

# Southwestern Indian Polytechnic Institute



**2011-2013 Catalog**

*A National Indian Community  
College*





## 2011-2013 CATALOG

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Southwestern Indian Polytechnic Institute  
"A National Indian Community College"  
9169 Coors Blvd. NW  
Albuquerque, NM 87120  
(Mailing Address: P.O. Box 10146, Albuquerque, NM 87184)  
[www.sipi.edu](http://www.sipi.edu)



## A MESSAGE FROM SIPI'S PRESIDENT

Welcome to Southwestern Indian Polytechnic Institute (SIPI)! I am very pleased that you have selected SIPI, a national Indian community college, as your partner in pursuit of higher education. This catalog provides important information to help you succeed in your chosen field of study.

SIPI is a great place! I am deeply impressed by our strong and dedicated college faculty and staffs, who are all committed to our mission, to “prepare Native American students to be productive life-long learners as tribal members in an ever-changing global environment. As a land grant institution, SIPI partners with tribes, employers, and other organizations with a stake in Indian education. An enduring commitment to student success is the hallmark of SIPI’s operations.” SIPI plans on being a vital partner in the growth, prosperity and good health of our Indian Nations; we count on you to join us.

We spent the past year engaged in the development and implementation of our Strategic Plan. To help us move forward, I worked with our college leadership to identify institutional priorities for the next three years, which we must now implement. These priorities are aligned with our strategic goals:

**Goal One:** Make learner success the core work of Southwestern Indian Polytechnic Institute.

**Goal Two:** Develop new programs, strengthen existing programs, and recruit students to respond directly to the current and projected demographic and economic trends of Indian tribes, the state in which they are located, the nation, and the world.

**Goal Three:** Promote the health and economic vitality of Indian tribes and communities through dynamic partnerships, coalitions, and collaborations.

**Goal Four:** Expand the use of instructional technology to enhance student learning.

**Goal Five:** Make better use of existing data and information; create new actionable information and customers for this information to support SIPI’s operational and strategic planning efforts.

**Goal Six:** Provide new and expanded opportunities for faculty and staff development that supports an atmosphere of excellence in academics and student support services.

Another important issue for the coming year will be our candidacy and accreditation efforts through the Higher Learning Commission. A key part of this process is demonstrating that we monitor the quality of our academic programs and our students' learning. We are an institution of higher education, first and foremost, dedicated to student success. Toward that end, we aspire to continually improve.

Best wishes for a successful academic year. Ahe’hee doo Nizhonigo Naninaa’ doo’ (Thank you and May you walk in beauty).

A handwritten signature in cursive script that reads "Sherry Allison".

Dr. Sherry Allison (Dine’)  
President

**SOUTHWESTERN INDIAN POLYTECHNIC INSTITUTE**  
**Academic Calendar 2011-2012**  
**2011 FALL TRIMESTER**

New & Readmit student application deadline .....	July 29
Student orientation, testing, advisement and course registration .....	August 23-27
Last day to register for courses .....	August 29
First day of classes .....	August 29
Last day to add/drop or challenge course .....	September 2
Labor Day holiday .....	September 5
Fall 2011 Trimester fees due .....	September 16
American Indian Day .....	October 10
Mid-term examination period .....	October 17-21
End of 9 <sup>th</sup> week; last day to drop a course with "W" .....	October 28
Petition to graduate closes .....	October 28
Veterans Day .....	November 11
Thanksgiving holiday break .....	November 24-25
TABE post-test .....	November 29
Spring pre-registration .....	December 5-9
Final examination period .....	December 12-16
Final grades due / trimester ends .....	December 16
Fall 2011-Spring 2012 Interim (December 19, 2011-December 30, 2011)	

**2012 SPRING TRIMESTER**

New & Re-admit student application deadline .....	December 9
Student orientation, pre-testing (ACT-Compass, TABE), advisement and course registration .....	January 4-7
Last day to register for courses .....	January 9
First day of classes .....	January 9
Last day to add/drop or challenge course .....	January 13
Martin L. King Day holiday .....	January 16
Spring 2012 Trimester fees due .....	January 27
Presidents Day holiday .....	February 20
Mid-term examination period .....	February 27-March 2
Spring Break .....	March 8-9
End of 9 <sup>th</sup> week; last day to drop a course with "W" .....	March 12
Petition to graduate closes .....	March 16
TABE post-test .....	April 10
Summer pre-registration .....	April 16-20
Final examination period .....	April 23-27
Trimester ends / Spring Commencement Exercises .....	April 27
Final grades due .....	April 27
Spring 2012-Summer 2012 Interim (April 30, 2012 – May 11 2012)	

**2012 SUMMER TRIMESTER**

New & Re-admit student application deadline .....	April 13
Student orientation, pre-testing (ACT-Compass, TABE), advisement and course registration .....	May 12-16
Last day to register for courses .....	May 17
First day of classes .....	May 17
Last day to add/drop or challenge course .....	May 23
Memorial Day holiday .....	May 28
Summer 2012 Trimester fees due .....	June 1
Mid-term examination period .....	June 25-29
Independence Day holiday .....	July 4
End of 8 <sup>th</sup> week; last day to drop a course with "W" .....	July 6
Petition to graduate closes .....	July 6
TABE post-test .....	July 31
Fall pre-registration .....	August 6-10
Final examination period .....	August 13-15
Final grades due / trimester ends .....	August 15
Summer 2012-Fall 2012 Interim (August 16, 2012 – August 24, 2012)	

Approved: *J Allison* 3/10/11  
 President of SIPI Date

Approved: *Franki Jensen* 3/10/11  
 Chairman, Board of Regents Date

# ACADEMIC CALENDAR 2012-2013

## SOUTHWESTERN INDIAN POLYTECHNIC INSTITUTE Academic Calendar 2012-2013 2012 FALL TRIMESTER

New & Re-admit student application deadline .....	August 3
Student orientation, pre-testing (ACT-Compass, TABE), advisement and course registration .....	August 28-September 1
Labor Day holiday .....	September 3
Last day to register for courses .....	September 4
First day of classes .....	September 4
Last day to add/drop or challenge course .....	September 10
Fall 2010 Trimester fees due .....	September 21
American Indian Day .....	October 8
Mid-term examination period .....	October 22-26
End of 9 <sup>th</sup> week; last day to drop a course with "W" .....	November 2
Petition to graduate closes.....	November 2
Veterans Day .....	November 12
Thanksgiving holiday break .....	November 22-23
TABE post-test .....	December 4
Spring pre-registration.....	December 10-14
Final examination period.....	December 14-20
Final grades due / trimester ends .....	December 20

Fall 2012-Spring 2013 Interim (December 21, 2012-January 2, 2013)

## 2013 SPRING TRIMESTER

New & Re-admit student application deadline .....	December 7
Student orientation, pre-testing (ACT-Compass, TABE), advisement and course registration .....	January 5-9
Last day to register for courses .....	January 10
First day of classes .....	January 10
Last day to add/drop or challenge course .....	January 16
Martin L. King Day holiday .....	January 21
Spring 2011 Trimester fees due.....	January 25
Presidents Day holiday .....	February 18
Mid-term examination period.....	February 25-March 1
Spring Break.....	March 7-8
End of 9 <sup>th</sup> week; last day to drop a course with "W" .....	March 11
Petition to graduate closes.....	March 15
TABE post-test.....	April 9
Summer pre-registration.....	April 15-19
Final examination period.....	April 22-26
Trimester ends / Spring Commencement Exercises .....	April 26
Final Grades due.....	April 26


