LIBRARIES Philosophy and organization of a school library, covering all aspects of operation; includes an introduction to automated library systems relative to school libraries. Prerequisites: LT 201, 202, 205, 209, and ENG 270. (3, 3T+0S)

219 ACADEMIC LIBRARIES Philosophy and organization of a college/university library, covering all aspects of operation; includes an introduction to automated library systems relative to academic libraries. Prerequisites: LT 201, 202, 205, and 207. (3, 3T+0S)

220 ADVANCED REFERENCE MATERIALS Evaluation and use of specialized reference materials (print and electronic) for libraries in business, science, fine arts, and social sciences. (3, 3T+0S)

221 MEDIA PRODUCTION Student production of media projects in video, computer programs, film, slides, or audio tapes. (3, 3T+0S)

223 LIBRARY INFORMATION FOR EDUCATORS As a future teacher, you will be introduced to the basic concepts for locating, accessing, and evaluating library information. You will learn how resources in print and electronic format can be used in a classroom setting. Pre-requisite: ENG 111. (1, 1+0S)

MACHINING TECHNOLOGY (MT)

MACHINIST APPRENTICESHIP (MT)

110 BASIC MACHINING OPERATIONS I Introduction to machine tool safety and operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)
120 BASIC MACHINING OPERATIONS II  Continuation of MT 110’s introduction to machine tool operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

130 BASIC PRINT READING  Introduction to reading and interpreting prints used by machinists. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

140 BASIC MATH FOR MACHINISTS  Introduction to the mathematics used by machinists, including basic arithmetic, algebra, geometry, and trigonometry. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

155 MATERIALS SELECTION  Overview and selection of materials used in machining processes. Pre-requisite: acceptance into the Machinist Apprenticeship Program. (1, 1T+0S)

190A MACHINIST APPRENTICESHIP TRAINING  This course provides the first semester of 600 hours of required training for the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

191B MACHINIST APPRENTICESHIP TRAINING  This course provides the second semester of 600 hours of required training for the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

210 ADVANCED MATH FOR MACHINISTS  Advanced mathematics used by machinists, including geometry and trigonometry. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

220 ADVANCED MACHINING OPERATIONS I  Advanced machine tool safety and operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

230 ADVANCED PRINT READING AND MEASUREMENT  Advanced print reading and interpretation, an introduction to geometric dimensioning and tolerancing, and basic measurement/inspection of parts. Prerequisite: acceptance into the Machinist Apprenticeship Program. (3, 3T+0S)

235 ADVANCED GEOMETRIC DIMENSIONING AND TOLERANCING  Advanced geometric dimensioning and tolerancing for 3rd year Machinist Apprentices. Pre-requisite: MT 230. (1, 1T+0S)

240 ADVANCED MACHINING OPERATIONS II  Continuation of MT 220’s advanced machine tool safety and operational theory. Prerequisite: acceptance into the Machinist Apprenticeship Program. (1, 1T+0S)

260 3RD YEAR MACHINING I  Advanced machining operations for 3rd year Machinist Apprenticeship Program. Pre-requisite: acceptance into the Machinist Apprenticeship Program. (4, 4T+0S)

280 3RD YEAR MACHINING II  Continuation of MT 260, machining operations for 3rd year Machinist Apprenticeship Program. Pre-requisite: MT 260 and acceptance into the Machinist Apprenticeship Program. (2, 2T+0S)

290D MACHINIST APPRENTICESHIP TRAINING  This course provides the first semester of 600 hours of required training for the second year of the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

291E MACHINIST APPRENTICESHIP TRAINING  This course provides the second semester of 600 hours of required training for the second year of the Machinist Apprenticeship program. You must be accepted into the MAP before you can enroll. (12, 0T+12L)

MASSAGE THERAPY (MAS)  Only those formally admitted to the Massage Therapy Program may enroll in MAS courses.

100L INTRODUCTION TO PROFESSIONAL MASSAGE  Provides an overview of massage therapy as a career; presents theory of massage and hands-on experience, including the basics of Swedish massage; teaches techniques for stress management, relaxation, and wellness. Your abilities and aptitude will be evaluated to assist you in deciding whether a career in massage therapy is appropriate. This course will apply as an elective toward the credit needed for the massage certification program. (3, 2T+1L)

101L MASSAGE THERAPY I  Provides a basic understanding and application of Swedish massage strokes, plus joint movements. You will discuss the benefits, common pathology, and contraindications inherent in massage therapy. You will work on each other in a safe supportive professional environment, learning to give a therapeutic, stress-reducing professional massage treatment. You will address issues of personal growth and awareness, and you will explore many of the healing mechanisms of the body which are accessible to the massage therapist. Pre-requisites: ENG 109N and MATH 100N; Co-requisite: HSCI 110 or BIOL 237 and 237L, and BIOL 238 and 238L. (Fall only) (4, 3T+1L)

103L MASSAGE THERAPY II  You will refine your massage skills, bringing fluidity and deeper awareness into your work; acquiring mastery of various bodywork techniques; cultivating a deeper understanding of the client/therapist relationship; discussing and applying energy flow theory; introduce and apply deep tissue work and specific injury techniques. You will work on each other under close supervision of a Registered Massage Therapy Instructor in a safe, supportive, and professional environment. Pre-requisite: MAS 101L; Co-requisites: HSCI 112 and 114. (Spring only) (4, 3T+1L)

104L MASSAGE THERAPY INTERNSHIP  You will give one-hour massage treatments to volunteers, under the supervision of a Registered Massage Therapy Instructor in a professional, safe environment. Emphasis will be on Swedish massage, but you will be encouraged to incorporate learning from all other classes into your internship program. You will conduct interviews, take medical histories, use SOAP notes, and 10 hours of Hydrotherapy. Pre-requisite: MAS 101L; Co-requisite: MAS 103L. (Spring only) (3, 0T+3L)

108L MASSAGE THERAPY PRACTICE LAB  You will have time to practice the basic massage therapy techniques that you are learning in MAS 101L, under the supervision of a Licensed Massage Therapy instructor. Co-requisites: MAS 101L and HSCI 110 or BIOL 237L. (Spring only) (2, 0T+2S)

110 IMPROVING YOUR BODY MECHANICS  This course is designed to teach registered Massage Therapists and Massage Therapy students appropriate body mechanic techniques to increase effectiveness and client satisfaction. Emphasis will be on learning...
techniques to decrease the possibility of therapist injury, pain, and tension. (1, 1T+0L)

113 INTRODUCTION TO FOOT REFLEXOLOGY You will learn to incorporate Foot Reflexology into your massage therapy treatment. You will cover the material needed to create a 60-minute treatment routine. Time will be devoted to theory, review, and to questions followed by demonstration and treatment practice. Pre- or Co-requisite: MAS 101L. (Spring only) (2, 2T+0S)

115 CRANIAL TECHNIQUES I You will be introduced to the basic anatomy, principles, palpation, and application techniques of cranial sacral. You will learn the first of three levels in Cranial Sacral techniques. Theory, review, and questions will be followed by a demonstration and treatment practice. Pre- or Co-requisite: MAS 101L or Department permission. (Spring only) (1, 1T+0S)

116 CRANIAL TECHNIQUES II In a continuation of MAS 115, you will review and refine the basic skills you mastered previously. You will expand techniques to access all of the cranial and facial bones, as well as being able to work with the whole body. You goal will be bring more balance to all of the nervous system. You will gain a solid foundation to incorporate Cranial Sacral modalities into your treatments. Pre-requisite: MAS 115. (2, 2T+0S)

117 INTRO TO THAI MASSAGE You will study traditional Thai massage as an experience of rhythmical movement in which you will lead the receiver through a flow of passive yoga stretches, deep muscle pressure, and joint mobilization. Through studying massage, yoga, meditation, and the practice of compassion in action, your study will emphasize meditative awareness, breathing, and the use of body weight and posture. Pre-requisite: MAS student or Licensed Massage Therapist, and HSCI 110. (1, 1T+0S)

118 DEVELOP YOUR TRADECRAFT As you are about to enter a professional career as a Massage Therapist in a variety of settings, such as a spa, health club, or in medical or private practice, in this course you will learn to fine-tune your skills, build confidence as a professional, refine treatment presentation and flow, and create a high quality experience for the client and provider. Pre-requisite: : MAS student or Licensed Massage Therapist, or permission of instructor. (1, 1T+0S)

119 TRADITIONAL THAI MASSAGE I You will study the Traditional Thai Massage form. Rooted in the Ayurvedic, Yoga, and Buddhist traditions of the East, this ancient art combines massage, yoga, meditation, and the practice of compassion in action. Pre-requisite: HSCI 110 and be a Licensed Massage Therapist. (1, 1T+0S)

120 TRADITIONAL THAI MASSAGE II A continuation of the Traditional Thai Massage form. Pre-requisite: HSCI 119. (2, 2T+0S)

121 HAWAIIAN LOMI-LOMI MASSAGE You will learn how to give a massage with the long rhythmic movements of your hands and forearms associated with this unique healing technique derived from the ancient Polynesians. Lomi-Lomi facilitates healing of the physical, mental, and spiritual levels. Pre-requisite: Be a Licensed Massage Therapist. (1.5, 0T+1.5L)

190 MASSAGE THERAPY EXAM REVIEW You will review pertinent subjects and curriculum (anatomy & physiology, pathology, kinesiology, therapeutic massage assessment and application, professional standards, ethics, business and legal practice) needed to be able to take and pass the National Certification Examination (NCETM) for Therapeutic Massage and Bodywork by taking several tests similar in style and content to the NCETM. Permission of Department. (Summer only) (1, 1T+0S)

200 TRIGGER POINT THERAPY While learning the basics of Trigger Point Therapy, you will begin to understand myofacial pain syndrome and learn to use touch, breath, sound, and movement to empower the person in pain. Pre-requisite: Be a current Massage Therapy student or be a Licensed Massage Therapist. (1, 1T+0S)

215 CRANIAL SACRAL TECHNIQUES III In a hands-on clinic open to the public, you will practice the Cranial Sacral techniques learned in HSCI 115 and 116. Pre-requisite: HSCI 116. (1, 1T+0S)

MATERIALS SCIENCE (MATE)

101 MATERIALS SCIENCE AND PROPERTIES Descriptive introduction to the properties and structures of materials. Pre-requisites: MATH 102N and ENG 109N. (2,2T+0S)

290 INTRODUCTION TO MATERIALS SCIENCE An interdisciplinary survey covering tools and techniques used in the study of the structure and mechanical properties of engineering materials (e.g., semiconductors, polymers, metals). Includes discussion and demonstrations of materials strengthening, materials failure, and non-destructive evaluation methodology. Pre-requisite: CHEM 121 and 121L. (Spring only) (3, 3T+0L)

300 CORROSION SCIENCE AND ENGINEERING This course is aimed at students with some chemistry, materials, or engineering background who have a desire to pursue a career in applied chemistry or materials. You will study the mechanisms and forms of corrosion, corrosion rate measurement tools and techniques, failure analysis, and material selection, and will also design for corrosion prevention and minimization. You will develop an understanding of materials science and engineering, specifically the fundamental concepts of electromechanical science and engineering as they apply to corrosion processes. Pre-requisites: MATE 290 and CHEM 121, or permission of instructor; Co-requisite: MATE 300L. (3, 3T+0L)

300L CORROSION SCIENCE AND ENGINEERING LAB You will be engaged in lab experiences which supplement MATE 300. Co-requisite: MATE 300. (1, 0T+1L)

MATHEMATICS (MATH)

100N FUNDAMENTALS OF MATHEMATICS Introduction to the mathematical method and its use in practical applications. You will learn to analyze data to create algebraic expressions and/or equations, simplifying algebraic expressions and/or equations, implementing and manipulating formulas, translating verbal statements into algebraic expressions and/or equations, solving linear equations and formulas, creating tables and interpreting graphs, and describing the results of problem solving in writing or orally. Pre-requisite: adequate score on Course Placement Evaluation. (4, 4T+0S)

102N BASIC ALGEBRA First complete course in algebra for those not prepared for college-level algebra: fundamental operations with signed values, fractions, ratio and proportion, solving linear equations, exponents, graphs, factoring, quadratic equations, rational expressions, polynomials, inequalities, sets, and applications. Pre-requisite: MATH 100N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

[Eff. Spring 2009, credit increases to 4]
130 INTERMEDIATE ALGEBRA  Elementary functions with emphasis on graphical representations of linear functions, quadratic functions, exponential and logarithmic functions, inverse functions, polynomial functions, systems of equations, inequalities, and complex numbers. Pre-requisite: MATH 102N. (3, 3T+0S) [Eff. Spring 2009, credit increases to 4]

145 INTRODUCTION TO PROBABILITY & STATISTICS  Basic probability and statistics, including analysis of numerical data, basic probability models, sampling inference, applications of the computer in statistics, and related topics. Pre-requisite: MATH 130. (3, 3T+0S)

150 COLLEGE ALGEBRA  College algebra as preparation for trigonometry: functions, graphs, equations, inequalities, exponentials, logarithms, quadratics, matrices, and determinants, imaginary and complex equations and their graphs, sequences, series, mathematical induction, and an introduction to probability. Pre-requisite: MATH 130. (3, 3T+0S)

155 TRIGONOMETRY  Review of relations and functions, imaginary and complex numbers, and exponential and logarithmic functions: stresses circular functions, rotations, identities, inverses, triangles, and vectors. Pre-requisite: MATH 150. (3, 3T+0S)

160 COLLEGE ALGEBRA AND TRIGONOMETRY  You will study the essential concepts of algebra, trigonometry, and the study of functions needed for further study in mathematics and applications to aeronautics, agriculture, astronomy, biology, business, chemistry, etc. Pre-requisite: MATH 150. (4, 4T+0S)

162 CALCULUS I  Cartesian plane and functions, limits and continuity, differentiation, the derivative as the slope of curve, rules and applications of differentiation, increasing and decreasing functions, the indefinite and definite integral. Pre-requisite: MATH 150 and MATH 155 or MATH 160. (4, 4T+0S)

163 CALCULUS II  The indefinite integral, the fundamental theorem of calculus; applications of the definite integral; volumes of solids; revolution, logarithmic, and exponential functions, techniques of integration conic and sections polar coordinates. Pre-requisite: MATH 155 and MATH 162. (4, 4T+0S)

210 MATH FOR ELEMENTARY TEACHERS  This course will prepare you as a prospective elementary school teacher with problem solving techniques related to topics taught at the K-8 level. You will strengthen your understanding of mathematical topics through the study of problem solving, number theory, set theory, geometry, practical measurement, and the use of technology. Pre-requisite: MATH 102N. (3, 3T+0S)

264 CALCULUS III  Parametric equations and vectors in the plane and in three-dimensional space, functions of several variables, extreme of functions in two variables, directional derivatives and gradients, tangent places, multiple integrals and iterated integrals as applied to volumes, surface areas, centers of mass and moments of inertia, triple integrals, infinite series and test for convergence and divergence, and differential equations. Pre-requisite: MATH 163. (4, 4T+0S)

290 UNDERGRADUATE RESEARCH EXPERIENCE IN MATHEMATICS  This is a computer-based experience in mathematical research, supported by laboratory work. You will learn computational modeling, experimental design, library and Internet information searches and research methodology, while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on nonlinear dynamics, differential equations, and mathematical physics. Pre-requisite: MATH 162. (May be repeated for credit) (3, 3T+0L)

306 COLLEGE GEOMETRY  You will study an axiomatic approach to the fundamentals of geometry in Euclidean and non-Euclidean spaces, with an emphasis on the historical development of geometry. Pre-requisite: MATH 162. [Fall] (3, 3T+0L)

308 THEORY AND PRACTICE OF PROBLEM SOLVING  You will experience mathematical invention and discovery at the level of high school geometry and algebra, including the study of sequences, series, and recursions. Pre-requisite: MATH 162. [Fall] (3, 3T+0L)

311 VECTOR ANALYSIS  You will study vector algebra, lines, planes, curves, tangent lines, vector-valued functions, arc length, line integrals, directional derivatives, gradient, divergence, curl, Gauss’s and Stokes’s theorems and geometric interpretations. Pre-requisite: MATH 264. [Fall] (3, 3T+0L)

312 PARTIAL DIFFERENTIAL EQUATIONS  You will study the methods of solutions of partial differential equations, engineering and science applications, Laplace’s equation, heat and wave equations, separation of variables, Fourier series and Fourier Transforms. Pre-requisites: MATH 264 and 316. (3T+0L)

313 COMPLEX VARIABLES FOR ENGINEERING  You will study the theory of a complex variable with applications to engineering and physical problems. Pre-requisite: MATH 264 and MATH 316. (3, 3T+0L)

314 LINEAR ALGEBRA WITH APPLICATIONS  You will study the systems of linear equations, matrices, linear transformations, eigenvalues and eigenvectors, determinants, and computational methods. Pre-requisite: MATH 163. (3, 3T+0L)

316 APPLIED ORDINARY DIFFERENTIAL EQUATIONS  You will study the theory of ordinary differential equations: elementary equations, numerical methods, phase plane analysis and Laplace transforms. Pre-requisite: MATH 163, with MATH 264 recommended. (3, 3T+0L)

327 DISCRETE STRUCTURES  You will develop skill in using principles and concepts of discrete math, such as Boolean logic, algorithms, recursive methods, inductive and deductive reasoning in solving problems in science, technology, and engineering. Pre-requisite: MATH 163. [Fall] (3, 3T+0L)

338 MATHEMATICS FOR SECONDARY TEACHERS  You will study advanced topics from secondary mathematics to meet the needs of pre- and in-service teachers. Pre-requisite: MATH 163. [Fall] (3, 3T+0L)

345 ELEMENTS OF MATHEMATICAL STATISTICS AND PROBABILITY THEORY  You will study probability theory, including combinatorics, probability densities, expectation, variance, correlation, estimation, confidence intervals, and hypothesis testing. Pre-requisite: MATH 163. [Spring] (3, 3T+0L)

375 INTRODUCTION TO NUMERICAL COMPUTING  You still study solutions of linear and non-linear equations, approximation
You will study thermodynamic prototyping, design economics, and engineering ethics. Pre-requisites: MATH 264 and 311. [Fall] (4, 4T+0L)

402 ADVANCED CALCULUS II You will continue your study of advanced calculus to several variables, metric spaces, sequences, limits, compactness and continuity of metric space, interchanging limits of operations, series, power series, partial derivatives, implicit and inverse theorems, and multiple integrals. Pre-requisite: MATH 401. [Spring] (3, 3T+0L)

441 PROBABILITY You will study mathematical models for random experiments, random variables, expectation, discrete and continuous distributions, joint distributions, conditional probabilities, independence, laws of large numbers, the central limit theorem, and moment generation functions. Pre-requisite: MATH 264. [Spring] (3, 3T+0L)

464 APPLIED MATRIX THEORY You will study determinants, the theory of linear equations, matrix analysis of differential equations, eigen values and eigenvectors, variational principles, and generalized inverses. Pre-requisite: MATH 314. [Spring] (3, 3T+0L)

466 MATHEMATICAL METHODS IN SCIENCE AND ENGINEERING You will study special functions and mathematical methods for solving differential equations, difference equations, and integral equations. Pre-requisites: MATH 311, 312, and 313. [Spring] (3, 3T+0L)

MECHANICAL ENGINEERING (ME)

160L GENERAL ENGINEERING DESIGN I Introduces engineering graphics, the design process, computer-aided design, engineering ethics, design economics, and project management. [Cross-listed with CE 160L] Pre-requisite: MATH 160. (3, 2T+1L)

202 ENGINEERING STATICS You will study force analysis of particles and rigid bodies in two and three dimensions using vector algebra as an analytical tool; centroids, distributed loads, trusses, frames, friction. [Cross-listed with CE 202] Pre-requisites: PHYS 215/L and MATH 163. (Fall) (3, 3T+0L)

260L ENGINEERING DESIGN II You will study the design process, project management, shop practice, CNC and rapid prototyping, design economics, and engineering ethics. Pre-requisites: ME 160L and MATH 162. (Fall, Spring) (3, 2T+1L)

301 THERMODYNAMICS You will study thermodynamic equilibrium, thermodynamic properties and equations of state; first and second laws of thermodynamics and their applications to engineering systems; reversibility and irreversibility, and their application to second law analysis. Pre-requisites: CHEM 122/L, PHYS 216/L, and MATH 163. [Spring] (3, 3T+0L)

302 MECHANICS OF MATERIALS You will study stresses and strains in members subjected to tension, compression, torsion, shear and flexure; combined and principal stresses; Mohr’s circle construction; buckling, introduction to statistically indeterminate members. [Cross-listed with ECCE 302] Pre-requisites: PHYS 216/L and MATH 163. (Fall) (3, 3T+0L)

306 DYNAMICS Principles of particle dynamics. Kinematics and kinetics of particles, systems of particles and rigid bodies. Prerequisite: ME 202 and MATH 163. (Spring) (3, 3T+0S)

317 FLUID MECHANICS Fluid statics; control volume forms of continuity, momentum, and energy; pipe flow and turbomachinery You will be introduced to boundary layers and turbulent flow. Laboratory experiments and demonstrations of basic concepts. Pre-requisites: ME 301 and 302. (Fall) (3, 3T+0L)

357 MECHANICAL VIBRATIONS You will study free and forced vibrations of one and two degrees of freedom systems for both steady state and transient forcing, and vibrations of selected continuous systems and balancing. [Cross-listed with CE 357] Pre-requisites: ME 306 and MATH 316. (Spring) (3, 3T+0L)

390 POWER SYSTEMS You will study mechanical and electrical properties of machinery for power generation or deployment; network or grid design of distribution of power; sources of electric power and their characteristics of energy conversion efficiency, cost, and environmental impact; introduction to electric energy storage. [Cross-listed with EECE 390] Pre-requisites: ME 306, 317, and EECE 203L (Fall) (3, 3T+0L)

401 ADVANCED MECHANICS OF MATERIALS You will study state of stress and strain at a point, stress-strain relationship; topics in beam theory, such as asymmetrical bending, curved beams, and elastic foundations; torsion of non-circular cross sections; energy principles. Pre-requisite: ME 306. (Spring) (3, 3T+0L)

490 CAPSTONE IN MECHANICAL ENGINEERING I In this project course, you will exercise your knowledge of mechanical engineering, design, and associated coursework. (Fall) (4, 2T+2L)

491 CAPSTONE IN MECHANICAL ENGINEERING II In this project course, you will exercise your knowledge of mechanical engineering, design, and associated coursework. Pre-requisite: ME 490. (Spring) (4, 2T+2L)

MUSIC (MUS)

Music for Non-Baccalaureate Majors
Each studio courses in this department may be repeated without penalty, each time counting for credit and toward your cumulative grade point average; however, no course may be counted more than once toward graduation requirements.