Spring 2013-Summer 2013 Interim (April 29, 2013 -May 10, 2013)

## 2013 SUMMER TRIMESTER

New & Re-admit student application deadline .....	April 12
Student orientation, pre-testing (ACT-Compass, TABE), advisement and course registration .....	May 11-15
Last day to register for courses.....	May 16
Instruction begins, first week of instruction .....	May 16
Last day to add/drop or challenge course .....	May 22
Memorial Day holiday.....	May 27
Summer 2011 fees due .....	May 31
Mid-term examination period.....	June 24-28
Independence Day holiday .....	July 4
End of 8 <sup>th</sup> week; last day to drop a course with "W" .....	July 5
Petition to graduate closes.....	July 12
TABE post-test.....	July 30
Fall pre-registration .....	August 5-9
Final examination period.....	August 12-14
Final grades due / trimester ends .....	August 14

Summer 2013-Fall 2013 Interim (August 15, 2013-August 27, 2013)

Approved:  3/10/11  
President of SIPI Date

Approved:  3/10/11  
Chairman, Board of Regents Date

# Table of Contents

<p><b>A MESSAGE FROM SIPI’S PRESIDENT..... I</b></p> <p><b>ACADEMIC CALENDAR 2011-2012.....II</b></p> <p><b>ACADEMIC CALENDAR 2012-2013..... III</b></p> <p><b>IMPORTANT NUMBERS ..... VI</b></p> <p><b>INTRODUCTION .....7</b></p> <p style="padding-left: 20px;">MISSION STATEMENT .....7</p> <p style="padding-left: 20px;">VISION STATEMENT.....7</p> <p style="padding-left: 20px;">GOALS .....7</p> <p style="padding-left: 20px;">SHARED GOVERNANCE.....7</p> <p style="padding-left: 20px;">ACCREDITATIONS .....7</p> <p style="padding-left: 20px;">AFFILIATIONS .....8</p> <p style="padding-left: 20px;">STATEMENT OF INSTITUTIONAL ASSESSMENT AND PROGRAM REVIEW ..... 8</p> <p><b>BOARD OF REGENTS .....8</b></p> <p><b>ADMINISTRATION.....9</b></p> <p><b>LOCATION AND HISTORY .....9</b></p> <p style="padding-left: 20px;">LOCATION .....9</p> <p style="padding-left: 20px;">HISTORY OF THE INSTITUTION.....9</p> <p><b>ADMISSION AND REGISTRATION.....10</b></p> <p style="padding-left: 20px;">ADMISSION .....10</p> <p style="padding-left: 20px;">GENERAL ADMISSION REQUIREMENTS.....10</p> <p style="padding-left: 20px;">DOCUMENTS NEEDED FOR ADMISSION.....10</p> <p style="padding-left: 20px;">APPLICANTS ON CRIMINAL PROBATION OR PAROLE .....10</p> <p style="padding-left: 20px;">READMISSION.....11</p> <p style="padding-left: 20px;">ORIENTATION.....11</p> <p style="padding-left: 20px;">CLASSIFICATION OF STUDENT .....11</p> <p style="padding-left: 20px;">TRANSFER CREDITS .....11</p> <p style="padding-left: 20px;">STUDENTS WITH DISABILITIES.....12</p> <p><b>POLICY STATEMENTS REGARDING APPLICATION FOR ADMISSIONS.....12</b></p> <p style="padding-left: 20px;">ANTI-HARASSMENT .....12</p> <p style="padding-left: 20px;">EQUAL EDUCATION .....12</p> <p style="padding-left: 20px;">FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA).....12</p> <p><b>FINANCIAL AID .....13</b></p> <p style="padding-left: 20px;">ELIGIBILITY REQUIREMENTS .....13</p> <p style="padding-left: 20px;">TYPES OF FINANCIAL PROGRAMS AVAILABLE .....13</p> <p><b>REGISTRATION FEES AND PAYMENTS .....14</b></p> <p style="padding-left: 20px;">STUDENT FEE SCHEDULE .....14</p> <p><b>ACADEMIC SUPPORT CENTER.....15</b></p> <p><b>SIPI/YDI EARLY CHILDHOOD LEARNING CENTER .....15</b></p> <p><b>COUNSELING AND ADVISEMENT SERVICES .....15</b></p> <p><b>PLACEMENT TESTING AND STATUS.....15</b></p> <p><b>LIBRARY SERVICES.....16</b></p>	<p><b>HOUSING AND RECREATION.....16</b></p> <p style="padding-left: 20px;">STUDENT RIGHTS AND RESPONSIBILITIES .....16</p> <p style="padding-left: 20px;">RESIDENCE LIFE .....16</p> <p style="padding-left: 20px;">CAMPUS RECREATION .....17</p> <p><b>MAIL SERVICE .....17</b></p> <p><b>FOOD SERVICE.....17</b></p> <p><b>STUDENT ORGANIZATIONS AND CAMPUS ACTIVITIES.....17</b></p> <p><b>STUDENT GOVERNMENT.....17</b></p> <p><b>ALCOHOL AND DRUG FREE CAMPUS.....17</b></p> <p><b>CAMPUS CRIME INFORMATION.....18</b></p> <p><b>STUDENT COMPLAINTS .....18</b></p> <p><b>GENERAL ACADEMIC POLICIES .....19</b></p> <p style="padding-left: 20px;">SYSTEM OF COURSE DESCRIPTIONS AND NUMBERING .....19</p> <p style="padding-left: 20px;">COURSE LOAD.....19</p> <p style="padding-left: 20px;">ENROLLMENT STATUS.....19</p> <p style="padding-left: 20px;">ADDING/DROPPING COURSES.....19</p> <p style="padding-left: 20px;">WITHDRAWING COURSES .....19</p> <p style="padding-left: 20px;">AUDITING A CLASS.....19</p> <p style="padding-left: 20px;">COURSE CHALLENGE.....20</p> <p style="padding-left: 20px;">CLASS ATTENDANCE.....20</p> <p style="padding-left: 20px;">GRADING.....21</p> <p style="padding-left: 20px;">ACADEMIC STANDING .....21</p> <p style="padding-left: 20px;">ACADEMIC PROBATION AND ACADEMIC SUSPENSION .....21</p> <p style="padding-left: 20px;">DOUBLE DEGREES .....22</p> <p style="padding-left: 20px;">CHANGE OF PROGRAM OF STUDIES .....22</p> <p style="padding-left: 20px;">MAXIMUM TIME FRAME.....22</p> <p style="padding-left: 20px;">GRADE REPLACEMENT .....22</p> <p style="padding-left: 20px;">FINAL EXAMINATIONS.....23</p> <p style="padding-left: 20px;">GRADUATION REQUIREMENTS .....23</p> <p style="padding-left: 20px;">WITHDRAWING FROM SIPI .....24</p> <p><b>ACADEMIC RECOGNITION.....24</b></p> <p style="padding-left: 20px;">PRESIDENT’S HONOR LIST.....24</p> <p style="padding-left: 20px;">VICE PRESIDENT’S HONOR LIST .....24</p> <p><b>STATEMENT ON GENERAL EDUCATION ...25</b></p> <p style="padding-left: 20px;">STUDENT LEARNING OUTCOMES .....25</p> <p style="padding-left: 20px;">CORE COMPETENCIES.....25</p> <p><b>ARTICULATION.....25</b></p> <p style="padding-left: 20px;">CORE TRANSFER COURSES .....25</p> <p style="padding-left: 20px;">NEW MEXICO BUSINESS TRANSFER COURSES.....26</p> <p style="padding-left: 20px;">NEW MEXICO COMMON COURSE NUMBERS FOR EARLY CHILDHOOD EDUCATION .....28</p> <p><b>EXTENDED COLLEGE .....28</b></p> <p><b>COMMUNITY PROGRAMS.....29</b></p> <p style="padding-left: 20px;">FAMILY EXTENSION &amp; EDUCATION PROGRAM (FEPP) .....29</p>
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FINANCIALLY FIT: A FINANCIAL EDUCATION PROGRAM IN INDIAN COUNTRY .....	29
TALENT SEARCH .....	30
<b>CIP CODES .....</b>	<b>31</b>
<b>ADULT BASIC EDUCATION AND DEVELOPMENTAL EDUCATION .....</b>	<b>32</b>
GENERAL EDUCATION DEVELOPMENT (GED) .....	33
<b>LIBERAL ARTS AND BUSINESS TECHNOLOGIES.....</b>	<b>34</b>
LIBERAL ARTS.....	34
EARLY CHILDHOOD EDUCATION .....	35
BUSINESS TECHNOLOGIES .....	37
ACCOUNTING .....	38
BUSINESS ADMINISTRATION.....	40
COMPUTER SCIENCE INFORMATION SYSTEMS .....	44
OFFICE INFORMATION APPLICATIONS .....	45
BUSINESS ADMINISTRATION – TRIBAL ADMINISTRATION .....	48
<b>ADVANCED TECHNICAL EDUCATION .....</b>	<b>50</b>
VISION CARE TECHNOLOGY PROGRAM .....	51
CULINARY ARTS PROGRAM.....	54
HOSPITALITY SERVICES MANAGEMENT .....	56
ELECTRONICS TECHNOLOGY PROGRAM .....	58
INSTRUMENTATION AND CONTROL TECHNOLOGY.....	58
MANUFACTURING TECHNOLOGY PROGRAM .....	59
COMPUTER INTEGRATED MANUFACTURING TECHNOLOGY .....	59
GEOSPATIAL INFORMATION TECHNOLOGY.....	60
NETWORK MANAGEMENT .....	63
PRE-ENGINEERING .....	65
COMPUTER-AIDED DRAFTING AND DESIGN .....	67
NATURAL RESOURCES MANAGEMENT .....	68
AGRIBUSINESS.....	68
CROP AND SOIL SCIENCE.....	70
NATURAL RESOURCES MANAGEMENT .....	71
ENVIRONMENTAL SCIENCE.....	72
<b>COURSE DESCRIPTIONS.....</b>	<b>74</b>
<b>PERSONNEL DIRECTORY .....</b>	<b>102</b>