102 MUSIC THEORY I Concentrated course in written music structure, musical notation, and fundamentals. This course is strongly recommended for all those pursuing musical studies. Prerequisite: ENG 109N. (3, 3T+0S)

103 MUSIC HISTORY AND LITERATURE I You will study the history of musical instruments, oral traditions, and music of Western civilization from antiquity to the year 1750. Prerequisite: ENG 109N. (3, 3T+0S)
105 MUSIC APPRECIATION Develops a foundation in the enjoyment and understanding of Western civilization's music through the use of recorded music and song literature; analysis of music styles and periods of development and of their relation to other subjects and activities. Prerequisite: ENG 109N. (3, 3T+0S)

107 INTRODUCTION TO MUSICAL INSTRUMENTS Fundamentals of string, percussion, woodwind, and brass instruments. Provides a strong background in techniques and styles. (3, 3T+0S)

108 APPLIED MUSIC: CLASSICAL GUITAR I You will the basic techniques of classical guitar, rudiments of music, and the history of classical guitar. (2, 1T+1S)

109 APPLIED MUSIC: FOLKLORIC GUITAR I Basic instruction in folk guitar. (2, 1T+1S)

110 APPLIED MUSIC: PIANO I Basic instruction in piano from beginning to intermediate level. (2, 1T+1S)

111 APPLIED MUSIC: GUITAR I Basic instruction in classical guitar from beginning to intermediate level. (2, 1T+1S)

112 APPLIED MUSIC: VOICE I Basic instruction in voice from beginning to intermediate levels. (2, 1T+1S)

113 APPLIED MUSIC: VIOLIN Basic principles of playing violin: finger patterns, bowing and vibrato techniques. (2, 1T+1S)

114 APPLIED MUSIC: FLAMENCO GUITAR I Basic rhythm patterns and strums for the “Cante Chico” and an introduction to “Soleares and Bulerias of the Cante Hondo.” (2, 1T+1S)

115 APPLIED MUSIC: SAXOPHONE Basic instruction in saxophone from beginning to intermediate level. (2, 1T+1S)

116 MARIACHI ENSEMBLE Beginning to intermediate instruction in Mariachi music ensemble. Pre-requisite: MUS 102 and one year experience playing an instrument. (2, 1T+1S)

117 APPLIED MUSIC: BASS Basic instruction in bass from beginning to intermediate level. (2, 1T+1S)

119 HISTORY OF FLAMENCO Overview of Spanish music history; and introduction to the elements of the Flamenco Tablao; and the history of Flamenco music. Includes readings from Flamenco historian D.B. Pohren and a layman of “Aficionados.” (3, 3T+0S)

121 APPLIED MUSIC: GUITAR II Continuation of MUS 111. Instruction in guitar from intermediate to advanced level. Prerequisite: MUS 111. (2, 1T+1S)

122 APPLIED MUSIC: VOICE II In this continuation of MUS 112, you will be presented with more advanced development of singing techniques. Prerequisite: MUS 112. (2, 1T+1S)

123 WOMEN’S ENSEMBLE This is a class for female group vocal participation through study of choral signing techniques and choral literature. You will be required to sing parts. Pre-requisite: MUS 112 or permission of instructor. (2, 1T+1S)

124 MIXED CHORUS You will be provided an opportunity for group vocal participation through study of singing techniques and song literature. Prerequisite: MUS 112. (2, 1T+1S)

125 MEN’S ENSEMBLE This is a class for group vocal participation for males through study of choral singing techniques and choral literature. You will be required to sing parts. Pre-requisite: MUS 112 or permission of instructor. (2, 1T+1S)

126 MUSIC THEORY II Continuation of MUS 102, with studies in harmony, texture, structure, tone-color, rhythm, and melody. Recommended for music majors. Prerequisite: MUS 102. (3, 3T+0S)

128 MUSIC HISTORY & LITERATURE II The Viennese Classic period of 1750 to the present. Prerequisite: ENG 109N. (3, 3T+0S)

129 APPLIED MUSIC: FOLKLORICA GUITAR II Intermediate-level instruction in folk music for guitar. You will study different styles of folk music, advanced chordal progressions, and musical notation requirements. Pre-requisite: MUS 109. (2, 1T+1S)

208 APPLIED MUSIC: CLASSICAL GUITAR II You will continue your study of classical guitar (MUS 108) with more complex music, techniques, and rhythms, and emphasis on ornamentation and presentation of classical music. Pre-requisite: MUS 108. (2, 1T+1S)

211 APPLIED MUSIC: GUITAR II Continuation of MUS 111. Instruction in guitar from intermediate to advanced level. Pre-requisite: MUS 111. (2, 1T+1S)

212 APPLIED MUSIC: VOICE II In this continuation of MUS 112, you will be presented with more advanced development of singing techniques. Prerequisite: MUS 112. (2, 1T+1S)

213 WOMEN’S ENSEMBLE This is a class for female group vocal participation through study of choral signing techniques and choral literature. You will be required to sing parts. Pre-requisite: MUS 112 or permission of instructor. (2, 1T+1S)

214 MIXED CHORUS You will be provided an opportunity for group vocal participation through study of singing techniques and song literature. Prerequisite: MUS 112. (2, 1T+1S)

215 MEN’S ENSEMBLE This is a class for group vocal participation for males through study of choral singing techniques and choral literature. You will be required to sing parts. Pre-requisite: MUS 112 or permission of instructor. (2, 1T+1S)

216 MUSIC THEORY II Continuation of MUS 102, with studies in harmony, texture, structure, tone-color, rhythm, and melody. Recommended for music majors. Prerequisite: MUS 102. (3, 3T+0S)

218 MUSIC HISTORY & LITERATURE II The Viennese Classic period of 1750 to the present. Prerequisite: ENG 109N. (3, 3T+0S)

219 APPLIED MUSIC: FOLKLORICA GUITAR II Intermediate-level instruction in folk music for guitar. You will study different styles of folk music, advanced chordal progressions, and musical notation requirements. Pre-requisite: MUS 109. (2, 1T+1S)

220 APPLIED MUSIC: MUSICA FOLKLORICA INSTRUMENTAL ENSEMBLE Studies song literature and performance of traditional and modern Hispanic folk songs. You will be selected by audition by the instructor. Includes performance for special occasions on and off campus. (2, .5T+1.5S)

221 APPLIED MUSIC: PIANO II Continuation of MUS 110. Instruction from intermediate to advanced level. Pre-requisite: MUS 110. (2, 1T+1S)

222 DANCE ACCOMPANIMENT II Rhythmic patterns and styles for dance accompaniment at the intermediate level with the use of the guitar. Prerequisite: MUS 121. (2, 1T+1S)

223 APPLIED MUSIC: FLAMENCO GUITAR II You will study the higher Flamenco forms such as the “Soleares, Bulerias, and Alegias.” Prerequisite: MUS 114. (2, 1T+1S)

224 DRUMMING II: WEST AFRICAN A continuation of MUS 124, covering more complex West African drumming rhythms and techniques, as well as history and culture. Provides more emphasis on group drumming and drumming with other music. Pre-requisite: MUS 124. (2, 1T+1S)

225 MUSICA FOLKLORICA LA NUEVA CANCION You will become familiar with the history, vocabulary, origin, and developments of traditional instruments, songs, and traditional Spanish folkloric music. The music will be in Spanish. Prerequisite: MUS 105 and ENG 109N. (3, 3T+0S)
Music for those pursuing a Bachelor of Music

099 RUDIMENTS OF MUSIC This course is designed to help students who fail the entrance exam for the baccalaureate program to achieve the necessary level of knowledge and skills to advance to the Bachelor of Music program. The course covers beginning-level music theory, solfege, and dictation. It may be taken twice for credit. (3, 1T+2S)

100 MUSICAL SKILLS I Diatonic melody and harmony: two-part counterpoint; aural skills, music reading, and keyboard. (1, 1T+0S)

101 MUSIC MAJOR STUDIO INSTRUCTION I This course provides a structured path toward the development of essential abilities required for skillful performance of classical guitar repertoire. You will review basic techniques and address important aspects of musicianship related to nylon-string guitar playing. You will learn how to project melodies, bass lines, and various textures using classical techniques from diverse traditions, with emphasis on European and Latin American methods. You will cultivate fingerboard knowledge and harmonic awareness while refining tone production, rhythmic skills, and biomechanical efficiency. (2, 2T+0S)

102 MUSICAL THEORY I Concentrated course in written music structure, musical notation, and fundamentals. This course is strongly recommended for all those pursuing musical studies. Prerequisite: ENG 109N. (3, 3T+0S)

104 MAJOR ENSEMBLE I You will play in a group (large or small, based on enrollment) that will be defined after the first week of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

106 MUSICAL SKILLS II Development of musical skills such as reading rhythms, vocal production of tonal materials, conducting, and taking dictation. Practice of inner hearing, musical memory, and polyphonic awareness exercises. Prerequisite: MUS 100 or permission. (1, 1T+0S)

118 MUSIC MAJOR STUDIO INSTRUCTION II You will continue on the path from basic skills and repertoire into intermediate-level repertoire that helps to build an understanding of style and performance practice. Musical pieces, etudes, and exercises will be drawn from various periods from the Renaissance to the present day. You will explore works that will require you to learn to sift positions and to play in various tempos, as well as in increasingly varied textures, rhythms, and harmonies. You will on sight-reading in higher positions. In addition, you will practice and perform scale and arpeggio studies with a metronome in order to increase velocity. Pre-requisite: MUS 101. (2, 2T+0S)

120 MAJOR ENSEMBLE II You will play in a group (large or small, based on enrollment) that will be defined after the first week of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

122 MUSICAL THEORY II Continuation of MUS 102, with studies in harmony, texture, structure, tone-color, rhythm, and melody. Prerequisite: MUS 102. (3, 3T+0S)

125 HISTORY OF JAZZ I You will examine the history of jazz from its origins through 1950. You will learn to identify major styles and performers and to describe the elements of each style. (3, 3T+0S)

126 HISTORY OF JAZZ II You will continue your study of the history of jazz, covering bebop (c. 1950) through the present. You will learn to recognize and describe the major styles in jazz, the most important proponents of each style, and the musical elements that determine each style. (3, 3T+0S)

128 JAZZ FUNDAMENTALS I You will survey the theory of music as used in American Jazz, addressing a pragmatic approach on the study of intervals, basic chord construction, modes of the major scales, basic substitution and function, thirteenth chords, modes of the harm, minor scale and voicing, and connecting chords. (3, 3T+0S)

129 JAZZ FUNDAMENTALS II You will study the theory of music as used in American Jazz, addressing a pragmatic approach on the study of modes of the ascending melodic minor scale, polychord nomenclature, symmetrical altered scales, five part harmony, synthetic scales, developing improvisational skills, and melody harmonization. (3, 3T+0S)

132 JAZZ MAJOR STUDIO INSTRUCTION I You will work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. (2, 2T+0S)

133 JAZZ MAJOR STUDIO INSTRUCTION II You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. (2, 2T+0S)

200 MUSICAL SKILLS III Development of musical skills such as the singing and dictation of intervals, arpeggios of the Maj7, Min7, Dom7, Min7(b5), and Diminished Chords and their alterations. Modes of the Major, Harmonic Minor and Ascending Melodic Minor Scales, and some Root Movements of important Chord Progressions. (1, 1T+0S)

202 MUSIC MAJOR STUDIO INSTRUCTION III This course will provide you with opportunities to have a greater role
in the fingering and problem solving of the music you play, thereby helping you to become a more independent musician. The course will also introduce you to the Baroque dances and suites as composed by such 17th and 18th century artists as G. Sanz, R. DeVisee, L. Roncalli, G.A. Brescianello, A. Logy, Weiss, and the simpler movements of J.S. Bach, etc. You will study increasingly advanced legato (slurring) techniques which will lead to the study of basic ornamentation (trills, mordents, grace notes, etc.). In addition, you will further develop technique and fingerboard awareness through scale pattern studies. Emphasis will be placed on clear tone, danceable rhythm, and efficient fingering. During the course of the term, you will also get the opportunity to apply these techniques to more contemporary pieces. Pre-requisite: MUS 118. (2, 2T+0S)

203 MAJOR ENSEMBLE III You will play in a group (large or small, based on enrollment) that will be defined after the first week of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

204 JAZZ KEYBOARD SKILLS I You will learn to realize jazz harmonies at sight from lead sheets or other progressions. (3 3T+0S)

205 HARMONY APPLIED TO THE GUITAR I Application of the concepts studied in Advanced Harmony to the guitar. You will apply the principles of harmony to the guitar fingerboard, with an emphasis on “voice leading” and “comping,” using various sets of strings, generating a richer combination of voicings applicable to the guitar, with a variety of common rhythmic styles. (3, 3T+0S)

206 MUSICAL SKILLS IV Development of musical skills such as reading rhythms, vocal production of tonal materials, conducting, and taking dictation. Practice of inner hearing, musical memory, and polyphonic awareness exercises. (1, 1T+0S)

209 MAJOR STUDIO INSTRUCTION IV You will review technique and works studied, plus studying new technical material including a minimum of 5 Studies and 6 Compositions by composers Seixas, Torroba, Carpenter, Holborne, John Duarte, John Dowland, Granata, Caliginoso, Vallet, Holdar, and Luis Milan. You must take the Upper Divisional Juri, consisting of a performance before a Board of Professors, with the pieces chosen in agreement with your Studio instructor. (2, 2T+0S)

210 MAJOR ENSEMBLE IV You will play in a group (large or small, based on enrollment) that will be defined after the first week of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

228 JAZZ KEYBOARD SKILLS II In this continuation of MUS 204, you will learn to realize jazz harmonies at sight from lead sheets or other progressions. Pre-requisite: MUS 204. (3, 3T+0S)

229 HARMONY APPLIED TO THE GUITAR II A continuation of the application of concepts studied in Advanced Harmony to the guitar. You will apply the principles of harmony to the guitar fingerboard, with an emphasis on “voice leading” and “comping,” using various sets of strings, generating a richer combination of voicings applicable to the guitar, with a variety of common rhythmic styles. (3, 3T+0S)

232 JAZZ MAJOR STUDIO INSTRUCTION III You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. (2, 2T+0S)

233 JAZZ MAJOR STUDIO INSTRUCTION IV You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. (2, 2T+0S)

241 ADVANCED HARMONY I Initiates a musical study focused on the music itself, providing students with ready access to a far-ranging variety of music. You will study the techniques and materials of the common practice period through the 20th century. (3, 3T+0S)

242 ADVANCED HARMONY II A continuation of MUS 241, you will continue a musical study focused on the music itself, providing ready access to a far-ranging variety of music. You will study the techniques and materials of the common practice period through the 20th century. (3, 3T+0S)

301 MAJOR STUDIO INSTRUCTION V You will continue your study with new works by such composers as Manuel Ponce, Visee, Milana, Sor, Giuliani, Torroba, Batohelor, Duarte, Purcell, Prat, Pujol, Llobet, Lauro, Weiss, Seixas, Dowland, Labarre, Haug, and Prayssing with a minimum of 5 Studies and 6 Compositions. (2, 2T+0S)

302 MAJOR ENSEMBLE V You will play in a group (large or small, based on enrollment) that will be defined after the first week of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

304 ARRANGING FOR THE GUITAR I You will learn to transcribe and arrange works originally written for other instruments to the guitar, keeping the most important compositional elements in the pieces, taking into consideration the idiomatic and physical elements of the guitar. (3, 3T+0S)

305 JAZZ STYLES AND ANALYSIS I You will study jazz styles from ragtime and early jazz to swing and bebop, analyzing styles with a focus on repertoire, improvisation, instrumentation, role of instruments, major innovators and important groups. You will transcribe and analyze works as your final project for this course. (3, 3T+0S)

308 JAZZ IMPROVISATION I This is a performance-practice oriented course, proving you tangible tools to develop your musical language, based on the Jazz Tradition. Every class will include a short lecture, ear training, playing through scales, arpeggios, generic melodic patterns, standard harmonic patterns, and tune learning. (3, 3T+0S)

310 HISTORY AND LITERATURE OF MUSIC I You will study style analysis, visual and aural, of representative compositions, and the relationship of music to socio-cultural background of each epoch. You will study the history of music from the beginnings of Western civilization to 1750. (3, 3T+0S)

320 MAJOR STUDIO INSTRUCTION VI You will study new technical material, including by composers as Manuel Ponce, Visee, Milana, Sor, Giuliani, Torroba, Batohelor, Duarte, Purcell, Prat, Pujol, Llobet, Lauro, Weiss, Seixas, Dowland, Labarre, Haug, and Prayssing with a minimum of 5 Studies and 6 Compositions. (2, 2T+0S)

321 MAJOR ENSEMBLE VI You will play in a group (large or small, based on enrollment) that will be defined after the first week
of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

323 ARRANGING FOR THE GUITAR II You will continue to learn to transcribe and arrange works originally written for other instruments to the guitar, keeping the most important compositional elements in the pieces, taking into consideration the idiomatic and physical elements of the guitar. (3, 3T+0S)

324 HISTORY AND LITERATURE OF MUSIC II In this course, you will continue your study of the history of music from 1750 to the present. (3, 3T+0S)

325 JAZZ STYLES AND ANALYSIS II You will study jazz styles from the cool school and hard bop to modal and contemporary styles, analyzing them with a focus on repertoire, improvisation, instrumentation, role of instruments, major innovators, and important groups. You will transcribe and analyze works as your final project for this course. (3, 3T+0S)

328 JAZZ IMPROVISATION II This course provides you with the theoretical and technical means to play and improvise over pre-existing tunes chosen from the Jazz Repertoire developed between 1940-1955. (3, 3T+0S)

331 JAZZ MAJOR STUDIO INSTRUCTION V You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. You will work on improving your repertoire and melodic vocabulary. (2, 2T+0S)

332 JAZZ MAJOR STUDIO INSTRUCTION VI You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. You will work on improving your repertoire and melodic vocabulary. (2, 2T+0S)

400 MAJOR STUDIO INSTRUCTION VII You will study new works chosen from Beisson, Nace, Morley, Duarte, Diabelli, Bach, Monpou, Weiss, Farina, Roussel, Casteinuovo, Tesedeco, Gilardino, Stocker, Jolivet, Chaves, Polonais, Rodrigo, Dodggon, Ponce, Ravel, Sor, Brayssing, Brouwer, Villa Lobos, Turima, Pujul, Saint-Luc, and Falla. (2, 2T+0S)

401 MAJOR ENSEMBLE VII You will play in a group (large or small, based on enrollment) that will be defined after the first week of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

403 RHYTHM STYLES FOR THE WORKING GUITARIST You will acquire the skills necessary to work as a rhythm section musician in several musical contexts and styles. (3, 3T+0S)

407 SOUTH AMERICAN GUITAR STYLES I A performance-practice oriented course which will assist you to develop the theory and skill of strummed styles from South American and the performance of some works by composers such as Antonio Lauro, Jorge Cardoso, Astor Piazzola, Heitor Villa Lobos, and others. (3, 3T+0S)

422 MAJOR ENSEMBLE VIII You will play in a group (large or small, based on enrollment) that will be defined after the first week of class, after placements occur as a result of auditions. Repertoire is defined on the same basis, chosen from a select list. (2, 2T+0S)

426 SOUTH AMERICAN GUITAR STYLES II You will study literature that approaches the subject with specific information to assist you to gain the skills necessary for the performance of styles from several different countries in South America, such as Samba, Bossa Nova, Baião, Afóxe, Caterete, Cachacera, Valse Venezuelano, Choro, Guaraní, and others. You will study the authors such as Nelson Faria, Jody Fisher, Marcos Cavalcante, Fanuel Maciel de Lima, Agustín Barrios, and Antonio Lauro who will be the primary bibliographic sources for this course. (3, 3T+0S)

431 JAZZ MAJOR STUDIO INSTRUCTION VII You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. You will work on improving your repertoire and melodic vocabulary. (2, 2T+0S)

432 JAZZ MAJOR STUDIO INSTRUCTION VIII You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. You will continue to work on improving your sight-reading skills and continue developing your knowledge and skilled performance of rhythm in several styles. You will work on improving your repertoire and melodic vocabulary. (2, 2T+0S)

433 JAZZ ARRANGING AND COMPOSING I In this course, you will incorporate the technique of transcription as one of the principal means of learning to write. Each week you will transcribe a piece for the designated instrumentation, and then do an arrangement for the same instrumentation and in the same style. All pieces will be performed and critiqued. For the transcription, you are encouraged to draw on widely diverse sources and to cover a wide range of styles and eras. (3, 3T+0S)

434 JAZZ ARRANGING AND COMPOSING II Composing and arranging for the small ensemble and advanced improvisation. Prerequisite: MUD 433. (3, 3T+0S)

NATURAL RESOURCES (NR)

101 SOILS Study of soil composition and classification; relationship of soil to plant growth and animal health; use of fertilizers, soil erosion and its control; world population growth and soil resources. Co-requisite: NR 101L. (3, 3T+0L)

101L SOILS LABORATORY Soil morphology and development. Field analysis and characterization of soil profiles. Impact of weather, drainage, agricultural, industrial, and man-made factors on edaphic characterization. Co-requisite: NR 101. (1, 0T+1L)

102 WATER MANAGEMENT New Mexico and federal water laws, various methods of irrigation; livestock watering methods, water diversion, and soil erosion control. (3, 3T+0L)

103 BOTANY OF FOREST AND RANGE Study of botany relationships involved when any tract of land is managed for both forage and timber crops. (3, 3T+0L)

NURSING (NURS)

When participation is required at a clinical setting, students are responsible for their own transportation.

Clinical courses are graded on a Credit/No Credit basis.

100 NURSE AIDE You will acquire the knowledge and skills essential for delivery of safe and effective care in long term care settings at the level of a nurse aide under the direct supervision of a Registered Nurse. Completion of the course meets the training requirements set
forth by the Department of Health and Human Services in preparation for taking the New Mexico Certification Exam for Nurse Aide. Prerequisite: ENG 108N and PD 108N and PD 108L; Co-requisite: HSCI 102 and NURS 100L. (4, 4T+0L)

100L NURSE AIDE LAB Practical application of skills in simulated lab and clinical settings for NURS 100. Graded on a CR/NC basis. Co-requisite: NURS 100. (1, 0T+1L)

102 STRATEGIES FOR NURSING SUCCESS Provides you with useful strategies that will increase your potential for success in college and after college in the workplace. Covers nursing opportunities, self-awareness, time management, and skills for enhanced learning and retention. (1, 1T+0L)

104 DOSAGE CALCULATIONS Practical approach to dosage calculation and preparation of drugs and solutions. Includes information related to systems of measurements and conversion. Provides useful information for any health care professional responsible for medication administration. Prerequisite: MATH 100N; Co-requisite: NURS 105. (Fall) (2, 2T+0L)

105 PHARMACOLOGY Introduces you to the concepts necessary for safe basic medication administration, with an emphasis on major drug groups, prototypes, therapeutic use, adverse effects, side effects, toxicity, nursing implications, and client education. Prerequisites: BIOL 238/L and 210/L; Co-requisites: NURS 113/L and NURS 104. (4, 4T+0L)

113 NURSING FUNDAMENTALS Introduces you to the concepts basic to the professional nursing role, with an emphasis on the care of adults in the application of the nursing process. You will learn to integrate holistic knowledge, holism, caring, communication, and teaching into the planning, implementation, and evaluation of effective nursing skills. Prerequisites: BIOL 237/L, BIOL 238/L; Co-requisites: NURS 105, BIOL 210/L, and HSCI 204. (4, 4T+0L)

113L NURSING FUNDAMENTALS CLINICAL Combines simulated lab and clinical experience with hands-on practice of concepts from NURS 113. Co-requisite: NURS 113. (2, 0T+2L)

115 MEDICAL-SURGICAL NURSING I Presents theoretical and practical aspects in the nursing care of adults with common, basic medical/surgical disorders, with an emphasis on assessment, goal setting, and intervention for selected nursing diagnoses. Integrates concepts of aging, nutritional therapy, and pharmacology. Prerequisites: NURS 113/L, BIOL 210/L; Co-requisites: NURS 115L, PSY 290, and CS 102. (4, 4T+0L)

115L MEDICAL-SURGICAL NURSING I CLINICAL Combines simulated lab and clinical experience with hands-on practice of concepts from NURS 115. Co-requisite: NURS 115. (2, 0T+2L)

116 INTRODUCTION TO MATERNAL-CHILD NURSING Introduces you to the nursing care of mothers, infants, and children, using the nursing process with an emphasis on client needs related to normal physiological and developmental processes and common health problems. Integrates concepts of aging, nutritional therapy, and pharmacology. Prerequisites: NURS 105, NURS 113/L, and HSCI 204; Co-requisites: PSY 290. (2, 2T+0L)

119 ROLE TRANSITION -- PRACTICAL NURSE Provides you with information specific to the discipline of nursing appropriate to the practical nurse, including the role of the PN related to the nursing process, management of patient care, and legal responsibility and accountability. Prerequisites: NURS 105, NURS 113/L, BIOL 210/L, and HSCI 204; Co-requisites: NURS 115/L, NURS 116, PSY 290, and CS 102. (2, 2T+0L)

200 ROLE TRANSITION -- REGISTERED NURSE You will explore the role of the RN in comparison to that of the PN. Provides a framework for a successful transition to the RN role. Topics include holism, nursing process, health assessment, patient education, and the process of adjustment to change. Prerequisites: Completion of course requirements for LPN/LVN program or current licensure as LPN/LVN. (Fall only) (2, 2T+0L)

214 PSYCHIATRIC/MENTAL HEALTH NURSING Introduces you to the basic concepts for nursing care of clients with psychiatric/mental health needs. You will learn to use the nursing process in caring for clients across the life span. Integrates concepts of nutritional therapy and pharmacology. Prerequisites: All Level-I courses; Co-requisite: NURS 214L. (2, 2T+0L)

214L PSYCHIATRIC/MENTAL HEALTH NURSING CLINICAL Uses a variety of clinical settings in the application of the concepts from NURS 214. Co-requisite: NURS 214. (1, 0T+1L)

215 MEDICAL-SURGICAL NURSING II Presents theoretical and practical aspects in the nursing care of adults with common, complex medical/surgical disorders. Emphasis is on assessment, goal setting, and intervention for selected nursing diagnoses. Integrates concepts of aging, nutritional therapy, and pharmacology. Prerequisites: All Level-I courses; Co-requisite: NURS 215L (4, 4T+0L)

215L MEDICAL-SURGICAL NURSING II CLINICAL Combines a simulated lab and clinical experiences in the application of concepts from NURS 215. Co-requisite: NURS 215. (2, 0T+2L)

216 MATERNAL-CHILD NURSING II Emphasis is on the care of women across the life span, children from birth to age eighteen, and childbearing and child rearing families with complex health care problems. Integrates concepts of growth and development, nutritional therapy, and pharmacology. Prerequisites: All Level-I courses; Co-requisite: NURS 216L. (4, 4T+0L)

216L MATERNAL-CHILD NURSING II CLINICAL Combines a simulated lab and clinical experiences in the application of concepts from NURS 216. Co-requisite: NURS 216. (2, 0T+2L)

228 INTEGRATED NURSING Introduces you to the roles and activities of the professional nurse, including concepts of nursing leadership and management. Emphasizes use of critical thinking skills in integrating complex concepts in the care of groups of clients. Prerequisite: NURS 215/L, and NURS 216/L; Co-requisites: NURS 228L. (Spring only) (4, 4T+0L)

343 PATHOPHYSIOLOGY I In this course, which is organized by body systems, you will discuss alterations in human physiological function. NURS 343 and 344 cover different body systems and do not need to be taken in sequence. Prerequisite, BIOL 237/L, and BIOL 238/L. (3, 3T+0L)
344 PATHOPHYSIOLOGY II In this course, which is organized by body systems, you will discuss alterations in human physiological function. NURS 343 and 344 cover different body systems and do not need to be taken in sequence. Prerequisite, BIOL 237/L, and BIOL 238/L (3, 3T+0L)

400 NURSING IN TRANSITION You will examine the role of the baccalaureate-prepared nurse in today’s health care systems, addressing historic, contemporary, and future role of the nurse. You will develop skills in scholarly exposition and the use of technology. (1, 1T+0L)

401 INTEGRAL NURSING THEORY You will explore the theory of Integral Nursing and Holistic Nursing theories. You will be introduced to the concept of praxis and to the legacy and philosophical foundation of Florence Nightingale. You will develop skills related to concepts such as self-awareness, self-care, relationship-centered care, nurse as environment, and reflective practice. Emphasis will be on the use of conscious intention. Pre-requisite: NURS 400 and passing NRS3. (3, 3T+0L)

410 AN INTEGRAL APPROACH TO EVIDENCE-BASED PRACTICE You will examine research methodologies utilized in nursing research, with an emphasis on utilization of research findings to establish evidence-based nursing interventions. You will analyze research findings aimed at selected health concerns. You will explore definitions of evidenced-based practice and examine how worldviews and theories influence research. Pre-requisites: MATH 145 and NURS 401. (3, 3T+0L)

420 INTEGRAL HEALTH ASSESSMENT You will develop skills in health assessment of (allopathic) human systems. You will be introduced to alternative systems (i.e., Ayurvedic, Native American, Oriental Medicine, and Intuitive). You will develop skills in interviewing, history taking, physical examinations, and documentation and use of assessment data in planning care through the use of laboratory and clinical settings. You will explore nursing as a model to frame data collection, organization, and synthesis into a cohesive whole. Pre-requisites: NURS 343, 344, and 401. (3, 2T+1L)

430 COMPLEMENTARY AND ALTERNATIVE THERAPIES IN NURSING You will study evidence-based complementary and alternative approaches to heal care, acquiring knowledge related to these modalities that can be incorporated into professional nursing practice and self-care practices. You will experience and develop beginning skills in the provision of CAM modalities as they interact with practitioners in selected clinical settings. Pre-requisite: NURS 401. (3, 2T+1L)

440 HEALTH ISSUES, POLICY AND POLITICS IN HEALTH CARE Through this course, you will gain the knowledge, skills, and attitudes to affect change in health policy to improve health care delivery. You will analyze contemporary health care issues of concern to nursing and learn strategies for effective involvement in policy-making decisions and policy implementation. You will examine work environments and the impact of organizational systems on the quality of care. You will apply the Theory of Integral Nursing to a current health policy issue in a position paper expressed orally to a group. Pre-requisite: NURS 401. (3, 3T+0L)

450 COMMUNITY AND GLOBAL HEALTH I In this first of a two-part course, you will develop an overview of contemporary community health nursing practice, with an emphasis on the influence of culture on healthcare beliefs and practices. You will learn how self-care is linked to population health. You will examine health problems of selected populations within New Mexico. You will explore how Public Health Nursing Competencies are linked with the Theory of Integral Nursing to form the basis for your learning experience. Pre-requisite: NURS 401, with NURS 410 strongly suggested. (4, 4T+0L)

451 COMMUNITY AND GLOBAL HEALTH II In the second part of this course, you will examine global health issues in relationship to local, regional, and international nursing practice. You will learn how self-care is linked to global health. You will select and focus upon a global health issue relevant to local community nursing practice. The focus of your clinical experience will be your engaging in a service-learning project based upon the selected issue. Pre-requisite: NURS 450. (3, 2T+1L)

460 INTEGRAL COMMUNICATION AND TEACHING You will examine communication techniques, coaching, and teaching strategies to enhance and facilitate cognitive and behavioral change. You will demonstrate the principles of Integral Health Coaching, Motivational Interviewing, and Non-Violent Communication. You will implement an evidence-based service-learning teaching project. Pre-requisite: NURS 401. (2, 2T+0L)

470 TRANSFORMATIONAL LEADERSHIP IN NURSING You will focus on the principles of transformational leadership as applied to the nurse leader at the bedside, within an organization, in the community, and in the profession. You will study Complexity Science, Appreciative Inquiry, and Emotional Intelligence. You will learn how self-care is a leadership quality. Career advancement through lifelong learning is emphasized. Pre-requisite: NURS 401. (3, 3T+0L)

480 INTEGRAL NURSING CAPSTONE This capstone course emphasizes reflection, integration, and synthesis of concepts from previous courses. It is primarily a self-directed course and is based upon the creation of a senior portfolio which demonstrates learning in cognitive, affective, and psychomotor domains. The portfolio is designed to demonstrate evidence of mastery of program objectives and serves as an assessment of student learning. The portfolio includes evidence of ability to conduct integral health assessments and evidence of ability to develop and implement service-learning projects. You will include evidence of skill development in the use of complementary/alternative therapies in nursing practice. In your portfolio, you will include a reflective essay and a plan for continued professional and personal development. Pre-requisite: Completion of all other NURS courses. (2, 2T+0L)

OFFICE ADMINISTRATION (OA)

101 BUSINESS EDITING SKILLS You will learn proofreading techniques, reviewing spelling, punctuation, grammar, and word processing formats on various types of business documents and worksheets. (Spring only) (3, 3T+0S)

103 INTRODUCTION TO KEYBOARDING Introduction to basic keyboarding skills on the letters of the alphabet, numbers, and symbols. Emphasizes speed and accuracy. This course is for students with NO previous instruction in keyboarding. (1, 1T+0S)

113 NOTEHAND Introduces an abbreviated writing system based primarily on longhand and secondarily on phonetics. (3, 3T+0S)
115 FILES MANAGEMENT Introduces the principles, procedures, and new technology of records management. Covers alphabetic, subject, numeric, geographic, and computer storage methods. (3, 3T+0S)

117 TIME MANAGEMENT You will learn information management applications which provide tools to send and receive e-mail, organize schedules and maintain contact lists, to-do lists, and notes. (Spring only) (3, 3T+0S)

118 PROFESSIONAL DEVELOPMENT Promotes self-understanding, self-management, personal and professional communication and appearance, leadership, personal and interpersonal relationships, positive attitudes, and goal setting. (3, 3T+0S)

132 MEDICAL TRANSCRIPTION You will correctly identify terminology, spell and define terms, and prepare appropriate forms and reports through the simulation of a medical office environment using audio cassettes. (3, 3T+0S)

134 LEGAL TRANSCRIPTION Introduces legal terminology through spelling and defining terms, and preparing appropriate letters, memos, and forms through the simulation of a legal office environment using audio cassettes. (3, 3T+0S)

135 INTRODUCTION TO ACCOUNTING Studies basic accounting principles and conceptual framework. Places heavy emphasis on the accounting model. (3, 3T+0S)

139 INTRODUCTION TO MS WORD A brief overview of the word processing application package, Microsoft Word. You will learn to create basic documents, such as letters and memos. You will be provided with the basic knowledge as well as hands-on experience to allow you to become computer literate in Word. (1, 1T+0S)

151 INTRODUCTION TO MS PUBLISHER Introduction to the electronic desktop publication specifically how to use, design, and edit publications for use in a variety of personal and business applications. (1, 1T+0S)

155 INTRODUCTION TO MS ACCESS Introduction to the electronic database specifically how to use, design, and edit databases for use in a variety of personal and business applications. (1, 1T+0S)

249 MICROSOFT WORD Covers the commands of Microsoft Word by using step-by-step applications; provides a working knowledge of the basic and intermediate capabilities of Microsoft Word on an IBM compatible. (3, 3T+0S)

251 ADVANCED WORD You will gain a working knowledge of the advanced applications of Microsoft Word, including merging documents, adding special features, adding visual elements, formatting with macros and styles, sharing data, and creating specialized tables. This course is required for Microsoft User Certification Specialist (MOS). Pre-requisite: OA 249. (3, 3T+0S)

260 ADOBE PAGEMAKER Introduces desktop publishing concepts using step-by-step applications to create flyers, newsletters, reports, brochures, resumes, and other publications using page-layout software. (3, 3T+0S)

261 DESKTOP PUBLISHING - MS PUBLISHER Introduction and application of desktop publishing concepts using Microsoft Publisher in the Windows environment to create flyers, newsletters, reports, brochures, resumes, and other publications using page-layout software. (3, 3T+0S)

265 ACCESS A Windows database course teaching basic through intermediate features: creating and editing databases by using step-by-step activities; formatting fields and entering calculated fields, as well as creating forms and using queries to extract information. (3, 3T+0S)

267 ADVANCED ACCESS You will gain a working knowledge of the advanced applications of Microsoft Access, including advanced tables, forms, queries, and reports; automating, securing, and integrating databases. This course is required for Microsoft User Certification Specialist (MOS). Pre-requisite: OA 265. (3, 3T+0S)

PERSONAL DEVELOPMENT (PD)
All Personal Development courses are graded on a “credit/no credit” basis, with the exception of PD 120.