## IMPORTANT NUMBERS

<b>Main Line (Switchboard)</b>	<b>800-586-SIPI OR 800-586-7474</b>
SIPI President's Office	346-2347
Vice President of Academic Programs	346-2351
Vice President of College Operations	346-2340
Director of Admissions and Financial Aid	346-2324
Financial Aid Office	346-2344/2361
Student Accounting Office	346-2374
Information & Technology Office; Student Network Accounts	922-4080
Director of Housing and Recreation	346-2327
Four Winds Lodge (Women's Dorm)	346-2357 or 56
Golden Eagle Lodge (Men's Dorm)	346-2354 or 55
Recreation Office (Gymnasium)	922-4084
<b>Academic Counselors</b>	922-4082
Distance Education	922-6506
Special Needs Counselor	346-2319
<b>Security</b>	
Office	346-2323
Security Guard on-duty	263-7531

# INTRODUCTION

The college's Board of Regents adopted the Southwestern Indian Polytechnic Institute's (SIPI) revised mission statement on September 25, 2009:

## Mission Statement

Southwestern Indian Polytechnic Institute (SIPI) is a National Indian Community College that prepares Native American students to be productive life-long learners, as tribal members, in an ever-changing global environment. As a land grant institution, SIPI partners with tribes, employers, and other organizations with a stake in Indian education. An enduring commitment to student success is the hallmark of SIPI's operations.

## Vision Statement

By the year 2020, Southwestern Indian Polytechnic Institute (SIPI) will solidify its position as a preeminent higher learning institution, providing a range of career and transfer opportunities for Native learners throughout the United States including Science, Technology, Engineering, and Mathematics (STEM). Recognized for its unwavering commitment to success for all students, SIPI is innovative in the pursuit of educational excellence. SIPI collaborates with tribes and other entities with a stake in Indian education. SIPI's graduates are proud of their Native American culture in a pluralistic, globalized world and are ready to compete with the best graduates from colleges and universities anywhere.

## Goals

- Make learner success the core work of SIPI.
- Develop new programs, strengthen existing programs, and recruit students to respond directly to the current and projected demographic and economic trends of Indian tribes, the state in which they are located, the nation, and the world.
- Promote the health and economic vitality of Indian tribes and communities through dynamic partnerships, coalitions, and collaborations.
- Expand the use of instructional technology to enhance student learning.
- Make better use of existing data and information; create new actionable information and customers for this information to support SIPI's operational and strategic planning efforts.
- Provide new and expanded opportunities for faculty and staff development that supports an atmosphere of excellence in academics and student support services.

(Source: SIPI's Strategic Plan 2010-2020)

## Shared Governance

SIPI recognizes its Board of Regents; the Office of the Director, Bureau of Indian Education; the President, administrators, faculty, staff and students as important voices who share in the responsibility of planning and decision making. The College acknowledges the difference in the weight of these voices as determined by the particular matter under consideration at any point in time. The College acknowledges the importance of ongoing communication among these voices and as such has established the President's Cabinet whose membership reflects representation among the campus voices with actions reported to the Office of the Director, Bureau of Indian Education.

## Accreditations

Current Accreditation Status: Candidate  
The Higher Learning Commission (HLC)  
North Central Association of Colleges and Schools (NCA)  
230 South LaSalle, Suite 7-500  
Chicago, Illinois 60604

Candidacy Dates: 1972, 2010

Pre-accreditation status: Correspondent (1972); Candidate for Accreditation under new policy (1973)

Accreditation Date(s): 1975-2010

Accreditation notes: Candidacy first granted in 1972; Accredited 1975-2010; status changed to Candidacy in 2010.

The Commission on Opticianry Accreditation (COA) accredits the college's Vision Care Technology program. This commission is an autonomous organization officially incorporated to serve as an independent agency for the sole purpose of accrediting opticianry and ophthalmic laboratory technology programs. The COA accredits two-year opticianry degree programs and one-year ophthalmic laboratory technology certificate programs. The Commission granted a two-year provisional accreditation of SIPI's program in November 2010, pending the outcome of the Institute's regional accreditation status from the Higher Learning Commission

## Affiliations

The college is an associate member of:

- American Indian Higher Education Consortium (AIHEC)

Membership affiliations include:

- American Association of Community Colleges
- Council of North Central Two-Year Colleges
- National Association of College and University Business Officers

## Statement of Institutional Assessment and Program Review

The Board of Regents adopted the following statement on institutional assessment on October 15, 1994:

SIPI is committed to a process of assessment that offers assurance to the Indian communities of the college's effectiveness and appropriateness of its mission as a higher education institution. The purpose of the assessment is to improve all aspects of the operation and function of the college.