105 READING AND STUDY SKILLS Introduces strategies and techniques necessary for developing college study skills. Includes methods and practice in increasing reading speed and comprehension; techniques for improving skills in listening, taking reading and lecture notes; studying for objective and essay examinations; developing vocabulary and basic sentence skills, and mastering spelling; and using the library and Student Success Center. (3, 3T+0S)

108N BASIC COMPUTATIONAL SKILLS Develops proficiency in basic mathematical concepts, including addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals. You will also study the use of percentages, ratios, solving for one unknown (pre-algebra), and determining simple geometric areas. Math concepts are presented in a simple, logical, and applied way to prepare you for MATH 100N or above. Co-requisite: PD 108L. (3, 3T+0S)

108L BASIC COMPUTATIONAL SKILLS LAB Reinforcement of skills learned in PD 108N, with hands-on learning and application. Emphasis is on multi-sensory methods through computer and manipulatives. Co-requisite: PD 108N. (1, 0T+1L)

120 BECOMING A MASTER STUDENT Through concentrating on study skills, learning styles, goal setting, and developing critical thinking and writing skills you will be given an opportunity to develop strategies which you can adopt and modify for lifelong learning and academic, personal, and professional success. (3, 3T+0S)

PHILOSOPHY (PHIL)
Note: each course in this department bears a Pre-requisite of ENG 109N.

110 INTRODUCTION TO PHILOSOPHICAL PROBLEMS Analysis of problems in values, knowledge, and reality in relationship to social, political, and religious philosophies. (3, 3T+0S)

111 HISTORY OF PHILOSOPHY Surveys the history of philosophical thought from the ancient Greeks to the present. (3, 3T+0S)

220 ETHICS Survey of the development of morality, principles of individual and social behavior, and past and present ethical issues. (3, 3T+0S)
PHYSICS (PHYS)

110 INTRODUCTION TO PHYSICS Introduction to the fundamental laws of classical and modern physics. Co-requisite: PHYS 110L. (3, 3T+0L)

110L INTRODUCTION TO PHYSICS LAB Co-requisite: PHYS 110. (1, 0T+1L)

121 APPLIED PHYSICS I Study of the physics of mechanics, heat, and sound with applications in modern technology: for students in technological fields. Prerequisite: MATH 130; Co-requisite: PHYS 121L. (3, 3T+0L)

121L APPLIED PHYSICS I LAB Co-requisite: PHYS 121. (1, 0T+1L)

122 APPLIED PHYSICS II Continuation of PHYS 121. Prerequisite: PHYS 121L; Co-requisite: PHYS 122L. (3, 3T+0L)

122L APPLIED PHYSICS II LAB Co-requisite: PHYS 122. (1, 0T+1L)

215 ENGINEERING PHYSICS I Mechanics, fluids, vibrations, and sounds; problem solving and demonstrations. Prerequisite: MATH 162; Co-requisite: PHYS 215L. (3, 3T+0L)

215L ENGINEERING PHYSICS I LAB Co-requisite: PHYS 215. (1, 0T+1S)

216 ENGINEERING PHYSICS II Heat, electricity, magnetism, problem solving, and demonstrations. Prerequisite: PHYS 161/L; Prerequisite: MATH 162 Co-requisite: PHYS 216L. (3, 3T+0L)

216L ENGINEERING PHYSICS II LAB Co-requisite: PHYS 216. (1, 0T+1L)

262 GENERAL PHYSICS You will study optics and modern physics. Pre-requisites: PHYS 122/L or PHYS 216/L; Co-requisite: PHYS 262L. (3, 3T+0L)

262L GENERAL PHYSICS LAB You will engage in laboratory experiences supportive of PHYS 262, for which this course is a co-requisite. (1, 0T+1L)

290 UNDERGRADUATE RESEARCH EXPERIENCE IN PHYSICS A math-based experience in physics research, combining computational and experimental techniques through which you will learn computational modeling, experimental design, library and Internet information searches and research methodology while interacting with peers and faculty. You will prepare a technical report or poster on your activities. Research questions focus on nonlinear dynamics, chemical physics, and particle physics. (May be repeated for credit). Pre-requisite: Grade average of at least 3.50 in MATH 130 and MATH 150, or permission of instructor. (3, 3T+0L)

330 INTRODUCTION TO MODERN PHYSICS You will study special relativity, quantum effects, quantum mechanics, atomic and subatomic physics, and the instruments of modern physics. Prerequisite: PHYS 262/L; Co-requisite: PHYS 330L. (3, 3T+0L)

330L INTRODUCTION TO MODERN PHYSICS LAB You will engage in laboratory experiences supportive of PHYS 330, for which this course is a co-requisite. (1, 0T+1L)

331 THERMODYNAMICS AND STATISTICAL MECHANICS You will study the concepts of heat and thermodynamics, large numbers and probability distributions, oscillator, spin and gas systems, simple interacting systems, and Fermi statistics. Prerequisite: MATH 311 and 314. (3, 3T+0L)

405 ELECTRICITY AND MAGNETISM You will study electrostatics, the theory of dialectic materials, magnetostatics, the theory of magnetic materials, direct and alternating circuit theory, Maxwell equations, propagation, refraction and reflection of plane waves and wave guides. Pre-requisite: MATH 311 and 312. (3,3T+0L)

PLUMBING (PLB)

110 INTRO TO SOLAR HEATING PLUMBING You will study the basics of plumbing technology found in solar heating systems, including domestic hot water (DHW), space heating, and process heat systems. You will cover basic plumbing theory and the requirements of the International Plumbing Code (IPC) and the Uniform Plumbing Code (UPC). (1, 1T+0S)

110L INTRO TO SOLAR PLUMBING LAB You will engage in laboratory experiences which apply to the theoretical material covered in PLB 110. You will work with the most common components, methods, tools, and pipe materials needed to connect solar heating systems from collectors to heat exchangers to storage and to point-of-use. Safety in the plumbing environment is stressed. (2, 0T+2S)

130 PLUMBING I Theoretical training in job safety; plumbing tools and materials; joining of pipe, sizing, and installing drain, waste vent piping; sizing and installing water supply piping; system testing. (3, 3T+0S)

130L PLUMBING LAB I Practical application in using tools; installing pipe for drain, waste, and vent systems; installing pipe for water supply systems; system testing. (5, 0T+5S)

131 PLUMBING CODE I Application and interpretation of the Uniform Plumbing Code relating to definition, materials, general regulations, drainage and venting systems, joint and connections, and plumbing fixtures. (2, 2T+0S)

132 BLUEPRINT READING Interpreting and drawing orthographic and isometric drawings involving a variety of floor plans requiring different pipe layouts. (2, 2T+0S)

140 PLUMBING SYSTEMS II Expands on process of installing sanitary drainage and vent piping, sizing water supply piping, plumbing fixtures and appliances, fuel gas sizing, and piping and system testing. (3, 3T+0S)

140L PLUMBING SYSTEMS II LAB Practical application of PLB 140. (5, 0T+5S)

141 PLUMBING CODE II Application and interpretation of the Uniform Plumbing Code relating to water distribution, building sewers, fuel gas piping, and water heaters and vents. (2, 2T+0S)
142  BLUEPRINT READING AND DRAWING  Interpretation of residential and commercial blueprints involving different layouts used in the rough-in of sanitary drainage and vent piping, water distribution, and fuel gas piping. (2, 2T+0S)

150L  PLUMBING PRACTICUM  You will gain hands-on experience as a plumber’s assistant. Pre-requisite: PLB 140. (Summer only) (4, 0T+4S)

POLITICAL SCIENCE (PSCI)

Note: each course in this department bears a Pre-requisite of ENG 109N or an adequate score on the Course Placement Evaluation.

110  THE POLITICAL WORLD  Introduces you to political science with emphasis on the evolution of political thought and the realities of politics today. (3, 3T+0S)

120  CONTEMPORARY POLITICAL ISSUES  You will study political issues confronting the individual in modern society at local, national, and international levels. (3, 3T+0S)

200  AMERICAN POLITICS  Survey of American politics, theory of democracy, political institutions, the electorate, American governmental branches and their bureaucracies. (3, 3T+0S)

210  STATE AND LOCAL GOVERNMENT  You will explore the nature of state and local governments and the relationships which those governments have with the federal government; functions of state and local governments with emphasis on New Mexico municipal, county, and state governments; study of New Mexico politics and its role in political parties. (3, 3T+0S)

212  THE AMERICAN PRESIDENCY  You will study the Presidency as an institution of power and of leadership, and its relation to other political institutions. (3, 3T+0S)

PSYCHOLOGY (PSY)

Note: Each course in this program bears a pre-requisite of ENG 109N or an adequate score on the Course Placement Evaluation.

105  GENERAL PSYCHOLOGY  Introduces you to the traditional areas of psychology including psychobiology, learning, motivation, personality, psychopathology, psychotherapy and social problems. You will examine factors which determine and affect behavior, with emphasis on psychological principles applied to the human experience. (3, 3T+0S)

110  ISSUES OF DEATH AND DYING  You will study the issues of death and dying from both a personal and social perspective, including the stages of dying and grief, developmental understanding of death, the impact of death and grief on family systems; legal and ethical issues regarding death and dying. (3, 3T+0S)

120  TOPICS IN PSYCHOLOGY  You will study selected topics in psychology and interdisciplinary application including, but not limited to, motivation, communication, leadership, learning skills and styles, interpersonal relationships, conflict resolution, and creativity. May be repeated for credit when topics vary. (2, 2T+0S)

150  PERSONAL GROWTH  You will explore the personal development of one’s mental, emotional, and physical state. You will study and discuss such interventions as nutrition, stress management, problem solving, and life-style changes. (3, 3T+0S)

210  THEORIES OF PERSONALITY AND COUNSELING APPLICATIONS  Survey of theory and application of both classical and contemporary approaches to the study of personality, with emphasis on an application of theory to counseling; consideration of legal and ethical issues within the profession of counseling. (3, 3T+0S)

211  APPLIED PSYCHOLOGY  Application of psychological theory to topics with applications to everyday life, law, behavior modification, biofeedback, counseling, consumer psychology, and environmental problems. (3, 3T+0S)

212  CHILD PSYCHOLOGY AND DEVELOPMENT  You will study the development and behavior of the child from conception to adolescence, with emphasis on physical, emotional, social, and intellectual development through an understanding of the major theorists including Erikson and Piaget. Practical applications of theory into practice for preschool-elementary classroom will be incorporated. (3, 3T+0S)

215  BASIC COUNSELING TECHNIQUES  You will become acquainted with basic counseling skills, including active listening techniques such as paraphrasing, summarization, attending behaviors, and focusing; emphasis is on rehearsal of skills. (3, 3T+0S)

216  ADVANCED COUNSELING TECHNIQUES  Emphasizes therapeutic interventions, conceptualization of problems, setting goals, selecting strategies, and treatment planning. Prerequisite: PSY 215. (Spring) (3, 3T+0S)

217  INTERVIEWING AND ASSESSMENT  Covers basic counseling skills which include active listening techniques such as reflection of content and feelings. Also includes therapeutic interventions, assessment of clients, setting goals, selecting strategies with clients, and treatment planning. Emphasis is on rehearsal of skills. (3, 3T+0S)

225  CREATIVE DRAMA TECHNIQUES FOR THE CLASSROOM K-12  Designed for Education and Human Services majors, this course will assist you to focus on techniques of creative dramatics for use in the classroom and/or counseling situations. You will be exposed to the study of psychodrama and the therapeutic uses of role-play, as well as being exposed to theatre games, exercises and improvisation, as adapted to various curricula for K-12 (science, social studies, math, language arts, etc.). You will participate in creative drama activities and have the opportunity to lead a group using the learned techniques in that group’s curriculum field. [Cross-listed as THE 225] (3, 3T+0S)

229  ADOLESCENT PSYCHOLOGY  You will study adolescent psychology from different theoretical perspectives, examining the process of development during adolescence including such topics as physiological, sexual, and emotional development, as well as the role of peer and family influences in the process of self-emergence and personal adjustment. (3, 3T+0S)

230  PSYCHOLOGY OF ADJUSTMENT  Psychological health, mental illness, adjustment problems (divorce, death, illness, etc.) and the adjustment process. (3, 3T+0S)

232  ABNORMAL PSYCHOLOGY  Review of the historical, scientific, and ethical issues in the field of psychopathology; theories of abnormal behavior development, systems of therapy, and relevant research. (3, 3T+0S)
Completion of PSY 240 and PSY 241s meets the criteria for education in the twelve core function which is part of the licensure process for Alcohol and Drug Abuse Counseling.

240 ALCOHOL & SUBSTANCE ABUSE EVALUATION AND ASSESSMENT You will study five of the twelve core functions and global criteria of the alcohol and other substance abuse, including screening, intake, orientation, assessment, and crisis intervention. In this course you will devote 8 clock hours to ethics of the substance abuse counselor. (3, 3T+0S)

241 ALCOHOL & SUBSTANCE ABUSE TREATMENT AND REFERRAL You will study seven of the twelve core functions and global criteria of the alcohol and other substance abuse, including treatment planning, counseling, case management, client education, referral, report and record keeping, and consultation with other professionals in regard to client treatment/services. (3, 3T+0S)

256 GRIEF THEORY AND PROCESS Theories of grief counseling and the grief process; identification of both normal and unhealthy grief reaction, discussion of referral procedures and basic grief interventions. (3, 3T+0S)

260 FAMILY SYSTEMS THEORY AND COUNSELING APPLICATIONS You will study the major theories in family systems with emphasis on the counseling applications and practice in counseling interventions with dysfunctional family structures. (3, 3T+0S)

261 THERAPEUTIC INTERVENTIONS WITH CHILDREN & ADOLESCENTS You will focus on therapeutic interventions for children, including play therapy and filial therapy; therapeutic interventions with adolescents, experiential treatments, family involvement, and in-patient and out-patient counseling. (3, 3T+0S)

262 INTERVENING IN ADOLESCENT BEHAVIOR You will focus on problem behaviors of adolescence and solution applications including, but not limited to, conflict management and resolution, crisis intervention, and problem-solving techniques. Pre-requisite: PSY 229. (3, 3T+0S)

270 SOCIAL PSYCHOLOGY You will explore factors that affect individual behavior in group situations; individual behavior with the family, at work, and in extreme situations such as combat; prejudice, sexuality, aggression, conformity, altruism, instinct, attitude formation and change; review major contributions to the field as well as current research. (3, 3T+0S)

271 HUMAN SEXUALITY You will go through a thorough analysis of physiological, behavioral, experiential, social, and cultural aspects of human sexuality; learning, role behavior, development, mental health, aesthetics, imagery, and social deviance as related to sexuality. (3, 3T+0S)

275 GROUP PROCESS Introduces you to basic issues and stages of development in the group counseling process; overview of types of counseling groups, group theory, leadership ethical guidelines, group formation and termination. (3, 3T+0S)

277 PSYCHOLOGY OF GENDER AND SEXUALITY You will explore issues in the behavior of men and women, including theoretical perspectives, stereotyping, gender differences, development, sexuality, and social and cultural problems. (3, 3T+0S)

280 PRACTICUM FOR HUMAN SERVICES Field or practical experience for individuals in the Human Services degree program: supervision by faculty member and a professional worker in a situation involving practical application of skills learned in the classroom. With the instructor’s guidance and permission, you will arrange for the experience which requires at least 50 clock hours of supervised experience for each credit hour granted. Prerequisite: PSY 275 and permission of the program director. (3, 3T+0S)

281 PRACTICUM FOR SUBSTANCE ABUSE COUNSELORS Field or practical experience for individuals in the Substance Abuse Counselor degree program: supervision by faculty member and a professional worker in a situation involving practical application of skills learned in the classroom. With the instructor’s guidance and permission, you will arrange for the experience which requires at least 50 clock hours of supervised experience for each credit hour granted. Prerequisite: PSY 241 and permission of the program director. (3, 3T+0S)

283 MENTORING PRACTICUM You will initially take part in a four-hour training which will cover leadership, community relations, self esteem, and communication skills. Thereafter, you will participate individually or in small groups of mentors, in a community or college project, activity, or club. You may also participate with the program in an area related to your degree major. You will put in a total of 48 hours, including lecture time, required for this course. May be repeated once for credit. (1, 0T+1L)

285 CRISIS INTERVENTION Advanced techniques for intervention in crisis situations, including skills of assessment, active listening, focused exploration, action planning, termination and treatment of planning; reviews major situations that create crisis. Prerequisite: PSY 215. (Fall) (3, 3T+0S)

286 GRIEF COUNSELING SKILLS Introduces you to the specific skills of grief counseling dealing with loss, death, and crisis. Prerequisite: PSY 215. (3, 3T+0S)

290 DEVELOPMENTAL PSYCHOLOGY Description of the more salient aspects of the behavior and development of children and adolescents; emphasis on pertinent psychological research and practical applications to life situations. Prerequisite: PSY 105. (3, 3T+0S)

302 BEHAVIORAL AND PSYCHOLOGICAL FOUNDATIONS OF HEALTH You will study the psychological and behavioral foundations of health, health belief models, holistic paradigms of the mind-body interaction as related to physical health through such topics as: the role of stress on mental and physical health, psychosomatic disorders, behavioral medicine, and the psychology of illness and wellness. Pre-requisite: PSY 105. Cross-listed as IHS 302. (2, 2T+0S)

PUEBLO INDIAN STUDIES (PIS)

Note: each course in this department bears a Pre-requisite of ENG 109N or adequate score on Course Placement Evaluation.