The Board of Regents affirms its position that assessment is an important element in the college's overall evaluation of its academic and non-academic units. An assessment program will assist the college in making useful decisions about improving the college and in developing effectiveness.

SIPI's Systematic Program Review process is designed to encourage program improvement, demonstrate accountability and provide information to guide decisions about programs and resources. Programs are evaluated according to the quality of curriculum, faculty, learning environment, infrastructure and outcomes, demand for courses and efficiency in the use of resources. SIPI's Systematic Program Review aim is to maintain academic quality, accountability and wise use of resources. All stages of the review process – department self studies, site visits and reports by reviewers, responses by the departments involved, final assessment by the Vice President of Academic Programs and appropriate committees, and action plans for the programs – are aimed at improving instructional programs, encouraging program innovation, demonstrating institutional accountability, and helping the institution plan program revisions, program deletions and resource allocation. Action plans specify detailed strategies, timelines and responsibilities to address the issues raised by reviewers.

## BOARD OF REGENTS

Francis Tafoya, Chairman, Eight Northern Pueblos

**Vacant** - Navajo Nation (New Mexico) waiting for representation

Latitia Taylor, Secretary-Treasurer, Southern Ute Indian Tribe

Duane Duffy, Member, Mescalero Apache Tribe

Freddie Howard, Member, Navajo Nation (Arizona)

Larry Schurz, Vice President, Inter-Tribal Council of Arizona

Darva Chino, Member, Ten Southern Pueblos

Joycelynn Dutchie, Alternate Member, Southern Ute Indian Tribe

Hershal Muniz, Member, Jicarilla Apache Nation

Noah Billie, Member, SIPI Student Senate President

## ADMINISTRATION

Dr. Sherry Allison, President  
Ed.D., Educational Administration/Leadership, Northern Arizona University  
M.A., Education, Northern Arizona University  
B.S.W., Social Work, New Mexico State University

Valerie Montoya, Vice President Academic Programs  
M.A., Sociology, Stanford University  
B.S., Sociology, Brigham Young University

Monte Monteith, Acting Vice-President College Operations  
M.A., Economics, New Mexico State University  
B.A., Economics, New Mexico State University

## LOCATION AND HISTORY

### Location

Geographically, SIPI is located in the heart of Indian Country, in the center of New Mexico's high-tech corridor, near Los Alamos and Sandia National Laboratories. SIPI is also close to the University of New Mexico, Albuquerque campus. SIPI is located at:

**9169 Coors Boulevard N.W., Albuquerque, NM 87120**  
**Southeast of the intersection of Coors Boulevard and Paseo del Norte N.W.**

### History of the Institution

The All-Indian Pueblo Council (a consortium of 19 New Mexico tribes), the Navajo Nation, the Jicarilla Apache Nation, the Mescalero Apache Tribe, the Southern Ute Indian Tribe and other southwestern tribes began planning for a school to serve American Indian communities during the mid-1960s. The United States Congress appropriated construction funds to build the school in the late 1960s at a cost of \$14.1 million dollars. Ten years later, the dream became a reality. Dedication ceremonies were held on August 20, 1971. On September 16, 1971, SIPI officially opened its doors for classes. In September 2003, SIPI opened the 72,540 square foot Science and Technology building.

The SIPI School Board was officially formed in May of 1970 and operated under an informal set of by-laws and operating procedures. The Board had eleven members representing Indian Tribes from New Mexico, Arizona, Colorado, and the Student Government President. In 1973, the SIPI School Board officially changed its name to Board of Regents and established an incorporated non-profit organization.

Operating initially on an open-entry, open-exit system of individualized training, SIPI was awarded a citation for Excellence of Service by the Department of Interior in 1974. Throughout the 1980's and early 1990s, SIPI continued to evolve and grow in a way that served its student population, tribal communities, industry and public agencies.

SIPI was later threatened with closure because of the federal government's efforts to decrease spending. SIPI responded by creating a more cost effective program and a traditional semester system was established. The students and the National Indian Community responded with a major movement of public support, which resulted in the continuing operation of SIPI. In May of 1983, SIPI held its first commencement exercises with 124 students graduating.

In June 1991, the SIPI Board of Regents developed an expanded 20-year mission and direction for the institution. The "Transition 2000 Plan" required SIPI to achieve community college accreditation and to develop advanced technical education and university transfer degrees. In September of 1991, SIPI celebrated its 20th Anniversary. In

August 1993, the institution achieved community college status and received continued accreditation by the Higher Learning Commission, a member of the North Central Association.

SIPI presently offers the following degrees as well as certificate programs:

**Associate of Applied Science**  
**Associate of Arts**  
**Associate of Science**

## **ADMISSION AND REGISTRATION**

### **Admission**

Anyone interested in seeking admission into Southwestern Indian Polytechnic Institute (SIPI) should obtain and complete an application packet from the Admissions office by calling (505) 346-2338, or 1-800-586-7474. The application packet is also available at the SIPI website, [www.sipi.edu](http://www.sipi.edu). Admission is the process of applying and being accepted to SIPI. Registration is the process of selecting courses, receiving a class schedule and completing enrollment at SIPI. SIPI's academic year is divided into three terms defined as trimesters, which usually begin in September, January and May. Students are urged to apply for admission at least two months before registration.

### **General Admission Requirements**

SIPI accepts as students, American Indian and Alaskan Natives who meet one of two tribal affiliation criteria:

- (1) verification of U.S. federal tribal membership from a Bureau of Indian Affairs (BIA) agency or tribal census office or
- (2) must be one-quarter percent, or more, blood quantum of a federally recognized tribe(s), verified by either a BIA agency or tribal census office.

Minimum age of acceptance to SIPI is 17 years of age. Accepted students who are 17 years of age are not eligible to reside in the lodges until their 18th birthday. A parent or legal guardian must sign the release statement on the school application. The GED program requires students to be 18 years of age.

### **Documents Needed for Admission**

- Admission Application
- Verification of Tribal Affiliation
- Official High School Transcript (Showing a graduation date)
- Transfer students must provide all official College transcripts
- Health Physical (Can be turned in 30 days after instruction begins)
- Immunization Record (Can be turned in 30 days after instruction begins)
- DD-214 Form (If claiming veteran status)

Reporting any false information on a student's application may be grounds for denying admission or suspension from the institution. The Admissions office will not copy, transfer, or return documents submitted for admission to SIPI. All accepted new and transfer students are required to take the ACT Compass Test for placement. Based on placement and test scores, the student may be required to enroll in developmental courses to help prepare the student for success in college level courses.

### **Applicants on Criminal Probation or Parole**

Applicants currently on criminal probation or parole must indicate their status by checking the "Yes" box in the General Information section on the first page of SIPI's Application for Admission. Any applicant, who is on criminal probation or parole or is pending for criminal probation or parole, must have their application reviewed by the Director, Admissions and Financial Aid before consideration for acceptance can be determined. The Director may request additional documents to determine the applicant's eligibility for acceptance.

SIPI will not grant acceptance to SIPI as part of a Grounds for Motion for Release or as a condition of release from incarceration, probation or parole. Students on probation or parole will not be provided lodging privileges until one year after the probation/parole is successfully completed. The student will provide the Admissions office official documentation of the successful completion of probation/parole.

If this institution finds that the SIPI application for admission has been falsified to later show that the student is on probation or parole the student will be immediately dropped from SIPI and will not be allowed to reapply until one year AFTER the drop was initiated. At that time the student must provide documentation of probation or parole and successful completion of probation or parole.

## **Readmission**

Any student who has withdrawn from SIPI must apply for readmission to enroll. All applicants requesting readmission must submit an updated admissions application form by the application deadline indicated on the academic calendar. The Admissions Office will review the student's previous academic and lodge documents to determine if acceptance or denial is appropriate. (All past financial debts owed to SIPI by the student must be paid in full before a readmission request will be considered.) Acceptance may be conditional. An accepted student may be required to retest, based upon a Chairperson's evaluation of the student's academic record. If a retest is needed, the acceptance letter instructions will note a retest requirement. If the student attended SIPI prior to 1989, an application form and all required documents as stated in the admissions requirements must be submitted. Contact the Admissions Office if a request has been denied and an appeal is desired.

## **Orientation**

Orientation is designed to assist new students in making a successful transition into SIPI and to enhance the student's positive feelings about the institution. Attendance is required of all new students. Readmitted students are also welcome to attend.

## **Classification of Student**

Students registered for twelve (12) or more credit hours during a regular trimester are considered full-time students. Part-time students are registered for one to eleven (1-11) credit hours.

## **Transfer Credits**

Transfer students will be admitted to SIPI in good standing, if previous college cumulative grade point is 2.0 and above. Transfer students with a grade point average that is below a 2.0 may be admitted on academic probation. Grades earned in courses taken at other institutions are not included in the calculation of SIPI grade point average. Transfer students who have less than 24 college transferable hours will be asked to submit an official high school transcript showing a date of graduation. Official high school and college transcripts submitted to the Admissions Office become the property of the institution and will not be copied, transferred, or returned to the student.

### **Evaluation of Credit**

Admissions must have an official transcript before a course transfer decision will be considered. A student must first contact his/her academic advisor for course transfer consideration. If the advisor confirms the course(s) fit in the student's program of studies, then a SIPI College Course Credit Transfer form is completed. The signed form is then routed to the Department Chair and Vice President of Academic Programs for approval, then to the Admissions Office for recording.

### **Transfer Credits**

If a credit from another college is to be accepted toward a SIPI certificate or degree then the following must apply:

- An official transcript is required for evaluation.
- Admissions will evaluate the transfer credits and the academic department will determine which transfer credits are acceptable toward the student's program of studies.
- Transfer credits in any degree program of study offered by SIPI must have a letter grade of "C" or higher, provided the classes are similar or equivalent to courses offered at SIPI.
- A minimum of twenty-four (24) residency hours in a core area is required for the award of a certificate or degree.
- Official transcripts submitted to SIPI Admissions and Records become the property of the institution and will not be transferred or returned to the student.

- Only credits from regionally accredited institutions are transferrable.
- To receive transfer credit for career and technical courses, the student must request that SIPI's Records Office refer the transcript(s) to the appropriate academic division for review. An interview and/or demonstration of competence may be required before the decision regarding credit is made. Demonstration of competence is required for all transfer credit more than ten(10) years old.
- Remedial courses and upper-division courses, 300 & 400 levels, are not generally transferable.

### **Quarter System Evaluation**

SIPI operates on a Trimester college year. Transfer courses from a post-secondary institution that uses a quarter system will be recalculated to trimester hours (one quarter hour equals 2/3 (.66) trimester hour) to determine acceptability.

### **Military Credits**

Credit for military service is granted to those students who have served in the armed forces. Credit for Physical Education (1 credit) and Health (2 credits) may be granted, provided the course(s) is/are part of the student's program of study. The prospective student must provide a Department of Defense Form 214 (DD Form 214), to the Director, Admissions during the application process.

## **Students with Disabilities**

SIPI ensures access to facilities and academic programs for students identified by the American Disabilities Act. The Vocational Rehabilitation Counselor assists students in arranging academic and residential accommodations. To assure that students receive the support services needed for accomplishing their educational and career goals, services are coordinated with external agencies such as, the Division of Vocational Rehabilitation Programs, and local health facilities. Please contact the Vocational Rehabilitation Counselor at (505) 346-2319 regarding a disability.

## **POLICY STATEMENTS REGARDING APPLICATION FOR ADMISSIONS**

### **Anti-Harassment**

It is the policy of SIPI to prevent and eliminate forms of unlawful harassment in employment and educational settings. SIPI prohibits harassment of people on the basis of race, color, religion, national origin, physical or mental disability, age, gender, sexual orientation, ancestry, medical condition or other protected status. SIPI is committed to creating and maintaining an atmosphere free from all forms of harassment.

### **Equal Education**

SIPI is committed to providing equal educational opportunity and forbids unlawful discrimination on the basis of color, religion, physical or mental disability, age, gender, sexual orientation, ancestry, or medical condition. Equal educational opportunity includes: admission, recruitment, extracurricular programs and activities, and housing.

### **Family Educational Rights and Privacy Act (FERPA)**

It is the policy of SIPI to comply fully with the terms, provisions and intent of the Family Educational Rights and Privacy Act of 1974, as amended (FERPA). A complete statement of SIPI's policy and procedures relative to this act may be obtained from the Admissions office. Following the guidelines established by FERPA, the college strives to protect personal privacy and the confidentiality of official student records. This section describes in general SIPI's policy of confidentiality and privacy.

Most of the information in your student record is considered confidential, with the following exceptions:

- Your local address
- Your e-mail address
- Your telephone number
- Your major field of study
- The dates you attended SIPI
- Your student classification

- Your enrollment status (full-time or part-time)
- The type of any degree you have earned from SIPI and the date on which you received it

The information listed above is considered public information. SIPI does not sell lists of students or name-and-address labels to businesses or agencies outside the college. If you wish to limit access to this information, you should notify the Admissions office that you want the information treated as confidential. You can do so by completing a privacy request form, available at the Admissions office.

In discharging their official duties, SIPI employees may read, review, photocopy, and distribute to appropriate persons within SIPI any information contained in your student record. However, before distributing confidential information outside SIPI, even to members of your family, SIPI faculty and staff must first secure your written permission to do so.

## **FINANCIAL AID**

SIPI offers a number of financial aid programs in the form of grants, work-study, scholarships, and employment. Students interested in financial aid are encouraged to contact the Financial Aid Office for information and application forms. Funds are limited and students should apply early. Refer to the consumer information located at the Financial Aid Office for policies and procedures and application processes.

All students enrolled in a certificate or degree program are strongly encouraged to apply for student financial aid by filling out a Free Application for Federal Student Aid (FAFSA). FAFSA applications are generally available at colleges, universities, high schools, and public libraries. The FAFSA is most prevalently accessed online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or via phone at 1-800-4-FED-AID. Students must complete a FAFSA each academic year.

### **Eligibility Requirements**

To receive financial aid:

1. Students must be enrolled as regular students in an eligible program.
2. To qualify for a full-time financial aid award, students are required to carry a minimum class load of twelve (12) credit hours and maintain satisfactory academic progress (SAP).
3. Part-time students are also eligible for financial aid.
4. Students are required to sign a statement of educational purpose stating that funds received will be used for educational purposes only.
5. Students may not owe a refund on Title IV grants and must NOT be in default on any federal student loans at any school previously attended.
6. Students who transfer between trimesters must provide an academic transcript from the post-secondary school that they are transferring from.
7. Male students over the age of 18 are required to register with Selective Service.
8. Students must be U. S. Citizens or eligible non-citizen.