200 INTRODUCTION TO PUEBLO INDIAN STUDIES You will survey academic approaches, such as history, linguistics, and anthropology, to the study of Pueblo Indians and their neighbors. (3, 3T+0S)
220 PUEBLO ARTS, CRAFTS, AND CULTURE  You will be introduced to this course through stories which accompany hands-on learning in various arts and crafts as told in the Pueblos for daily life and the transmission of cultural practices and knowledge. The course is taught by social scientists, along with artists in beadwork, fabric work, wood carving, storytelling, and more. (3, 3T+0S)

240 RESEARCH TOPICS IN PUEBLO INDIAN STUDIES  You will engage in directed one-on-one research topics related to Pueblo Indian Studies. May be repeated to a maximum of 6 crs. Pre-requisite: permission of instructor. (1-6, 1-6T+0S)

242 PUEBLO INDIAN WOMEN'S LIVES  You will survey anthropological, sociological, historical, life history, arts and crafts, and other writing by and about Pueblo Indian women. Topics may vary from term to term. (Fall) (3, 3T+0S)

246 TOURISM AND THE ARTS IN NEW MEXICO PUEBLOS  As tourism and art production have become principal means for the Pueblo peoples of New Mexico to support their families and communities, you will study this course through a multi-lens perspective of this economic, cultural, and aesthetic reality using historical readings, short films, and visits to local museums and Pueblo artists' galleries. Cross-listed as HUM 246. (3, 3T+0S)

250 INTERNSHIP IN TRIBAL LEADERSHIP, COMMUNICATION, AND TECHNOLOGY I  You will do a Field Service Learning and Internship with the Pueblo in which you have membership Permission of instructor. Graded CR/NC. (3, 0T+3L)

251 INTERNSHIP IN TRIBAL LEADERSHIP, COMMUNICATION, AND TECHNOLOGY II  This is a continuation of PIS 250. You will do a field service learning and internship. Permission of instructor. Graded CR/NC. (3, 0T+3L)

252 PUEBLO INDIAN HISTORY  You will study academic approaches to historical studies of Pueblo Indians in New Mexico and Arizona from pre-Columbia to the present using archival sources, ethnographic resources, and federal records. (3, 3T+0S)

256 PUEBLO TRIBAL GOVERNMENTS  You will study the forms of government practices used by Pueblo Peoples at the time of contact with Europeans to the present. (3, 3T+0S)

258 INDIAN GAMING, ENTREPRENEURSHIP, SOVEREIGNTY AND CASINOS  You will survey games played by Pueblo Indians from earliest times to the present and how the establishment of casinos fits within these traditions. You will study the recent history of gaming from Bingo operations and the tribal court battles to the passage of the federal Indian Gaming Regulatory Act (1988). You will also explore and debate the importance of political and economic issues to Pueblo gaming. Pre-requisite: ENG 111. Cross-listed as BA 258. (3, 3T+0S)

265 NATIVE AMERICAN LITERATURE I  Involves a survey of Native American writing from the time of the European invasion to the present with an emphasis on contemporary authors. Cross-listed as ENG 265. Pre-requisite: ENG 111. (3, 3T+0S)

266 NATIVE AMERICAN LITERATURE II  Involves critical reading and discussions of writings by Native American writers of fiction (short stories and novels) and poetry. Cross-listed as ENG 266. Pre-requisite: ENG 111. (3, 3T+0S)

270 PUEBLO INDIANS AND EDUCATION  You will examine traditional ways of learning in Pueblo Indian cultures and compare those teaching methods with BIA and contemporary compact schools and public schools. (3, 3T+0S)

272 PUEBLO HEALTH CONCEPTS AND PRACTICES  You will examine Pueblo health care beliefs, values, and practices in modern life. (3, 3T+0S)

281 SPIRIT OF PLACE, NATIVE SENSES OF PLACE  You will examine the meaning of place in your life and its particular importance to understanding Native identity and culture. You will focus on how to relate place with examples of how Native writers, poets, artists, storytellers, and other performers convey a “sense” or “spirit” of place in their work. Cross-listed as HUM 281. (3, 3T+0S)

283 TEWA ETHNOBIOLOGY: PLANTS AND ANIMALS OF THE TEWA WORLD  You will study, through lecture and field trips, how Tewa cultures reproduce knowledge of nature, including how indigenous plants and animals are named in Tewa dialect, as well as Spanish and English, and how those introduced by Spanish and American settlers became incorporated into Tewa culture. (3, 3T+0S)

284 AGRICULTURE PRACTICES OF THE PUEBLO WORLD  You will study diverse agricultural practices used by Eastern and Western Pueblos from pre-Columbian times to the present. (Fall only) (3, 3T+0S)

RADIATION PROTECTION (RAD)

233 RADIATION BIOLOGY  Survey of radiobiology: effects of differing types of radiation on matter, different radiations and their properties; detailed modes of action of radiation on biochemical and biophysical systems with emphasis on the large macromolecules of living tissue; nature of radiation damage to long-chain nucleic acid molecules; potential problems from indiscriminate use of radiation therapy and diagnostic x-rays, and nuclear facility accidents; effects of low-level radiation exposure. Cross-listed as ES 333. Prerequisite: permission of instructor. (Spring only) (3, 3T+0L)

234L INTRODUCTION TO RADIOSCIENCE AND TECHNOLOGY  Production, properties, interactions, dosimetry, detection and instrumentation of radiations from radioisotopes, radiation producing equipment, and nuclear reactors; phenomenon of radioactive materials from the viewpoint of nuclear stability, decay processes, and interaction with matter; devices and instrumentation for detection of radiation sources; applications of radiation and radioisotope techniques; radiation safety. Prerequisite: permission of instructor. (Fall only) (4, 0T+4L)

238L INTRODUCTION TO RADIATION PROTECTION  Theory and practice of radiation protection: health physics programs for area, site, and personnel monitoring for various types of facilities including nuclear materials production and processing, nuclear reactors, accelerators, radioisotope handling, and x-ray production facilities; interaction of radiation with material; devices and instrumentation for the detection of radiation with emphasis on health physics applications; safe handling procedures and survey methods; translation of guides and regulations to working procedures. Prerequisite: RAD 234L, or permission of instructor. (Spring only) (4, 0T+4L)

242 PROBLEMS IN RADIATION PROTECTION  Considers current topics of concern in radiation protection, such as natural
radiations, radiations peculiar to industrial and manufacturing processes, low-level radiation exposure, and ALARA principles. Prerequisite: RAD 234L, or permission of instructor. (Fall only) (4, 4T+0L)

243 PRACTICAL RADIOLOGICAL PROGRAMS AND SAMPLING METHODS Practical methods of handling Health Physics problems in the field. Includes techniques for environmental monitoring, sampling, and contamination control. Environments covered: uranium, plutonium, and tritium facilities, and accelerators, reactors, and general hospitals. (Summer only) (4, 4T+0L)

The following course is not taught at Northern. It exists only in terms of enabling posting of incoming credit from agencies providing this training.

244 RADIOLOGICAL CONTROL TECHNICIAN QUALIFICATION The RCT qualification process focuses on types of jobs that RCTs actually perform (conduct of radiological work). Includes training procedures on planning radiological work and radiological work controls, radiological monitoring and surveys, managing radioactive waste and contamination, radioactive material identification, storage, and control, releasing items and transporting radioactive material, instrumentation and calibration, controlling radioactive liquids and airborne radioactivity, construction and restoration projects, and activities involving energetic materials; radiological standards dealing with 1) administrative controls levels and dose limits, and 2) posting requirements; handling radiologically contaminated personnel; respiratory protection program; and managing radiological records. Those Radiation Protection majors who present current RCT certification to the Registrar will receive credit for this course, which may be substituted for PHYS 121 and 121L within the Radiation Protection degree major only. (4, 3T+1L)

RADIOLOGIC TECHNOLOGY (RAD)

Note: Only those accepted to the Radiologic program may take these RAD courses, and the RAD courses are sequential. In the event you are transferring into the program, you will be placed in the program at the appropriate level. You are responsible for providing your own transportation to and from the clinical sites and must understand that each of you will rotate through the individual sites.

108 BASIC PATIENT CARE Provides skills in safety, body mechanics, infection control, medication administration, pharmacology, life-threatening emergencies, and age-specific patient assessment. (Fall only) Pre-requisite: passing RAD. (3, 3T+0L)

135L PRINCIPLES OF RADIOLOGIC TECHNIQUES I Lecture and laboratory course providing knowledge based on the: principles of x-ray production, x-ray interaction with matter, concepts of radiologic technology and quality imaging techniques. (Fall only) Pre-requisite: passing RAD. (3, 2T+1L)

136L PRINCIPLES OF RADIOLOGIC TECHNIQUES II Continuing from RAD 135L, you will learn about quality assurance (regarding the properties of film, film holders, intensifying screens, film processing, and film artifacts. You will also train on the mechanics of film processing, silver recovery, and the darkroom environment. Prerequisite: Pre-requisite: RAD 135L. (Spring only) (3, 2T+1L)

140L RADIOLOGIC PROCEDURES I You will examine the skeletal and systems anatomy of the chest, abdomen, and upper and lower extremities. Along with nomenclature, you will practice the positioning related to each specific area. Pre-requisite: passing RAD; Co-requisite: RAD 145L. (Fall only) (4, 2T+2L)

141L RADIOLOGIC PROCEDURES II Anatomy and positioning continue with studying the pelvis, proximal femur, vertebral column, skull, sinuses, and facial bones. Prerequisite: Pre-requisite RAD 140L. (Spring only) (4, 2T+2L)

142L RADIOLOGIC PROCEDURES III Classification of reaction signs and symptoms to contrast media; types of contrast media and studies related. You will also learn the anatomy and positioning of the more common contrast procedures as witnessed in the clinical environment. Prerequisite: Pre-requisite: passing RAD. Co-requisite: RAD 140L. (Fall only) (5, 0T+5L)

145L CLINICAL EXPERIENCE I The first half of the semester will be restricted to the laboratory environment. You will be oriented to the clinic environment by learning radiation safety and protection along with basic equipment-operational skills (energized and darkroom), and basic film quality. In the second half of the semester, you will move from the lab to the clinical setting to apply your new knowledge and skills under the direct supervision of a clinical instructor. Prerequisite: Pre-requisite: passing RAD. Co-requisite: RAD 140L. (Summer only) (3, 2T+1L)

146L CLINICAL EXPERIENCE II As the clinical experience continues, you begin to perform master competencies under the direct supervision of the clinical coordinator. Once you have performed master competencies, you may continue those procedures under indirect supervision, learning and accepting increased responsibility. Prerequisite: Pre-requisite: RAD 145L. Co-requisite: RAD 141L. (Spring only) (5, 0T+5L)

149L CLINICAL EXPERIENCE III You will continue to work on master competencies and begin contrast studies. Prerequisite: Pre-requisite: RAD 146L; Co-requisite: RAD 142. (Summer only) (5, 0T+5L)

235 RADIOLOGIC PHYSICS You will learn electricity and electromagnetic properties and circuitry as those pertain to x-ray equipment. You will also study dynamic imaging (Fluoroscopy), image intensification, and safety related to these procedures. Prerequisites: Pre-requisite: RAD 136L, or permission of instructor. (Fall only) (3, 3T+0L)

236 PRINCIPLES OF RADIOLOGIC TECHNIQUES IV You will learn more advanced effects of radiation by studying radiation biology, including specifications of the x-ray beam and radiation interaction with cellular matter such as DNA and RNA synthesis. You will also learn digital technology as it applies to the clinical experience. Prerequisite: Pre-requisite: RAD 136L or permission of instructor. (Spring only) (2, 2T+0L)

240 RADIOLOGIC PROCEDURES IV You will begin examining advance modalities and imaging systems. You will continue with contrast procedures related to the operating room and other specialty areas. Modalities to include Mammography, Bone Densitometry, CT, MRI, Nuclear Medicine, Ultrasound, Angiography, Radiation Therapy, and opportunities that may present themselves as technology is offered. Prerequisite: Pre-requisite: RAD 141L, or permission of instructor; Co-requisite: RAD 245L. (Fall only) (3, 3T+0L)
245L CLINICAL EXPERIENCE IV  You will continue performing master competencies, working toward more indirect supervision while also performing intermediate rotations in trauma, O.R., and other specialty area. Prerequisite: Pre-requisite: RAD 149L, or permission of instructor; Co-requisite: RAD 240. (Fall only) (8, 0T+8L)

246L CLINICAL EXPERIENCE V In this final clinical rotation, you will complete the master competencies required for graduation, while continuing advanced rotations and learning administration and quality control. Prerequisite: Pre-requisite: RAD 245L, or permission of instructor. (Spring only) (8, 0T+8L)

250 RADIODIC PATHOLOGY In this supplemental writing skills course designed to enhance your communication abilities, you will research pathology from radiologic studies seen and performed in the clinical setting and/or pertaining to the weekly area of study. Prerequisite: Pre-requisite: RAD 240, or permission of instructor. (Spring only) (1, 1T+0L)

251 REGISTRY REVIEW You will complete medical radiography review to prepare for the American Registry of Radiologic Technologist exam. You will complete terminal competencies at this time. Pre-requisite: Pre-requisite: passing RAD and RAD 240, or permission of instructor. (Spring only) . (1, 1T+0L)

READING IMPROVEMENT (RDG)

108N READING IMPROVEMENT Introduces you to reading required for vocational programs and the workplace. Comprehension and critical thinking are stressed. Prerequisite: ENG 106N or adequate score on Course Placement Evaluation. (3,3T+0S)

109N READING AND CRITICAL THINKING Introduces you to reading required for college success. You will work on comprehension, problem solving, note taking, summarizing, and computer assisted research. Prerequisite: RDG 108N, or adequate score on Course Placement Evaluation. (3, 3T+0S)

RENEWABLE ENERGY (RE)

103 RENEWABLE ENERGY INTRODUCTION AND OVERVIEW In this course, you will view the past, present, and future fields of renewable energy used: to heat, light, and cool buildings; to produce domestic hot water; to power, heat, and cool industrial processes; to provide transportation; and to provide communications. You will cover many systems: passive, active and photovoltaic solar; wind; micro-hydro; wave; geothermal; biomass; fuel cells; human and animal power; and hydrogen. You will also cover vehicle fuels, such as ethanol, biodiesel, CNG, along with electric and hybrid systems, regenerative braking and flywheels. Classes will be conducted both on- and off-campus. Pre-requisite: ENG 108N and MATH 100N. (3, 3T+0S)

104 ARCHITECTURE 2030 AND THE 2010 IMPERATIVE Because half of the planet’s greenhouse gasses are produced by the construction and then the heating, cooling, and lighting of buildings, and because the state and several cities in New Mexico have committed to the Architecture 2030 movement -- a worldwide effort of monumental scope to change the design of buildings to end this contribution to global warming by the year 2030. In this course you will examine the changes needed in building design and construction, including design exercises. Pre-requisites: ENG 108N and MATH 100N. (3, 3T+0S)

108 ACTIVE SOLAR HEATING Given that solar energy can supply heat for buildings, domestic hot water, and industrial processes and given that active systems acquire heat with collectors, distribute the heat with fluids driven by pumps or blowers, store the heat in liquids, solids, or change-of-state materials and control the process with electrical or electronic sensors and controls, in this course you will analyze requirements and match needs with appropriate systems. Recommended co-requisite: RE 108L. (3, 3T+0S)

108L SOLAR ENERGY LAB Working with components of both active and passive solar heating systems: flat plate and concentrating collectors; heat transfer gasses, liquids, and solids; monitoring, control, and distribution systems; glazing, selective surfaces; and low emissivity materials. You will cover heat storage in liquids, solid, and change-of-state materials, with an emphasis on mounting components, pipe and duct connections, and safety. Classes will take place on- and off-campus. Recommended co-requisite: RE 108 or ADOB 107. (2, 0T+2S)

127 GEOTHERMAL SYSTEMS FOR HEAT AND POWER You will discuss the full range of geothermal systems, from their origins and uses to how geothermal energy can provide industrial process heat and electrical energy. Classes will take place on- and off-campus. Pre-requisite: RE 103. (4, 2T+2S)

128 BIOMASS SYSTEMS FOR HEAT, POWER, AND COGENERATION You will study biomass, a wide range of heat and energy productions systems that use plant materials. You will also study the range of equipment: from the fire pit to the highly efficient nearly zero-emitting industrial furnaces. You will be introduced to coal-fired power plants, carbon material, and carbon-neutral and carbon-sequestering concepts. You will work with small scale systems and equipment both on- and off-campus. Pre-requisite: RE 103. (4, 2T+2S)

129 TRENDS AND EMERGING ENERGY SOURCES You will use this class as a forum to research, discuss, and forecast emerging trends in the field of renewable and emerging energy sources, which have been around for a long time and have now gained international attention and a high status not previously enjoyed to the extent that homeowners, garage scientists, multinational companies and national governments are focused on incremental developments and giant leaps into new technologies. Pre-requisite: RE 103. (2, 2T+0S)

140L ELECTRIC VEHICLE CONVERSION: VOLTS AND BOLTS Through hands-on experience, you will learn how to convert an internal combustion engine vehicle to an electric vehicle (EV) powered by an electric motor and batteries. During the course, you will address vehicle selection, modification, removal of internal combustion-related parts, current EV technologies, performance considerations, driving techniques, charging infrastructure, and safety issues. (2, 1T+1S)

144 BIO-DIESEL FUEL PRODUCTION AND ENGINE REQUIREMENTS In this course, you will cover the history and present methods of producing bio-diesel fuel from soybeans and from recycled cooking oils and other industrial by-products. You will discuss the engine requirements for using bio-diesel fuels and demonstrate options. You will assemble and use a small-scale bio-diesel production unit. You will investigate fuels available at pumps and project future possibilities. You will spend time under the hood of a functioning bio-diesel vehicle. Pre-requisites: ENG 108N, MATH 100N, and RE 103. Recommended co-requisite: ELEC 190. Cross-listed as ATEC 144. (4, 2T+2S)
As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in biology, associated biological sciences and technologies. A few laboratory sessions are included. (Summer) (2, 2T+0L)

103 TOPICS IN CHEMISTRY As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in chemistry, associated chemical sciences and technologies. A few laboratory sessions are included. (Summer) (2, 2T+0L)

104 TOPICS IN PHYSICS As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in physics, associated physical sciences and technologies. A few laboratory sessions are included. (Summer) (2, 2T+0L)

105 TOPICS IN MATH As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in math, associated mathematical sciences and technologies. A few laboratory sessions are included. (Summer) (2, 2T+0L)

106 TOPICS IN ELECTRONICS As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in electronics, associated electronic sciences and technologies. A few laboratory sessions are included. (Summer) (2, 2T+0L)

107 TOPICS IN COMPUTERS As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in computers, associated computer sciences and technologies. Some laboratory sessions are included. (Summer) (2, 2T+0L)

108 TOPICS IN SCIENCE As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in general science or a specific scientific area such as environmental, geology, hydrology, anthropology, archeology, etc. associated biological sciences and technologies. A few laboratory sessions are included. (Summer) (2, 2T+0L)

109 TOPICS IN ENGINEERING As a Dual Credit high school student, you will survey topics designed to introduce you to career opportunities in general engineering or a specific engineering area such as civil, chemical, nuclear, aeronautical. A few laboratory sessions are included. (Summer) (2, 2T+0L)

110 TOPICS IN TECHNICAL COMMUNICATIONS As a Dual Credit high school student, you will survey topics designed to develop your communication skills in the planning, research, writing and oral presentation of technical reports. A few laboratory sessions are included. (Summer) (2, 2T+0L)

111 TOPICS IN TECHNOLOGY MANAGEMENT As a Dual Credit high school student, you will survey topics designed to develop professional and business skills to pursue a technology-based field of study in college and then enter the technology workforce. A few laboratory sessions are included. (Summer) (2, 2T+0L)

112 TOPICS IN TECHNOLOGY SCHOLARSHIP As a Dual Credit high school student, you will survey topics designed to develop scholarly skills to pursue a technology-based field of study in college and then enter the technology workforce. Scholarly skills include active listening, questioning, note-taking, time management, setting of personal and team goals in a college setting. A few laboratory sessions are included. (Summer) (2, 2T+0L)
SOCIOLOGY (SOC)
Note: Each course in this department bears a pre-requisite of ENG 109N, or adequate score on the Course Placement Evaluation.