### **Types of Financial Programs Available**

Students must fill out a Free Application for Federal Student Aid (FAFSA) to be considered for financial aid. Funding offered by the financial aid office:

Need Based:

- Pell Grant
- Federal Supplemental Grant
- Federal Work Study
- New Mexico Student Incentive Grant
- New Mexico Work Study
- New Mexico College Affordability Grant
- Tribal Grant/Scholarships—must apply to respective tribe
- National Indian Youth Council—must reside off-campus in Bernalillo County.

Non-Need Based:

- American Indian Services
- Veterans Benefits—must have served in the US military and contributed to an educational fund
- American Indian College Fund (AICF) – must have an established GPA of 2.5 or better; apply at [www.collegefund.org](http://www.collegefund.org)

Other sources of scholarships may be found on the following websites:

<http://www.fastweb.com> -OR- <http://www.scholarshipsearch.com>

## REGISTRATION FEES AND PAYMENTS

### Student Fee Schedule

Admitted students are required to register for each trimester they attend. The Bureau of Indian Education (BIE) provides tuition, room and board, and some books to students at minimal charge. Students must pay required fees prior to registration for classes. All fees will be paid in the Student Accounting Office.

<b>LODGE FULL-TIME STUDENT:</b>	<b><u>\$280.00</u></b>
<b>COMMUTER FULL-TIME STUDENT:</b>	<b><u>\$ 225.00</u></b>
<b>COMMUTER PART-TIME STUDENT:</b>	<b><u>\$ 150.00</u></b>

#### Payment Methods

SIPI accepts money orders and federal and/or tribal government checks, no cash or personal checks. Fees, excluding the \$20 minimum required registration fee, are refundable during the registration period through the published add/drop period at the beginning of each trimester.

#### Deferred Payment Agreement

If students cannot pay fees in full during the registration period, a deferred payment agreement option is available. The Deferred Payment Agreement is a signed document that allows students to make a partial payment with the understanding that the remainder of their fees will be paid (or proof of financial aid from the financial aid office or from a tribal scholarship office provided) by the end of the third week of instruction as indicated on the academic calendar. A minimum of \$20.00 for commuter students or a minimum of \$75.00 for lodge students is required to register for classes.

The Admissions Office will not issue any reports (i.e., transcripts, grade reports, etc.) to the student or educational agencies until all financial obligations are met.

#### Withdrawals Due to Non-Payment

If fees are deferred, the student agrees to pay the balance (or provide proof of financial aid) by the due date as published on the academic calendar. If fees are not paid (or proof of financial aid is not provided) by the agreed date, the student will be withdrawn from SIPI for non-payment. Any student dropped for non-fulfillment of financial obligation (deferred payment) will be required to pay in full before registering for future classes. Students withdrawing from SIPI after the fee due date are still responsible for payment of their fees. Any unpaid fees will be posted to the student's account as a debt.

#### Status Change

All students must report to Student Accounting when changing their status (i.e., resident to commuter, full-time to part-time, etc.). Resident students must exit properly when moving out of the lodges to avoid additional costs. See refunds policy.

#### Refunds

All fee payments will be verified by the Student Accounting Office. Any fee overpayments will be refunded to the student. Students withdrawing during the registration and add/drop periods may get a refund, excluding \$20 minimum registration fee. All allowable refunds will be processed through the Federal Finance System (FFS) according to policies. The processing time for refunds is approximately six (6) weeks.

### **School Debts**

For students in debt to SIPI for any reason, the Admissions Office will withhold midterm and final grades, attendance confirmations, official and unofficial transcripts, and diplomas and certificates until the debt is paid in full. In addition, SIPI reserves the right to prohibit readmission, pre-registration, or registration until all debts are paid in full.

## **ACADEMIC SUPPORT CENTER**

SIPI's faculty and staff hope students will spend many productive hours in the Academic Support Center while attending SIPI. The Center is the students' place, a place where they can study in a quiet area, engage in the dynamics of a study group, write papers or develop spreadsheets, work with a tutor, or take advantage of computer assisted instructional software and other study resources. If students are uncomfortable with computers, we will periodically conduct basic introductions to the computer through a workshop series. Information on these workshops will be posted on our bulletin boards and the SIPI web page.

We strive to make the Academic Support Center a place of comfort where students can reach their academic goals. Any suggestions for improvement of services are encouraged.

## **SIPI/YDI EARLY CHILDHOOD LEARNING CENTER**

The Southwestern Indian Polytechnic Institute (SIPI), SIPI Board of Regents and Youth Development, Inc. (YDI) Head Start/Early Head Start have partnered to provide an Early Childhood Development Laboratory School on the SIPI campus. The Laboratory School is designed to:

- Provide quality early childhood education for income eligible students accessing training and education at SIPI. **Students must apply as soon as possible. Space is limited and application is not a guarantee for placement.** A list of required documents can be obtained from the Early Childhood Learning Center before scheduling an application appointment.
- Enhance the Early Childhood Education classes currently being offered at the college through a hands-on learning environment and laboratory school.
- Serve as a clearinghouse for age-appropriate and culturally-appropriate materials and practices that support the social, emotional, physical, and cognitive growth of Native American children and the well-being of their families.

The Laboratory School will address the demand for high quality, credentialed early childhood educators and childcare providers at the local, state, and national level. Students in the Early Childhood program at SIPI are able to do practicum at the Early Childhood Learning Center. For more information call 505-922-6524 or visit [www.ydinm.org](http://www.ydinm.org).

## **COUNSELING AND ADVISEMENT SERVICES**

Academic Counselors work with students to solve personal, social, career and academic problems. The counselors keep in close contact with academic programs and residential lodges, so that students who are encountering difficulties may receive professional guidance and counseling. At the beginning and end of each trimester the Academic Support Center staff administers the ACT Compass placement assessment to new and returning students to ensure placement in appropriate courses. In addition, a career assessment is available to assist students in exploring career interests.

Counselors and instructors provide academic advisement to students. Each student admitted to SIPI is assigned an advisor. The advisor provides academic advisement to students about class schedules and programs of study.

## **PLACEMENT TESTING AND STATUS**

Entering students are required to take standardized tests to help SIPI better understand the student's academic abilities and needs. College assessment tests serve two purposes. First, they assess a student's skill levels in reading, writing, and mathematics in order to identify coursework that would be most appropriate. Second, by identifying the

educational skills of those entering its classes, SIPI can better assess the quality of education it provides for its students.

All new SIPI students are required to take ACT Compass, unless they possess:

- ACT Assessment report that shows a composite score of 18 or higher **OR**
- SAT Score Verbal + Math report that shows a mean score of 870 or higher.

Transfer students who earned a C grade or higher in course equivalents to our ENGL 101 and MATH 121 may be exempt from ACT Compass, provided the grades were earned within the past five years.

If ACT Compass cutoff scores(s) indicate a student would be best placed in Adult Basic Education (ABE) developmental courses; a student will then be administered the Test of Adult Basic Education (TABE). ABE staff will review scores and discuss course opportunities with students. Students may enroll in the ABE program as appropriate.