101 INTRODUCTION TO SOCIOLOGY  Theorists and theories of human group behavior. (3, 3T+0S)

105 INTRODUCTION TO HUMAN SERVICES  Introduces you to the structure, nature, purpose, and procedures of the private and public human service systems; i.e., health, welfare, education, employment, religion, and criminal justice. During this course, you will be required to perform two hours per week of field or practical experience in the community. (3, 3T+0S)

140 SOCIOLOGY OF ALCOHOL AND SUBSTANCE ABUSE  You will survey the history, law, economics, and social problems regarding alcohol and drug use and abuse, including prevention and treatment efforts. (3, 3T+0S)

141 EFFECTS OF ALCOHOL AND DRUG ABUSE  Covers the physiological and behavioral effects of alcohol and other drugs. Major categories of drugs (stimulants, depressants, hallucinogenics, etc.) are studied separately. (3, 3T+0S)

211 SMALL GROUP COMMUNICATION STUDIES  You will learn the theory and skills involved in small group processes through participation, including attention to group types, characteristics, dynamics, conflicts, norms, leadership, problem solving, and decision making. (3, 3T+0S)

213 DEVIAN'T BEHAVIOR  Analysis of deviation from societal norms including history, theory, and research on individual and group norm violations and societal responses to the violations. (3, 3T+0S)

216 ETHNIC/INTERCULTURAL RELATIONS  You will study the patterns of race, ethnicity, minority, class, and gender interactions from individual, group, and institutional perspectives with a focus on the dynamics of ethnocentrism, prejudice, and discrimination. (3, 3T+0S)

220 SOCIAL PROBLEMS  You will examine various social problems, proposed solutions, and probably repercussions of those solutions; racism and prejudice, crime, sex roles, social stratification, ecology, drug abuse, and alcoholism. (3, 3T+0S)

225 MARRIAGE AND THE FAMILY  You will study the history, current state and future of courtship, marriage, family, parenthood, divorce, remarriage, and sex roles. (3, 3T+0S)

250 PSYCHOSOCIAL GERONTOLOGY  You will examine the aging process and the aging person from social and psychological perspectives, including inter-generational interaction, age grading, family responsibilities, social attitudes and perspectives of the aged person; examines social institutions designed to support the aging person from the standpoint of their service to the aging persons and their families. (3, 3T+0S)

SPANISH (SPAN)

100 CONVERSATIONAL SPANISH  Limited grammar, vocabulary, and pronunciation skills will be developed. May be repeated for credit. (1-3, 1-3T+0S)

101 SPANISH I  Introductory course for those who are not native Spanish speakers and who have had little or no previous exposure to Spanish. (3, 3T+0S)

102 SPANISH II  Continuation of SPAN 101. Prerequisite: SPAN 101. (3, 3T+0S)

105 SPANISH IMMERSION I  Designed to prepare teachers to pass the Four-Skills Spanish Exam. The main goal is to bring you to the level of proficiency necessary to speak, write, read, and comprehend in Spanish. Prerequisites: SPAN 101 and 102. (3, 3T+0S)

111 SPANISH AS A HERITAGE LANGUAGE I  As a student whose heritage language is Spanish, your objectives in this course will be to build upon your present language base, with emphasis on the development of all four language skills: listening, speaking, reading, and writing. (3, 3T+0S)

112 SPANISH AS A HERITAGE LANGUAGE II  Your objectives in this course will be to continue to build upon your present language base, with emphasis on the development of all four language skills: listening, speaking, reading, and writing. Prerequisite: SPAN 111. (3, 3T+0S)

201 INTERMEDIATE SPANISH I  Vocabulary building, oral and written expression; thorough review of grammar and usage. Prerequisite: SPAN 101 and SPAN 102. (3, 3T+0S)

202 INTERMEDIATE SPANISH II  A continuation of SPAN 201. Prerequisite: SPAN 201. (3, 3T+0S)

205 SPANISH IMMERSION II  This course is designed to reinforce your listening, speaking, reading, and writing skills in Spanish. You will concentrate on practicing the rule for accents, grammar, orthography, reading for meaning and interpretation, conversation, and articulation in Spanish. Prerequisite: SPAN 105. (3, 3T+0S)

211 SPANISH AS A HERITAGE LANGUAGE III  In this intermediate level course for heritage language students, you will review grammar and continue your development of the four language skills with an emphasis on literacy and speaking. Prerequisite: SPAN 112. (3, 3T+0S)

212 SPANISH AS A HERITAGE LANGUAGE IV  In this intermediate level course for heritage language students, you will continue your development of the four language skills with an emphasis on reading authentic materials, on practical writing needs, and on communicating with native speakers. Pre-requisite: SPAN 211. (3, 3T+0S)

221 CREATIVE WRITING IN SPANISH  You will study Spanish and bilingual creative literary expression, including poetry, fiction, and drama. Prerequisite: SPAN 102, or permission of instructor. (3, 3T+0S)

230 SPANISH FOR HEALTH PROFESSIONS  This is an introductory course for health professionals and persons interested in health care who must communicate with Spanish-speaking patients: basic concepts of grammar; develops vocabulary and communicative competencies appropriate to a health care setting. (3, 3T+0S)

290 READINGS IN HISPANIC LITERATURE  You will study selected topics, genres, periods, and movements in Latin American
or Peninsular literature; lectures, discussions, and composition in Spanish; occasionally offered in translation. Prerequisite: reading and writing proficiency in Spanish. (3, 3T+0S)

300 SPECIAL TOPICS IN HISPANIC LANGUAGE AND CULTURE This course will provide you an opportunity for emphasis on oral and written expression based on a theme or language-related topics (literature, culture, civilization, translation, commercials, etc.). Pre-requisite: SPAN 202 or SPAN 212.

301 INTRODUCTION TO SPANISH LITERATURE You will enter into an introduction to the novel, poetry, short fiction, and drama of Spain and Latin America, with emphasis on interpretation rather than literary history, through lectures, discussion, and composition in Spanish. Pre-requisite: Reading and writing proficiency in Spanish. (3, 3T+0S)

307 CIVILIZATION AND CULTURE You will study the Spanish, Latin American, and southwestern U.S. Spanish experience of yesterday and today through the social, historical, political, and literary aspects that his experience encompasses. Pre-requisite: Reading and writing proficiency in Spanish. (3, 3T+0S)

325 SPANISH FOR WRITTEN COMMUNICATION You will develop writing proficiency and critical thinking through reading and discussion of a variety of texts from Spain and Spanish-speaking America. You will be guided in your understanding of the reading selections at the textual and cultural level with an ample analysis of vocabulary words which may have multiple meanings in Spanish. You will focus on strategies in composing different pieces of writing. Pre-requisites: SPAN 101 and 102 or SPAN 201 and 202. (3, 3T+0S)

350 INTRODUCTION TO SPANISH LINGUISTICS You will enter into the study of phonology, morphology, syntax, and dialectology of the Spanish language. Pre-requisites: SPAN 202 or 212 or 300. (3, 3T+0S)

351 ADVANCED SPANISH GRAMMAR You will further your study of morphological and syntactic structures through analysis. Pre-requisite: SPAN 350. (3, 3T+0S)

360 SPANISH LINGUISTICS AND PHONETICS You will apply linguistics and phonetics to the knowledge and use of Spanish and English in order to provide future teachers with the ability to help children develop in their primary language. Pre-requisites: SPAN 101 and 102 or SPAN 201 and 202. (3, 3T+0S)

370 SOUTHWEST SPANISH You will study various aspects of Southwest Spanish: linguistic structure, regional and social variation, bilingualism, maintenance and shift, English influence, etc. Pre-requisite: SPAN 350. (3, 3T+0S)

371 NEW MEXICO SPANISH You will study all aspects of the Spanish language of New Mexico. You will conduct original research about the language. Pre-requisite: SPAN 350. (3, 3T+0S)

375 NEW MEXICO FOLKLORE You will study all aspects of the Spanish-speaking people of New Mexico: language, customs, beliefs, music, and folk sayings. Pre-requisite: SPAN 202 or 212 or 300. (3, 3T+0S)

400 HISTORY OF THE SPANISH LANGUAGE You will study the phonological, grammatical, and lexical development from Latin to Spanish. Pre-requisite: SPAN 370 or 371. (3, 3T+0S)

430 SURVEY OF CHICANO LITERATURE You will study the major genres of Chicano Literature (novel, short story, essay, poetry, and drama) with emphasis on post-1960s literature. Pre-requisite: SPAN 301. (3, 3T+0S)

440 SURVEY OF MEXICAN LITERATURE You will focus on a study of readings in Mexican literature emphasizing Mexico’s contribution to Hispanic American literature for pre-Colombian to contemporary times. You will examine diverse genres in Mexico’s literature. Pre-requisite: SPAN 301. (3, 3T+0S)

450 SURVEY OF SPANISH LITERATURE I You will study Spanish Peninsular literature including the Medieval, Renaissance, and Baroque periods through the 18th Century. Pre-requisites: SPAN 101 and 102 or SPAN 111 and 112. (3, 3T+0S)

451 SURVEY OF SPANISH LITERATURE II You will study Spanish Peninsular literature of the 19th and 20th centuries. Pre-requisites: SPAN 101 and 102 or SPAN 111 and 112. (3, 3T+0S)

460 SURVEY OF LATIN AMERICAN LITERATURE I You will study Latin American literature from the pre-Columbian through the Colonial period. Pre-requisites: Pre-requisites: SPAN 101 and 102 or SPAN 111 and 112. (3, 3T+0S)

461 SURVEY OF LATIN AMERICAN LITERATURE II You will study Latin American literature of the 19th and 20th centuries. Pre-requisites: Pre-requisites: SPAN 101 and 102 or SPAN 111 and 112. (3, 3T+0S)

SPANISH-COLONIAL FURNITURE MAKING (SCFM)

110L BASIC SPANISH COLONIAL FURNITURE LAB Fundamentals such as hand/power tools usage and safety, carving techniques, selection of materials; introduces historical themes; repeatable; offered in evenings only. (4, 0T+4S)

150 INTRODUCTION TO SPANISH COLONIAL FURNITURE Basic concepts of woodworking; selection and preparation of stock; adhesives, abrasives, and layout of stock; tools and machines, portable and stationary; basic joinery techniques common to furniture making trade. Co-requisite: SCFM 150L. (3, 3T+0S)

150L INTRODUCTION TO SPANISH COLONIAL FURNITURE LAB Application of basic concepts of woodworking in shop. Selection and preparation of stock for joinery assembly and finishing. Employment of hand and power tools, adhesives, fasteners, and hardware; demonstration of basic joinery techniques. Co-requisite: SCFM 150. (9, 0T+9S)

160L SPANISH COLONIAL FURNITURE MAKING LAB Actual design construction and finishing of furniture particular to the average home. Pre-requisite: SCFM 150L or SCFM 110L. (12, 0T+12S)

170L ADVANCED SPANISH COLONIAL FURNITURE MAKING LAB I Concepts of furniture construction by the actual designing, construction, and finishing of one or more pieces of furniture. Pre-requisite: SCFM 160L. (12, 0T+12S)

175L ADVANCED SPANISH COLONIAL FURNITURE MAKING LAB II This course continues SCFM 170L and is designed
for entrepreneurial students planning to develop a business in Spanish Colonial furniture making. Topics include customized contract work, pricing items for selling, developing a marketing plan and portfolio, working with galleries, and advanced tool maintenance. Pre-requisite: SCFM. (12, 3T+9S)

180L SPECIAL PROJECTS Students work on special projects with minimal assistance; repeatable; permission of instructor. (6, 0T+6S)

190L ADVANCED PROJECTS You will learn more advanced techniques of carving, hand tool, and power tool usage. You will produce one intricate project, applying the techniques learned in class. Pre-requisite: SCFM 110L. (2, 0T+2S)

SPECIAL EDUCATION (SPED) ALTERNATIVE LICENSURE PROGRAM

401 FOUNDATIONS OF EDUCATION This course addresses competencies for entry-level teachers from a theoretical and historical perspective of models and theories that provide the basis of special education practice. It also addresses current and historical state and national rules and regulations relating to special education. The course provides a basis for procedural safeguards relating to educational services and state and federal mandates for students with disabilities. Based on principles of brain-based learning and diversity and multiculturalism, the course provides defensible choices in your apprenticeship and professional practice. Co-requisite: SPED 455. (3, 3T+0S)

455 THE SPECIAL EDUCATION PROGRAM: IEP’s AND ASSESSMENTS This course addresses the planning and implementation of effective program for exceptionalities, least restrictive environments, classroom management, human growth and development, and transition. Major components include assessment and evaluation, diagnostics, placement and the Individual Education Plan (IEP). Co-requisite: SPED 401. (4, 4T+0S)

465 READING FOR SPECIAL LEARNERS Provides you with learning experiences in the diagnosis and analysis of reading difficulties and how to adapt materials for various disabilities of the exceptional learner. You will focus on experiences in developing and implementing appropriate instructional strategies in teaching reading across the curriculum. Selection and adaptability of instructional materials are highlighted with the use of technological products for specific populations. Pre-requisite: passing NMTA. (3, 3T+0S)

475 CURRICULUM METHODS AND MATERIALS FOR SPECIAL EDUCATION You will focus on teacher knowledge and application skills in teaching curricula aligned with state content standards and benchmarks. You will explore areas of individualized modifications and/or accommodations when the general education curriculum is not appropriate. You will address instructional strategies in meeting the needs of the special learner with transition as a major component, with emphasis on the application of technology to support teaching and learning. You will address and integrate the Individual Education Plan (IEP) throughout the learning process. Pre-requisite: SPED 401 and passing NMTA. (Spring) (3, 3T+0S).

485 TEACHING READING IN SPECIAL EDUCATION Provides you with a conceptual framework for teachers in the development of competencies in the diagnosis and teaching of reading for the exceptional learner. This course will also provide experiences to understand and incorporate evidence-based research into the teaching of reading. You will acquire an understanding of reading assessments, including informal reading inventories, running records, miscue analysis and standardized reading assessments. You will also address skills in adaptive instructional strategies with an integrative approach across the curriculum. Pre-requisite: passing NMTA. (3, 3T+0S)

497 SUPERVISED FIELD EXPERIENCE Provides you with experience in portfolio preparation and interaction with students in exploring and discussing professional ethics and issues in Special Education. You will prepare and complete a portfolio representing experiences in the 20-credit-hour program. Pre-requisite: passing NMTA. (1, 1T+0S)

497L SUPERVISED FIELD EXPERIENCE LAB Provides you with 120 hours of supervised field experience in an educational setting under the supervision of a certified Special Education teacher and resource specialists. Your experiences will encompass the special education program addressing Special Education level competencies in parent/professional communication skills, planning and implementing effective programs, least restrictive environment, individual educational planning, assessment and evaluation, curriculum development and implementation, technology, classroom management, and accommodating strategies to meet the diversity of the exceptional learner. Requires 96 or more hours of practicum in the field, which includes 6 hours of seminar. Interaction with students on a one-to-one basis and in small group settings is provided. Pre-requisite: passing NMTA. (3, 0T+3S)

SPEECH (SPCH)

130 PUBLIC SPEAKING Principles of rhetorical theory as applied in public speaking situations: audience analysis, content, organization, style, verbal and non-verbal expression, and critical listening. You will deliver various speeches following selected rhetorical modes. Prerequisite: ENG 109N. (3, 3T+0S)

THEATRE (THE)

Each studio courses in this department may be repeated without penalty, each time counting for credit and toward your cumulative grade point average; however, no course may be counted more than once toward graduation requirements.

120 INTRODUCTION TO THEATRE 1 This course provides an overview of the Theatre Arts from its prehistoric origins through Western and non-Western cultures to the present, and an introduction to the practical applications of theatre. You will explore the physical realities of creating theatre as a living art form, including lighting, set design, costuming, and stage make-up. (3, 3T+0S)

122 ACTING 1 You will explore acting styles and techniques of major historical periods through individual scene study, using a variety of acting exercises to develop a personal acting theory, style, and method. (3, 1T+2S)

124 ACTING FOR THE CAMERA You will be exposed to specialized acting techniques for the camera in film, TV, and commercials. You will study terminology, lighting, auditioning, cold-reading, scene study, and working with a partner, as well as preparing a resume with an 8”x10” headshot. (3, 2T+1S)

126 SPEECH AND MOVEMENT FOR THEATRE This course will help you develop the articulation, clarity and projection of speech for theatre; focuses on movement on stage for dramatic and theatrical performances. (2, 1T+1S)
130 HISTORY OF THEATRE  This course provides you with an in-depth study of a theatre topic and its place in theatre history through the reading of plays. May be repeated, as topics vary from term to term. Pre-requisite: ENG 109N. (3, 3T+0S)

132 STAGECRAFT  You will learn stage carpentry, foam carving, prop construction, safety in the theatre, paint techniques for the stage, rigging, and hardware. (3, 2T+1S)

134 INTRODUCTION TO COSTUMING  Introduces you to basic design principles, color theory, sewing machine and hand-stitching, fabric/light concepts, and play analysis leading to costuming a stage production. (2, 1T+1S)

150 STAGE PRODUCTION  A practicum in producing a theatrical performance. You may choose to be involved in any aspect of technical theatre, including lights, sounds, crew, costumes, or you may choose to perform in the production. You will have hands-on experience in mounting a show from conception to a fully-realized production. (2, 0T+2S)

196 INTRODUCTION TO LIGHT AND SOUND FOR THE THEATRE  You will be introduced to performance light and sound, including the theory of light and color for stage lighting and to sound support for live performances. You will have hands-on experience in mounting a show from conception to a fully-realized production. (3, 2T+1S)

218 ACTING II  You will be involved in an intensive study of the techniques involved in building and developing a characterization, with emphasis on sub-textual work and play analysis. Pre-requisite: THE 120. (3, 1T+2S)

224 PLAYWRITING  You will study character development, scene structure and narrative theory in the process of developing a stage and/or screen script; includes reading of published scripts. Pre-requisite: ENG 109N. (3, 2T+1S)

225 CREATIVE AND THERAPEUTIC DRAMA TECHNIQUES FOR THE CLASSROOM K-12  Designed for Education and Human Services majors, this course will present techniques of creative dramatics for use in the classroom and/or counseling situations. You will be exposed to the study of psychodrama and the therapeutic uses of role-play, as well as being exposed to theatre games, exercises and improvisation, as adapted to various curricula for K-12 (science, social studies, math, language arts, etc.). You will participate in creative drama activities and have the opportunity to lead a group using the learned techniques in that group’s curriculum field [Cross-listed as PSY 225]. Pre-requisite: ENG 109N. (3, 3T+0S)

226 DIRECTING AND PLAY PRODUCTION  You will learn the fundamental techniques and theories of stage direction. Prerequisite: THE 120 and 122 (2, 1T+1S)

228 PERFORMANCE POETRY  You will study reading, writing, and performing poetry, with an emphasis on the personal and political aspects of poetry from the 1960s to the present, including the Poetry Slam movement. (3, 2T+1S)

238 TEATRO CHICANO  You will read and discuss contemporary Chicana/o playwrights, with encouragement to explore self-identity through cultural identity. You will develop a definition of Chicano/a aesthetic, and write personal pieces expressing cultural heritage and identity. Pre-requisite: ENG 109N. (3, 3T+0S)

250 STAGE MANAGEMENT  You will focus on professional stage manager duties, including responsibilities for actors, calling cues during production, all technical production, and compiling the Production Book. Prerequisite: THE 120. (2, 1T+1S)

282 ACTING III: SCENE STUDY  You will continue your study of acting developed in THE 122 and 218 through an in-depth study of characters in two- or three-character scenes. The class will culminate in a performance. Pre-requisites: THE 218. (3, 2T+1S)

290 DESIGN FOR THE THEATRE  You will explore drafting, model building, rendering, play analysis, styles, ornament, and CAD. Your goal will be to develop a real design onstage through the Stage Production lab and through portfolio development Pre-requisite: THE 150. (3, 2T+1S)

296 ADVANCED LIGHT AND SOUND FOR THE THEATRE  Although you will have some practical hands-on crew work in this class, you will primarily focus on design, theory, physics, and concepts of the art of performance lighting and sound. Pre-requisite: THE 196. (3, 2T+1S)

VISUAL COMMUNICATION (VC)

110 FUNDAMENTALS OF VISUALIZATION  This is a basic course in which you will explore classical two-dimensional visual elements using methodologies drawn in part from the Bauhaus tradition. Co-requisite: VC 111. (Fall) (3, 3T+0S)

111 2-D COMPUTER VISUALIZATION  You will use basic computer functions in exploring classical two-dimensional visual elements, texture, and pattern. Co-requisite: VC 110. (Fall) (4, 3T+1S)

120 3-D VISUALIZATION  This is a basic course in which you will explore classical three-dimensional visual elements using methodologies drawn in part from the Bauhaus tradition. Co-requisite: VC 121. (Spring) (3, 3T+0S)

121 3-D COMPUTER VISUALIZATION  You will use basic computer functions in exploring three-dimensional visual elements and geometric primitives. Co-requisite: VC 120. (Spring) (4, 3T+1S)

135 ELECTRONIC PUBLICATIONS I  Introduces you to the fundamentals of digital page layout and electronic publication. (4, 3T+1S)

140 DIGITAL IMAGING I  In this course you will become familiar with Photoshop, digital camera, scanner and printer. (4, 3T+1S)

155 COMPUTER ANIMATION I  During the first half-semester of this course you will spent gaining a working knowledge of 3ds max. During the second half you will study storyboarding and executing an animated sketch. (4, 3T+1S)

160 DIGITAL PRODUCTION FOR FILM I  You will develop literacy in Digital Video Production techniques for broadcast and film, with an objective of your understanding production methods by
examining film history and storyboarding, as well as audio, lighting, camera, and editing techniques for digital transfer to film (4, 3T+1S)

165 VISUAL COMMUNICATIONS I You will work in digital video production and post-production involving live footage, animation, text, and sound, with an emphasis on articulation and economy of expression. Classes consist of weekly seminars in which you will work independently on your projects. Pre-requisite: VC 160. (4, 3T+1S)

175 INTERNET PUBLICATION I Introduces you to the production of web page design and publication on the Internet. (Cross-listed as CT 175.) (4, 3T+1S)

230 IMAGE TECHNOLOGY I An introduction to digital media and image processing. You will explore visualization technology using digital camera, scanner, and image processing software for print-ready and/or web-ready output. You will use tools such as SRL and digital camera, photo scanner, Adobe Photoshop, and Internet Publishing software.