## **LIBRARY SERVICES**

Location: Library Building

Phone: (505) 792-4463

Hours: 8:00 am – 4:30 pm daily

The SIPI Library is available to all enrolled students. The library's collection has around 30,000 titles, about 100 periodical titles, and many books and magazines for recreational reading. The SIPI Library offers many services to students and staff. The following are the main services offered:

- Reference Services (finding materials, titles, subjects, etc.)
- Reserve Services (books/materials on reserve will be kept behind the service desk)
- Study areas
- Tutoring in research techniques, Internet access, and how to use the card catalogue to find materials
- Some (older) editions of Encyclopedias are available for checkout
- Computerized card catalog, OPAC, available for research
- 15 computers and one typewriter are available for student use
- The library is a Wi-Fi zone.

## **HOUSING AND RECREATION**

### **Student Rights and Responsibilities**

All SIPI students have specific legal rights and responsibilities as written in the Student Handbook. Copies may be obtained from the Residential Housing and Recreation Office or the website: [www.sipi.edu](http://www.sipi.edu).

### **Residence Life**

The Department of Housing provides two (2) traditional style residential facilities, which provides accommodations for approximately 384 students. Golden Eagle Lodge (GEL) provides accommodations for male students and Four Winds Lodge (FWL) accommodates female student.

Full-time students in good standing are eligible for on-campus residency. Full-time students are defined as those carrying a minimum of twelve (12) credit hours per trimester. Students who drop or dis-enroll from a class and fall below 12 credit hours are considered part-time and are no longer eligible for lodge residency. Non-degree seeking students are also not eligible for lodge residency.

Because employees who work at the lodge are not certified to care for individuals who are pregnant, particularly in emergency situations, students are not permitted to live in the dorms after their second trimester of pregnancy, at which time other living arrangements must be made.

## **Campus Recreation**

The Residence Life Program offers a wide variety of recreation activities for residential students and the larger college community. Activities include instructional classes, fitness training, intramural and extramural sports, club sports, public entertainment events, outdoor recreation activities, leadership training, team building, and special events. Schedules of various activities are posted in the lodges, Academic Support Center, and other academic buildings. All activities incurring a cost to sponsor (i.e., movie, Balloon Fiesta, etc.) require a current SIPI ID card for participation. In addition, ID cards are used to check out equipment for recreational purposes.

### **MAIL SERVICE**

Student mailboxes are available in the Academic Support Center. Each student can request a personal mailbox that is accessible daily. Mail is distributed Monday through Friday, two times each day.

### **FOOD SERVICE**

SIPI provides food services through the on-campus dining hall. Hot meals and a fresh salad bar are featured daily; visitors are welcome.

Monday-Friday:	Breakfast	6:45 am	to	8:00 am
	Lunch	11:30 am	to	1:00 pm
	Dinner	4:30 pm	to	6:00 pm
Holidays & Weekends:	Brunch	10:00 am	to	12:00 pm
	Dinner	4:00 pm	to	6:00 pm

### **STUDENT ORGANIZATIONS AND CAMPUS ACTIVITIES**

There are a number of clubs on campus, which are formed by student interest on a term by term basis. Some clubs that have existed in the past include American Indian Science and Engineering Society (AISES), Basketball Club, Dance Club, Music and Art Club, SIPI Intertribal Indian Club, New Optical Image, Phi Theta Kappa (must have a GPA 3.5 or higher), Four Winds Lodge Dorm Council, Golden Eagle Lodge Dorm Council, American Indian Political Alliance Council, and Natural Resources Club. The Student Senate information board, located in the Academic Support Center, has more information about which clubs are active in any given term, and what their mission and activities are.

Students have the opportunity to form their own club. Interested students must complete a Plan of Operations, which is available at the Student Senate Office, and have the application approved by administration.

### **STUDENT GOVERNMENT**

The Student Senate is comprised of four elected officers: President, Vice-President, Secretary, and Treasurer. The student body votes for these offices soon after the beginning of the fall trimester. This body acts as the voice for the students on matters that concern the students as a whole. The Student Senate is composed of members of the student recognized clubs and organizations of SIPI.

### **ALCOHOL AND DRUG FREE CAMPUS**

SIPI recognizes illegal non-prescription drug/alcohol abuse as a potential health, safety, and security problem to the students and the SIPI community. As such, on June 3, 1991, the SIPI Board of Regents passed Resolution 148 entitled Zero Tolerance, alcohol and illegal drug policy. SIPI's Board of Regents amended this Resolution on April 22, 2004. The amendment increases the penalties for violating this policy, as well as including Commuter Students as being covered by this policy.

## **CAMPUS CRIME INFORMATION**

The SIPI Security Office prepares an annual report to comply with the Jeanne Clery Disclosure of Campus Security Policy and Crime Statistics Act. The full text of the report and SIPI's policies regarding crime on the SIPI campus may be found at <http://www.sipi.edu> under the link "Public Disclosures."

Each year, a notification is made to all enrolled students by distributing copies of the report campus wide and providing a copy of the report in high-traffic areas, such as the Library and dormitories. Employees are notified via the SIPI e-mail system.

Copies of the report may also be obtained at the SIPI Security Office or in the Admissions Office, both located in the Administration Building. Statistical information on crimes reported on the SIPI campus can also be found on the U.S. Department of Education's website at: <http://ope.ed.gov/security/index.asp>.

### **Sex Offender Registration**

The Campus Sex Crimes Prevention Act (CSCPA) of 2000 is a Federal law that provides for the tracking of convicted sex offenders enrolled at, or employed by, institutions of higher education. The CSCPA is an amendment to the Jacob Wetterling Crimes Against Children and Sexually Violent Offender Act.

The New Mexico Sex Offender Registration and Notification Act (Chapter 29, Article 11A NMSA 1978) also requires convicted sex offenders to notify their local law enforcement agencies within ten days of obtaining employment or enrolling as a student.

SIPI will be notified if and when a registered sex offender resides within one mile of the campus. Until that time, BCSO is not obligated to notify SIPI when a registered sex offender resides within that distance, or is employed at SIPI or potentially in contact with minors.

SIPI is required to inform the campus community that a list of registered sex offenders will be maintained and made available at two campus locations: the Security and Safety Office, located in Room 111 of the Administration Building; and the Admissions Office, also located in the Administration Building.

A list of all registered sex offenders in New Mexico is available from the New Mexico Department of Public Safety at: <http://www.nmsexoffender.dps.state.nm.us/>. Information on registered sex offenders in Bernalillo County can be found at: <http://ims.bernco.gov/website/sexoffend/viewer.htm>.

SIPI is located in Bernalillo County. SIPI's zip code is 87120.

The CSCPA amends the Family Educational Rights and Privacy Act of 1974 (FERPA) to clarify that nothing in the Act can prohibit an educational institution from disclosing information provided to the institution concerning registered sex offenders.

## **STUDENT COMPLAINTS**

SIPI will ensure that student complaints are heard and properly tracked through a uniform process outlined by this policy. This process will be used by SIPI faculty, staff and students to accept and process student-initiated complaints. A student may pick up a copy of the Student Complaint Form at the College Operations office in the Administration Building or through the SIPI website. The purpose of this policy is to provide a method for prompt and equitable settlement of student-initiated complaints in which no other forum is available. This tracking process will be used to monitor and improve customer service for students.