235 ELECTRONIC PUBLICATIONS II You will cover the design, lay-out, and execution of a multi-page digital publication. Pre-requisite: VC 135. (4, 3T+1S)

240 DIGITAL IMAGING II You will cover the preparation of images for general output and web publication using Illustrator, Photoshop, and Image Ready software. Pre-requisite: VC 140. (4, 3T+1S)

255 COMPUTER ANIMATION II You will cover the development and execution of an animation clip that will be edited into a class project. Prerequisite: VC 155. (4, 3T+1S)

260 DIGITAL PRODUCTION FOR FILM II You will cover the production and editing of a PSA (Public Service Announcement) for a non-profit or small business organization of your choice. Building on the foundation acquired in VC 160, you will learn advanced editing, paint and compositing techniques, incorporating these into your final project. Pre-requisite: VC 160. (4, 3T+1S)

265 VISUAL COMMUNICATION II You will develop and execute cooperative projects which may be promotional, narrative, or scientific visualization. You will produce a portfolio project in the form of a digital tape, CD, or DVD. Pre-requisite: VC 165. (4, 3T+1S)

275 INTERNET PUBLICATION II You will study advanced production of web page design and publication on the Internet. Pre-requisite: VC 175. (4, 3T+1S)

280 VISUAL COMMUNICATION HISTORY You will study the historical perspective of visual communication from the evolution of tool-use and language to digital technology. (3, 3T+0S)

290 MULTIMEDIA Introduces you to multimedia, utilizing electronic imaging, animation, and digital editing. Prerequisites: VC 140 and VC 155. (4, 3T+1S)

WELDING (WELD)

110 INTRODUCTION TO WELDING Shop and personal safety, different welding processes, different metals, and basis of metal identification and analysis. (3, 3T+0S)

111L FUNDAMENTALS OF OXYACETYLENE WELDING Lighting, adjusting, and turning off oxyacetylene cutting outfit, safety precautions, tools and equipment; ninety-degree cuts, level cuts, and cutting holes in mild steel. (3, 0T+3S)

112L FUNDAMENTALS OF ARC WELDING Three types of arc welders, straight and reverse polarity, selection of correct electrode, starting, stopping, and restarting of bead; construction of pad in flat position and of square groove butt weld. (3, 0T+3S)

120L OXYACETYLENE WELDING Cutting, fusion, and braze; selection of welding tips, and demonstration of ability to carry a puddle; distinction between braze and fusion, and application of flux. (3, 0T+3S)

121L ARC WELDING Different types of arc welders, polarity, beads, and E-6010 and E-7018 electrodes; construction of test plates in all positions. (3, 0T+3S)

122L INERT GAS WELDING GTAW process; identification of applications, advantages of the process, and identification of major parts of equipment; fuller metals and metallurgical properties of base metals; setting up equipment and production of welds on the popular metals in the flat through vertical positions on the common joints. (3, 0T+3S)

130 HANDS-ON WELDING The principles and practice of welding basics, usually offered periodically on a short-term basis. (2, 1T+1S)

210 WELDING BLUEPRINT READING Identification of information contained in a blueprint: the view, size, and dimensions, drawing or pictorial view and three-view sketches of a specified rectangular block. (3, 3T+0S)

211L PRACTICAL ARC LAB Practical use of ARC equipment; projects assigned according to the skill of the welder. (3, 0T+3S)

212L PRACTICAL OXYACETYLENE LAB Practical use of oxyacetylene equipment; projects assigned according to the skill of the welder. (3, 0T+3S)

213L PRACTICAL INERT GAS LAB Practical use of inert gas equipment; projects assigned according to the skill of the welder. (3, 0T+3S)

299 COOPERATIVE EDUCATION FIELD EXPERIENCE Employment in an approved work-related experience following individualized learning objectives. Forty-eight (48) work hours are required to earn one semester hour of credit. Students may earn up to five credit hours. Students are evaluated jointly by program faculty and employer on a CR/NC basis. Prerequisite: permission of instructor. (2-5L)

WILDLAND FIRE SCIENCE (WFS)

100 FOREST MANAGEMENT TRAINING Focuses on basic ecological concepts covered in a classroom setting, including the role of natural disturbances, succession, and fire ecology. Students will learn orienteering skills using a map, compass, global position, and study tree and plant identification, forest growth measurements, and measuring slope and aspect. You will also learn how to assess watershed health, sample streams, and evaluate water quality criteria, such as turbidity and invertebrate counts. You will cover basic concepts related to geology and soil in the field experience. (1, .5T+.5S)
102  FOREST WORKERS SAFETY CERTIFICATION  Through this course, you and your employer will qualify to receive reduced workers’ compensation insurance premiums. You will study power saw mechanics, basic power saw operation, bucking and felling safety, fire-line construction safety, and Hazmat and OSHA requirements. (1, .5T+.5S)

110  WILDLAND FIRE TECHNICIAN I  Provides an orientation to the philosophy and history of wildland fire history and the loss of life and property by fire, municipal fire defenses, organization and function of federal, state, and private fire protection agencies. You will be introduced to fire fighting tactics and strategy, incident command systems (ICS), and initial fire ground resources. (Applies to CFSTS certification for Fire Officer.) (2, 2T+0S)

112  WILDLAND FIRE FIGHTER TRAINING  Provides entry-level firefighting skills, such as safety orientation, firefighter preparedness, tools and equipment, firing devices, use of water, suppression, securing the control line, use of maps, scouting, hazardous materials, and standards for survival. Also includes introducing primary environmental factors that affect the start and spread of wildfire, and the recognition of potentially hazardous situations. (3, 2T+1S)

118  INTERAGENCY INCIDENT BUSINESS  Targeted for entry-level logistics and financial/administration positions, helicopter managers, and single resource positions in the incident command system. This course meets the general training needs of all positions for which an understanding of interagency incident business management is required. Topic include employee responsibilities and conduct, personnel timekeeping, pay and commissary, correct reporting procedures for traumatic injury occupational disease, procurement and equipment recording, property management, interagency agreements, and claims/accident investigation. Pre-requisite: WFS 110. (1, 1T+0S)

125  BASIC AIR OPERATIONS  Surveys the uses of aircraft in fire suppression, and instructs trainees on how to conduct themselves in and around aircraft; covers management policy, regulations, and procedures that govern aviation operations in fire suppression; familiarizes trainees with tactical and logistical uses of aircraft in fire suppression as well as describes the specifications for helicopter landing areas. Pre-requisite: WFS 110. (1, 1T+0S)

127  ADVANCED FIRE FIGHTING TRAINING I  You will learn to use fire line reference tools to facilitate the communication and decision-making processes, describe to incorporate and maintain open lines of communication with appropriate personnel, demonstrate your ability to apply the SOP’s found in the Incident Response Guide, and demonstrate your ability to apply information found in the Fire-line Handbook. Pre-requisite: WFS 110 and 112. (1, 1T+0S)

128  ADVANCED FIRE FIGHTING TRAINING II  Through this introductory leadership course which uses both classroom and field exercises, you will undertake a self-assessment to step into a leadership role. You will study leadership values and principles, transition challenges for leaders, situational leadership, team building, and ethical decision making. This course involves 2-4 hours of pre-course work. Pre-requisites: WFS 110, 112, and 127. (1, 1T+0S)

201  WILDLAND FIRE TECHNICIAN II  Provides training for initial attack incident commanders and company officers confronting wildfire which presents a threat to life and property. Includes size-up, assessment, public relations, and follow-up. Pre-requisite: WFS 110 and WFS 112. (3, 3T+0S)

215  INTERAGENCY (IA) HELICOPTER TRAINING  Provides the basic knowledge and skills required by those who will be working with crews on contract helicopters for initial attack capacity. This is a combined classroom/field course designed to provide you proficiency in all areas of the tactical and logistical use of helicopters to achieve efficiency and standardization. Includes safety, personal protective equipment, capabilities and limitations, load calculations, helicopter makes and models, landing areas, fueling, contract administration, cargo transport, helibase and helispot organizations and operations. Also, covers missions and organizations, introducing you to subsequent specialized training options. Pre-requisite: WFS 110. (3, 3T+0S)

232  FUNDAMENTALS OF FIRE BEHAVIOR  A classroom-based skill course designed to prepare you, as a prospective supervisor, to undertake safe and effective fire management operations. It is the second course in a series which collectively serves to develop fire behavior prediction knowledge and skills. Provides more detailed information on the treatment of fuels, weather and topography, and a stronger foundation for analyzing variables and their interactive effects on fire behavior. Pre-requisites: WFS 110 and WFS 112. (3, 3T+0S)

235  IGNITION OPERATION  You will be trained in the functional role and responsibilities connected with firing operations. You will cover planning, ignition procedures, ignition techniques, and equipment applicable to wildland and prescribed fire, and you will also address the role of the ignition specialist or firing boss as the organization manages escalation from a non-complex to a complex fire situation. Pre-requisites: WFS 110 and WFS 112. (2, 2T+0S)

237  CREW BOSS  A classroom skill course designed to produce your proficiency in the performance of all duties associated with the single resource crew boss, from initial dispatch through return to home unit. Includes preparation and mobilization, assignment preparation, tactics and safety, off-line duties, and demobilization/post-incident activities. Designed for training throughout the United States, and includes examples from all geographic areas. Pre-requisites: WFS 110 and WFS 112. (2, 2T+0S)

239  ENGINE BOSS  This is a skills course designed to produce proficiency in the performance of the duties associated with engine boss, single resource (ENGB). Upon completion of this course, you will be able to perform the tasks of an Engine Boss in meeting the tactical decisions required to safely manage an engine and personnel on an incident. You will study engine and crew responsibilities and limitations, information sources, fire size-up considerations, tactics, and wild land/urban interface. Pre-requisite: Must have Crew Boss and FFT1 certifications. (1, 1T+0S)

241  DOZER BOSS  This is a skills course to meet the training needs of a Dozer Boss on an incident as outlined in the Position Task Book and PMS 310-1. Primary considerations are tactical use and safety precautions required to establish and maintain an effective dozer operation. Upon completion of this course, you will ensure that the dozer has been properly inspected and signed up, ensure the operator is qualified and properly signed up, determine the capabilities and limitations of the dozers and operators to perform an assignment, and identify the actions required of the dozer boss to safely and effectively complete an assignment. A field exercise is part of this course. Pre-requisite: Must hold FFT1 certification. (2, 2T+0S)

280  WATER/HYDRAULICS  You will gain practical knowledge and application skills in water/hydraulics. You will select the equipment
required to maintain flow of water as required by the incident, install pump, hose lays, and holding tanks to provide water during all phases of the incident, and perform required field maintenance on a portable pump. Pre-requisites: WFS 110 and 112. (2, 1T+1S)

281 CHAIN SAW You will train on the use of chain saw use. You will be able to list, define, and apply chain and safety standards as required by OSHA and NECG agency manuals, hang-books, and directives, maintenance and function of PPE, identify basic chain saw parts, trouble shooting and safety features. You will receive a demonstration of chain saw use in felling, limbing, and bucking. Pre-requisite: WFS 110 and 112. (3, 2T+1S)

SPECIAL COURSES

TOPICS (TP)

147, 247 Lower-division courses in selected subject areas. When available they will be shown in the published Schedule of Classes with a specific descriptive title. No more than 6 credit hours of “TOPICS” courses may be applied toward completion of a degree or certificate. (1-6)

399, 499 Upper division courses in selected subject areas. When available they will be shown in the published Schedule of Classes with a specific descriptive title. No more than 6 credit hours of “TOPICS” courses may be applied toward completion of a baccalaureate degree. (1-6)

INDEPENDENT STUDY (IS)

248, 398, 498 Reserved for the outstanding student (*) whose educational needs cannot be met within the traditional curriculum offerings. Individual work experience, research projects, or practicum may be used to earn credit through Independent Study. No more than 6 credit hours of Independent Study courses may be applied towards completion of an associate degree or certificate, or toward a baccalaureate degree (1-6)

Initial approval and assignment of an instructor who will supervise the course must be obtained from the department chairperson who will provide an approved outline of the course content to the Provost for approval and submission to the Registrar. All approvals must be documented and on file at the Registrar’s office prior to registration for the course.

* For this purpose, an outstanding student is one who has been working toward a specific declared major and who has completed at least fifty percent of that program’s requirements and, over that amount of course work, has attained a minimum 3.50 cumulative GPA.
FULL-TIME STAFF

Josephine Aguilar ........................................................... Administrative Assistant to the President
Johanna Aguino ........................................................... Child Care Teacher Assistant
Kristin Alvarez .............................................................. Accountant
Raymond Archibeque .................................................... Educational Advisor
Jennifer Archuleta ....................................................... Financial Aid Officer
Priscilla Baldonado ......................................................... Cook I
Rachel Begay ............................................................... Administrative Assistant to Registrar
Gary Bouy ............................................................... SBDC Advisor
Barbara Bustos ........................................................... Educational Advisor, EOC
Adam Chacon ............................................................... Purchasing Clerk
M. Cristina Chacon ........................................................ Child Care Teacher Asst.
Therese Chacon ............................................................ Accounting Technician
Anna Marie Cordova .................................................... Department Secretary, EOC
Ignacio Coronado .......................................................... Carpenter
Jieder Crouch ............................................................... Administrative Secretary, SOL
Maurice DeSegovia .......................................................... Assistant Director, Recruitment
Clarissa Duran .............................................................. STEM Program Coordinator
Lisa Duran ................................................................. Department Secretary, Humanities
Robin Duran ............................................................... ABE Technician
Patricia Espinoza .......................................................... Custodian
Miriam Foranda ............................................................... Educational Advisor
Micaela Gallegos ........................................................... Child Care Teacher Assistant
Mike Gallegos ............................................................... Custodian
Lorraine Garcia ............................................................. Business Office Technician
Mary Garcia ................................................................. Cashier
Tina Garcia ................................................................. Department Secretary, Nursing
Glenn Gomez ............................................................... Adult Basic Education Coordinator
Janelle Gomez ............................................................... Secretary, College of Math & Science
Pablo Gonzales ............................................................. AA Program Coordinator, Teacher Education
Jeremy Gonzales .......................................................... Distance Education Technician
Jerry Griego ................................................................. Custodian
Ted Griffith ................................................................. Electrician
Jody Grittman .............................................................. Bookstore Manager
Alice Gurule ................................................................. Custodian
Mary Lou Hoffman-Duran ............................................. Custodian
Julia Honaberger .......................................................... Department Secretary, Facilities
Sue Ellen Jacobs ............................................................ Co-Director of NPI
Diahnne Jacquez ............................................................ Accounting Technician
Jynella Jaramillo ......................................................... Developmental Studies Technician
Page Konrad ............................................................... Educational Advisor
Charles Lehman ......................................................... Co-Director, University Center Program
Carmen Lobato ............................................................ Department Secretary, HEP
Brandy Lopez .............................................................. Department Secretary, Business
Tamara Lopez ............................................................. Coordinator, ALP and RETA
Betty Lujan ................................................................. Data Processing Coordinator
Dorain Maestas ............................................................ Cook Supervisor
Ivan Maestas ............................................................... MIS Technician
Bernie Manzanares ........................................................ Custodian
Herman Manzanares ..................................................... Grounds Keeper
Brenda Martinez .......................................................... Career Services Specialist
Donald Martinez .......................................................... Student Activities Coordinator, El Rito
Jennifer Martinez .......................................................... Accounting Technician
Jerry Martinez ............................................................. Custodian
Joe Martinez ............................................................... BANNER System Administrator
Johnny Martinez .......................................................... Security
Kenneth Martinez .......................................................... Custodian
Lercy Martinez ............................................................ Custodian
Karen Martinez ............................................................ Custodian
Mildred Martinez .......................................................... Accounting Technician
Steven Martinez .......................................................... Educational Advisor, Upward Bound
Stephanie McReynolds .................................................. Educational Advisor
Viviane Medina ........................................................... Financial Aid Officer
Pam Montrose ............................................................. Advisor/GED Examiner/Veterans Benefits
Tessie Naranjo ............................................................. Co-Coordinator of NPI
Henry Ocana ............................................................. Carpenter Assistant
Amy Ortiz ................................................................. Library Technician
Catherine Pacheco ...................................................... Lab Instructional Assistant
Tina Marie Pacheco .................................................... Secretary, College of Education
Jeanette Padilla .......................................................... Financial Aid Officer
Amanda Padilla ........................................................... Child Development Teacher Assistant
Lisa Pryillas ............................................................... MIS Technician
Paula Reid ................................................................. Coordinator of Student Advisement
Lydia Rivera ............................................................... Financial Technician
June Rock ................................................................. Switchboard Operator
Florencio Rodriguez ..................................................... Maintenance Worker
Alfonso Romero ........................................................... Custodian
Andy Romero ............................................................. Physical Plant Supervisor
Cecilia Romero ......................................................... Administrative Secretary, El Rito Heritage Ctr
Cindy Romero ............................................................. Custodian
Ernesto Romero .......................................................... Grounds Keeper I
Anna Roybal ............................................................... Department Secretary, Upward Bound
Shannon Rupert .......................................................... Lab Technician/Environmental
Dolores Martinez Salazar .............................................. Admissions Specialist
Joyce Sandoval ........................................................... Comptroller
Rita Sandoval ............................................................. Administrative Secretary, SBDC
Richard Sedillo .......................................................... Coord. Recreation & Student Activities, Espanola
Gilberto Siquieros ........................................................ Carpenter
Arnold Suazo ............................................................. Carpenter
Danny Suazo ............................................................. Educational Advisor, EOC
Charles Tafoya .......................................................... Educational Advisor, SOL
Shannon Tafoya .......................................................... Department Secretary, Massage Therapy
Debra Trujillo ............................................................. Data Processing Coordinator
Tessie Trujillo-Lopez ..................................................... Payroll Manager
Emily Turner ............................................................... Cataloger
Mary Ann Valdez ....................................................... Administrative Assistant to the Provost
Michael Valdez .......................................................... Plant Supervisor
Thomas Vallejo .......................................................... Distance Education Coordinator
Gerald Wheeler .......................................................... Accountant
Steve Wold ............................................................... Math Specialist
Janice Zoller ............................................................... Educational Advisor, Upward Bound
Fall 2009
Suggested deadline to submit an Application for Fall 2009 ................................................................. Friday, 31 Jul
Deadline to submit an Application for Fall 2009 ................................................................................ Thursday, 20 Aug
Online Registration * .............................................................................................................................. Monday, 13 Apr through Thursday, 20 Aug
Convocation ........................................................................................................................................... Tuesday, 12 Aug
Last Day to Take Placement Tests Prior to Fall 2009 ........................................................................... Thursday, 20 Aug
Classes Begin .................................................................................................................................... Monday, 24 Aug
Last Day to Change Schedule (Drops/Adds only) .................................................................................. Friday, 28 Aug
Last Day to Drop from a Full-Term Course with a Refund .............................................................. Friday, 4 Sep
Last Day to Change from CR-AU/AU-CR ............................................................................................. Friday, 4 Sep
Holiday (Labor Day) ............................................................................................................................... Monday, 7 Sep
Last Day to Receive a Refund for Texts through the Bookstore ....................................................... Tuesday, 8 Sep
Last Day to Drop from a Full-Term Course without Record ............................................................. Friday, 11 Sep
Mid-Term Exams .................................................................................................................................... Saturday-Thursday, 10-16 Oct
Fall Break (no classes) ............................................................................................................................. Monday-Tuesday, 19-20 Oct
Mid-Term Grades Due ............................................................................................................................ Wednesday, 21 Oct
Faculty and Staff Development Day (no classes) ................................................................................. Wednesday, 21 Oct
Last Day for Instructors to Initiate a Withdrawal ................................................................................... Friday, 30 Oct
Holiday (Veterans Day) no classes ........................................................................................................ Thursday, 11 Nov
Deadline to Submit a Petition to Graduate for Fall 2009 ................................................................. Friday, 13 Nov
Last Day to Withdraw from a Full-Term Course .................................................................................... Friday, 13 Nov
Registration for Spring 2010 Begins * ................................................................................................... Monday, 16 Nov
Thanksgiving Break ............................................................................................................................... Thursday-Sunday, 26-29 Nov
Final Exams ........................................................................................................................................... Saturday-Thursday, 12-17 Dec
Last Day of Term .................................................................................................................................. Friday, 18 Dec
Final Grades Due .................................................................................................................................. Monday, 21 Dec

Spring 2010
Suggested deadline to submit an Application for Spring 2010 ............................................................... Monday, 4 Jan
Deadline to submit an Application for Spring 2010 ........................................................................... Thursday, 14 Jan
Online Registration * .............................................................................................................................. Monday, 9 Nov through Thursday, 14 Jan
Convocation ........................................................................................................................................... Tuesday, 12 Jan
Last Day to Take Placement Tests Prior to Spring 2010 ................................................................. Thursday, 14 Jan
Holiday (Martin Luther King Jr’s Birthday) .......................................................................................... Monday, 18 Jan
Classes Begin ....................................................................................................................................... Tuesday, 19 Jan
Last Day to Change Schedule (Drops/Adds only) ................................................................................ Friday, 22 Jan
Last Day to Drop a Full-Term Course with a Refund ........................................................................ Friday, 29 Jan
Last Day to Change from CR-AU/AU-CR ............................................................................................. Friday, 29 Jan
Last Day to Receive a Refund for Text through the Bookstore ....................................................... Tuesday, 2 Feb
Last Day to Drop a Full-Term Course without Record ....................................................................... Friday, 5 Feb
Mid-Term Exams .................................................................................................................................... Saturday-Thursday, 6-11 Mar
Mid-Term Grades Due ............................................................................................................................ Tuesday, 16 Mar
Deadline to Submit a Petition to Graduate for Spring 2010 ............................................................. Friday, 19 Mar
Spring Break ........................................................................................................................................ Saturday-Friday, 13-19 Mar
Last Day for Instructors to Initiate a Withdrawal .................................................................................. Friday, 26 Mar
Holiday (Good Friday) ........................................................................................................................... Friday, 2 Apr
Last Day to Withdraw from a Full-Term Course .................................................................................. Thursday, 9 Apr
Registration for Summer and Fall 2009 Begins * .................................................................................. Monday, 12 Apr
Final Exams ........................................................................................................................................... Saturday-Thursday, 8-13 May
Commencement Rehearsal ................................................................................................................... Thursday, 13 May
Last Day of Term .................................................................................................................................. Friday, 14 May
Commencement Ceremony .................................................................................................................. Saturday, 15 May
Final Grades Due .................................................................................................................................. Monday, 17 May
Summer 2010

Suggested deadline to submit an Application for Summer 2010 ................................................................. Friday, 14 May
Deadline to submit an Application for Summer 2010 ............................................................................. Thursday, 3 Jun

Online Registration * ................................................................................................................ Monday, 12 Apr through Thursday, 3 Jun

Last Day to Take Placement Tests Prior to Summer 2010 ....................................................................... Thursday, 3 Jun

Classes Begin ........................................................................................................................................... Monday, 7 Jun

Last Day to Change Schedule (Drops/Add only) ...................................................................................... Wednesday, 9 Jun
Last Day to Change From CR-AU/AU-CR ................................................................................................. Friday, 11 Jun
Last Day to Receive a Refund for Textbooks through the Bookstore ...................................................... Monday, 14 Jun
Last Day to Drop a Full-Term Course with 100% Refund ........................................................................ Friday, 11 Jun
Last Day to drop a Full-Term Course with 50% Refund ........................................................................... Friday, 18 Jun
Deadline to Submit a Petition to Graduate for Summer 2010 ................................................................. Friday, 18 Jun

Holiday (Independence Day) ..................................................................................................................... Monday, 5 Jul
Last Day to Withdraw from a Full-Term Course ......................................................................................... Friday, 16 Jul
Final Exams ................................................................................................................................................ Saturday-Thursday 24-29 Jul
Last Day of Term .......................................................................................................................................... Friday, 30 Jul
Final Grades Due ......................................................................................................................................... Monday, 2 Aug

* Faculty are available for advisement throughout each regular Fall and Spring semester, from the beginning of the term until final exams are scheduled. When faculty are unavailable, academic advisement is taken over by professional staff from the Student Advisement Center. Students are encouraged to meet with their advisors and to register online.

Those registering on the final day of registration pay an additional late fee of $5.00
## INDEX

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Placement (AP)</td>
<td>17 &amp; 26</td>
</tr>
<tr>
<td>Adobe Construction (Cert.)</td>
<td>100</td>
</tr>
<tr>
<td>Admission Policies</td>
<td>12</td>
</tr>
<tr>
<td>Administrative Assistant (Cert.)</td>
<td>87</td>
</tr>
<tr>
<td>Administrative Withdrawals</td>
<td>34</td>
</tr>
<tr>
<td>Admission Policies</td>
<td>13</td>
</tr>
<tr>
<td>Adobe Construction (ADOB) courses</td>
<td>209</td>
</tr>
<tr>
<td>Adobe Construction (Cert.)</td>
<td>100</td>
</tr>
<tr>
<td>Adult Basic Education (ABE)</td>
<td>30</td>
</tr>
<tr>
<td>Advanced Placement (AP)</td>
<td>17 &amp; 26</td>
</tr>
<tr>
<td>Allied Health (AAS)</td>
<td>167</td>
</tr>
<tr>
<td>Alternative Licensure Program</td>
<td>164</td>
</tr>
<tr>
<td>Elementary (K-8) (Cert.)</td>
<td>1464</td>
</tr>
<tr>
<td>Secondary (7-12) (Cert.)</td>
<td>164</td>
</tr>
<tr>
<td>Special Education</td>
<td>165</td>
</tr>
<tr>
<td>Anthropology (ANTH)</td>
<td>210</td>
</tr>
<tr>
<td>Art (AA)</td>
<td>49</td>
</tr>
<tr>
<td>Art (ART) courses</td>
<td>210</td>
</tr>
<tr>
<td>Astronomy (ASTR)</td>
<td>212</td>
</tr>
<tr>
<td>Attendance</td>
<td>35</td>
</tr>
<tr>
<td>Auto Body Repair (AAS)</td>
<td>101</td>
</tr>
<tr>
<td>Auto Body Repair - Estimation of ABR (Cert.)</td>
<td>104</td>
</tr>
<tr>
<td>ABR - Non-Structural Analysis &amp; Damage (Cert.)</td>
<td>103</td>
</tr>
<tr>
<td>Auto Body Repair - Refinishing (Cert.)</td>
<td>102</td>
</tr>
<tr>
<td>Auto Body Repair (ABR) courses</td>
<td>212</td>
</tr>
<tr>
<td>Automotive Mechanical Repair (Cert.)</td>
<td>107</td>
</tr>
<tr>
<td>Automotive Service Fundamentals (Cert.)</td>
<td>106</td>
</tr>
<tr>
<td>Automotive Technology (AAS)</td>
<td>105</td>
</tr>
<tr>
<td>Automotive Technology (ATEC) courses</td>
<td>213</td>
</tr>
<tr>
<td>Baccalaureate Programs</td>
<td>16</td>
</tr>
<tr>
<td>BANNER access</td>
<td>5</td>
</tr>
<tr>
<td>Barbering (AAS)</td>
<td>94</td>
</tr>
<tr>
<td>Barbering (Cert.)</td>
<td>95</td>
</tr>
<tr>
<td>Biology (AS)</td>
<td>188</td>
</tr>
<tr>
<td>Biology (BIOL) courses</td>
<td>214</td>
</tr>
<tr>
<td>Biology (BS)</td>
<td>191</td>
</tr>
<tr>
<td>Board of Regents, Faculty and Staff</td>
<td>8</td>
</tr>
<tr>
<td>Bookkeeper (Cert.)</td>
<td>72</td>
</tr>
<tr>
<td>Bookstore Services</td>
<td>29</td>
</tr>
<tr>
<td>Business Administration (AA)</td>
<td>77</td>
</tr>
<tr>
<td>Business Administration (BA) courses</td>
<td>217</td>
</tr>
<tr>
<td>Business Administration (BA)</td>
<td>73</td>
</tr>
<tr>
<td>Business and Office Administration Department</td>
<td>70</td>
</tr>
<tr>
<td>Calendar</td>
<td>6</td>
</tr>
<tr>
<td>Campus Crime</td>
<td>45</td>
</tr>
<tr>
<td>Career and Technical Education</td>
<td>99</td>
</tr>
<tr>
<td>Carpentry (CARP) courses</td>
<td>220</td>
</tr>
<tr>
<td>Change of Name</td>
<td>33</td>
</tr>
<tr>
<td>Changes in Enrollment</td>
<td>27</td>
</tr>
<tr>
<td>Chemical Technician (AAS)</td>
<td>195</td>
</tr>
<tr>
<td>Chemistry (CHEM) courses</td>
<td>220</td>
</tr>
<tr>
<td>Children on Campus</td>
<td>25</td>
</tr>
<tr>
<td>Civil Engineering (CE) courses</td>
<td>221</td>
</tr>
<tr>
<td>Classical Guitar (BA)</td>
<td>58</td>
</tr>
<tr>
<td>Classification of Students</td>
<td>16</td>
</tr>
<tr>
<td>CLEP</td>
<td>17</td>
</tr>
<tr>
<td>Clerk Receptionist (Cert.)</td>
<td>88</td>
</tr>
<tr>
<td>Colorado Reciprocity</td>
<td>20</td>
</tr>
<tr>
<td>Communications (COMM) courses</td>
<td>221</td>
</tr>
<tr>
<td>Communications, Humanities, and Social Sciences</td>
<td>128</td>
</tr>
<tr>
<td>Community Services / Continuing Education</td>
<td>31</td>
</tr>
<tr>
<td>Complaint Procedure for Transfer Students</td>
<td>18</td>
</tr>
<tr>
<td>Computer Science (CS) courses</td>
<td>222</td>
</tr>
<tr>
<td>Computer-Aided Drafting (AAS)</td>
<td>126</td>
</tr>
<tr>
<td>Computer-Aided Drafting (Cert.)</td>
<td>127</td>
</tr>
<tr>
<td>Concurrent Admission</td>
<td>16</td>
</tr>
<tr>
<td>Construction Trades (CONS) courses</td>
<td>223</td>
</tr>
<tr>
<td>Construction Trades Management (AAS)</td>
<td>109</td>
</tr>
<tr>
<td>Construction Trades Technology (AAS)</td>
<td>108</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>31</td>
</tr>
<tr>
<td>Cosmetology (AAS)</td>
<td>93</td>
</tr>
<tr>
<td>Cosmetology (Cert.)</td>
<td>96</td>
</tr>
<tr>
<td>Cosmetology (COSM) courses</td>
<td>223</td>
</tr>
<tr>
<td>Cosmetology Instructor (Cert.)</td>
<td>96</td>
</tr>
<tr>
<td>Course Cancellations</td>
<td>22</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>209</td>
</tr>
<tr>
<td>Course Placement</td>
<td>26</td>
</tr>
<tr>
<td>Criminal Justice (AA)</td>
<td>129</td>
</tr>
<tr>
<td>Criminal Justice (CI) courses</td>
<td>224</td>
</tr>
<tr>
<td>Dance (DANC) courses</td>
<td>225</td>
</tr>
<tr>
<td>DANTES Subject exams</td>
<td>36</td>
</tr>
<tr>
<td>Dean’s List</td>
<td>18</td>
</tr>
<tr>
<td>Directory Information</td>
<td>32</td>
</tr>
<tr>
<td>Distance Education</td>
<td>46</td>
</tr>
<tr>
<td>Drafting (DRFT) courses</td>
<td>225</td>
</tr>
<tr>
<td>Dropping Courses</td>
<td>21</td>
</tr>
<tr>
<td>DSST/DANTES</td>
<td>18</td>
</tr>
<tr>
<td>Early Admission of HS Students</td>
<td>18</td>
</tr>
<tr>
<td>Early Childhood Education (AA)</td>
<td>157</td>
</tr>
<tr>
<td>Early Childhood Education (ECE) courses</td>
<td>226</td>
</tr>
<tr>
<td>Economics (ECON) courses</td>
<td>227</td>
</tr>
<tr>
<td>Education (ED) courses</td>
<td>227</td>
</tr>
<tr>
<td>Education, College of</td>
<td>157</td>
</tr>
<tr>
<td>Educational Opportunity Center (EOC)</td>
<td>30</td>
</tr>
<tr>
<td>Electrical Technology (AAS)</td>
<td>110</td>
</tr>
<tr>
<td>Electrical Technology (Cert.)</td>
<td>111</td>
</tr>
<tr>
<td>Electricity (ELEC) courses</td>
<td>231</td>
</tr>
<tr>
<td>Electronics, Electronic &amp; Computer Engineering (EECE)</td>
<td>231</td>
</tr>
<tr>
<td>Elementary (K-8) (Cert.) Alternative Licensure Program</td>
<td>164</td>
</tr>
<tr>
<td>Elementary Education (AA)</td>
<td>160</td>
</tr>
<tr>
<td>Elementary Education (BA)</td>
<td>161</td>
</tr>
<tr>
<td>Engineering, College of</td>
<td>147</td>
</tr>
<tr>
<td>Engineering (ENGR) courses</td>
<td>232</td>
</tr>
<tr>
<td>English (ENG) courses</td>
<td>232</td>
</tr>
<tr>
<td>English Requirements</td>
<td>26</td>
</tr>
<tr>
<td>Enrollment in Credit Courses</td>
<td>16</td>
</tr>
<tr>
<td>Enrollments</td>
<td>18</td>
</tr>
<tr>
<td>English (ENG) courses</td>
<td>232</td>
</tr>
<tr>
<td>English Requirements</td>
<td>26</td>
</tr>
<tr>
<td>Enrollment in Credit Courses</td>
<td>16</td>
</tr>
</tbody>
</table>
Enrollment Limitations .............................................................. 27
Enrollment Services ................................................................ 26
Advanced Placement .............................................................. 26
Environmental Monitoring (Cert.) ........................................ 197
Environmental Science (AAS) ................................................... 196
Environmental Science (BS) .................................................... 198
Environmental Science (ES) courses ....................................... 233
Esthetics (Cert.) ........................................................................ 97
Estimated Expenses ................................................................. 20
Fiber-Arts (FA) courses ............................................................ 237
Fiber-Arts/Weaving (AAS) ......................................................... 112
Fiber-Arts/Weaving (Cert.) ......................................................... 113
Film (FIT) courses .................................................................... 239
Film Technician (Cert.) .............................................................. 51
Financial Aid............................................................................... 23
General Policies ........................................................................ 23
Fine Arts Department ............................................................... 48
Flamenco Dance (AA) ............................................................... 52
Flamenco Music (AA) ............................................................... 54
Food Services ............................................................................ 29
Forestry (FOR) courses ........................................................... 239
GED Testing .............................................................................. 30
General Business (AAS) ........................................................... 80
General Curriculum Requirements .......................................... 40
Certificate Programs ................................................................. 40
Degree Requirements ............................................................... 40
General Education Common Core (GECC) ........................... 41
General Studies (AA) ................................................................. 131
Geography (GEOG) courses .................................................... 239
Geology (GEOL) courses ........................................................ 240
Good Standing ......................................................................... 36
Grade appeals .......................................................................... 38
Grade Changes ......................................................................... 35
Grade Issuance ......................................................................... 35
Grade Point Average (GPA) ..................................................... 35
Grading System ....................................................................... 33
Graduation Rates .................................................................... 45
Graduation with Honors ......................................................... 39
Graduation .............................................................................. 39
Residency Requirements .......................................................... 39
Health Science (HSCI) courses ............................................... 241
Health, Physical Education and Recreation (HPER) courses 240
High School Equivalency Program (HEP) ............................... 30
History (HIST) courses ............................................................. 243
History of The Institution .......................................................... 11
Hospitality, Tourism and Restaurant Management (Cert.) .... 91
Hospitality, Tourism and Restaurant Management (HTRM) courses .................................................. 243
Human Services (AA) ............................................................... 135
Human Services in the Social Sciences (AA) ......................... 133
Humanities (HUM) courses ....................................................... 244
Humanities and Social Sciences (HSS) courses ...................... 244
Information Engineering Technology (Aeng) ......................... 148
Information Engineering Technology (Beng) ......................... 151
Information Technology (IT) courses ...................................... 245
Insurance ................................................................................ 25
Integrative Health Studies (BS) .............................................. 168
Integrative Health Studies (IHS) courses .............................. 246
International Students ............................................................. 14
International Studies ............................................................... 14
Jazz (BA) ................................................................................. 61
Laboratory Biotechnology (AAS) ............................................ 201
Law Enforcement (LE) courses ............................................. 249
Legal Office Professional (Cert.) .......................................... 89
Library Services ...................................................................... 29
Library Technology (AAS) ....................................................... 136
Library Technology (Cert.) ....................................................... 137
Library Technology (LT) courses ......................................... 249
Machining Technology (AAS) ............................................... 114
Machining Technology (MT) courses .................................... 249
Management Information Systems (AA) .............................. 84
Management Information Systems (BBA) ......................... 81
Manicurist/Pedicurist (Cert.) ................................................... 97
Manicurist/Esthetician (Cert.) ................................................. 98
Massage Therapy (AAS) ......................................................... 173
Massage Therapy (Cert.) ......................................................... 171
Massage Therapy (MAS) courses ........................................ 250
Materials Science (MATE) courses ........................................ 251
Math and Science, College of............................................. 188
Math Center .......................................................................... 28
Mathematics (BS) ................................................................. 202
Mathematics (MATH) courses .............................................. 251
Mechanical Engineering (Beng) Solar Energy ...................... 155
Mechanical Engineering (ME) courses ................................. 253
Medical Office Professional (Cert.) ........................................ 90
Megan’s Act ........................................................................... 45
Mission Statement ................................................................. 12
Music (AA) ............................................................................. 56
Music (MUS) courses ............................................................. 253
Natural Resources - Range Ecology Management (AAS) .... 205
Natural Resources (NR) courses .......................................... 257
Non-degree status .................................................................. 14
Nursing (AAS) ....................................................................... 181
Nursing (AS) .......................................................................... 183
Nursing Completion Program - RN to BSN ......................... 185
Nursing (NURS) courses ....................................................... 257
Nursing Department ............................................................... 177
Office Administration (AAS) ................................................. 86
Office Administration (OA) courses .................................... 259
Open Registration .................................................................... 6
Other Fees .............................................................................. 20
Parking .................................................................................... 30
Payment Policy ....................................................................... 19
Personal and Career Development ........................................ 28
Personal Development (PD) courses .................................... 260
Philosophy (PHIL) courses ................................................... 260
Photo ID .................................................................................. 25
Physics (PHYS) courses ......................................................... 261
Plumbing (PLB) courses ......................................................... 261
Plumbing Technology (AAS) ............................................... 115
Plumbing Technology (Cert.) ............................................... 116
Police Science (AAS) ............................................................... 138
Political Science (PSCI) courses ........................................... 262