## GENERAL ACADEMIC POLICIES

### System of Course Descriptions and Numbering

Courses of study and their descriptions are arranged according to course numbers and are arranged alphabetically according to subject. The course value in trimester credit hours is indicated in parenthesis after the course title.

Courses numbered 091-100 are preparatory or developmental courses and not applicable to college credit.

Courses numbered 101-199 are college level courses usually taken (at the freshmen level) during year one.

Courses numbered 200-299 are college level courses usually taken (at the sophomore level) during year two.

### Course Load

The normal course load for each trimester is 12 to 18 credit hours. Twelve credit hours constitute a full load for residence lodge accommodations and for cafeteria meals. Students requesting to register for more than 18 hours must seek permission and must meet certain criteria.

- A full-time student carries 12 or more credits per trimester.
- A three-quarter-time student carries 9-11 credits per trimester.
- A half-time student carries 6-8 credits per trimester.

### Enrollment Status

#### Certificate and Degree

Students who have been accepted into a program of study and intend to earn a certificate or degree.

#### Non-Degree

Students who have been accepted but do not wish to earn a degree or have not chosen a degree program of study.

These are students who usually plan to enroll in college level courses only.

#### Non-Certificate

Students who have been accepted but do not wish to earn a certificate or have not chosen a degree program of study.

#### Adult Basic Education and Developmental Education

Students who have been accepted and recommended for placement in ABE/Developmental Education to develop career and/or postsecondary skills; These are students who are in developmental studies and have not been accepted into a certificate level program.

#### Concurrent/Dual Enrollment

Qualified high school students who are approved through a Concurrent Enrollment Agreement between a high school and SIPI. Accepted students are enrolled in concurrent status and earn college credit as well as credit toward high school graduation.

### Adding/Dropping Courses

Students may add or drop courses by the end of the first week of classes during a trimester. An exception can be made after the first week of classes if a course is cancelled due to low enrollment. (*See academic calendars for dates.*)

### Withdrawing Courses

Students withdrawing from a course or courses on their own may do so by the week after mid-term without a penalty. A withdrawal from a course results in a final grade of "W" which is recorded on the student's transcript. (*See academic calendars for dates.*)

### Auditing a Class

A student may audit a class by registering for the course, providing the instructor approves the audit. Only courses numbered 101 or above may be audited. All audit course approvals or changes must be completed by the trimester

calendar add/drop deadline. An auditor has the same responsibilities as other students and is responsible for checking with the respective instructor regarding homework assignments, examinations, and attendance policies that will be required while enrolled.

An audit receives no credit and will not be included in the student's total course load for purposes of enrollment certification such as, full time status, residence lodge privileges, and financial aid grants. Courses taken for audit may be repeated for credit. Audit courses appear on the academic record.

## **Course Challenge**

Students may, with written approval of the instructor and department chair, take a special examination to establish credit in courses appearing in the catalog. To challenge a course, the student must meet the following criteria:

1. Student must not have been previously enrolled in the course at SIPI or elsewhere,
2. Student must be enrolled in 12 or more credit hours (not including the challenge course),
3. Proposed course to be challenged must be numbered 101 or higher; and
4. A maximum of two core program courses may be challenged.

No more than 20% of the student's total program of studies requirements may be satisfied through this method or credit for courses may only be challenged once. Course prerequisites must be fulfilled when challenge is unsuccessful and prior to challenging a course. The student must enroll in the course if it is a required course in his/her program of studies.

If credit is authorized, it will count toward satisfying course requirements in the student's program of studies. However, the challenge credit earned will not be used to: Calculate the grade point average (GPA), Satisfy lodge residency requirements, Compute full-time status, or Satisfy financial aid criteria.

## **Class Attendance**

It is SIPI policy that students registered for credit courses are expected to attend all class sessions. Attendance shall be taken and recorded each day of class by each instructor. If a student is not in class, the instructor will record an absence. A student arriving more than five (5) minutes late or leaving without permission will also be recorded as absent. A student who is absent from any class on three (3) or more consecutive days without notification will be dis-enrolled from the class. The student is entirely responsible for: (1) keeping track of all absences, tardiness and missed class work for each course; (2) the consequences of the absences, tardiness, and missed class work; and (3) notifying appropriate instructors of any necessary absence from class.

Absences may be allowed by an instructor within a specific percent of contact hours, which is stated in the course syllabi. It is the responsibility of the student to track their absences. If a student is absent beyond the allowable absences, he/she will be dis-enrolled from the class. A student may appeal a disenrollment providing there is justifiable documentation. In addition, instructors may dis-enroll a student from a course for lack of progress when the student fails to prepare sufficiently for the subject content, persistently neglects class preparation and/or assignments, or demonstrates inability to make satisfactory academic progress.

### **Tardies**

A tardy occurs when a student is late to class up to five (5) minutes. A student who is tardy over five (5) minutes will be recorded as being absent; every third (3rd) tardy will be converted to an absence and recorded as such.

### **No Shows**

If a student has registered for a class, but fails to attend class two (2) consecutive class hours at the beginning of a trimester, he/she will be dis-enrolled as a "no show". This may include any student who was pre-registered for a class but failed to notify the Department Chair, Counselor, and/or Advisor of their intent to withdraw.

### **Class Abandonment**

Students absent from any class for three (3) consecutive class hours or more without notification will be dis-enrolled from class with no appeal rights.

## Grading

### Grades

Grades are issued and recorded at the midpoint and the end of the trimester. The grade earned in each course is indicative of the quality of work completed. The grading scale, except for GED, is as follows:

A	Excellent	4 Quality Points
B	Good	3 Quality Points
C	Satisfactory	2 Quality Points
D	Minimally Passed	1 Quality Point
F	Failed	0 Quality Points
I	Incomplete	The grade of "I" is given only when circumstances beyond the student's control have prevented the completion of coursework within the official dates of the session.
W	Withdrawal	Withdrawal; grade from the beginning of the trimester through the published "last day to withdraw with a 'W'" date, if a student withdraws or is disenrolled from a course. Previous course disenrollment's that were processed and that resulted in a "W" will remain the same. All withdrawals or disenrollment's occurring after the published "last day to withdraw with a 'W'" date and all improper withdrawals regardless of when they occur will be recorded as a letter grade of "F". Exception(s) being students who withdraw for medical reasons with verifiable documentation; or students who withdraw due to military obligations with verifiable documentation (military orders or evidence of enlistment).
AU/S	Audit Satisfactory	To indicate a student has satisfactorily completed all course requirements for an Audit course.
AU/W	Audit Withdrawal	To indicate that the student did not complete the course requirements and/or withdrew from an Audit course.

**Note:** GED courses are graded using PS/FL/W and are not included in any GPA calculations.

### Grade Point Average System

A Grade Point Average (GPA) is computed by dividing the total quality points by the total hours attempted in the following way:

Grade points are computed by multiplying the number of credit hours earned per individual course by the quality point value assigned to the grade. For example, a three credit hour course with a grade of "B" = 9 quality points (3 credit hours multiplied by 3 quality points value). Courses attempted that earned an "F" are included in the calculation.

The total number of quality points earned in all courses is divided by the total number of hours attempted. The result is the GPA. GPAs (including cumulative GPAs) will be rounded to two (2) decimals, i.e., 2.8921 calculate to 2.89; 2.8974 calculate to 2.90.

## Academic Standing

Students shall maintain a minimum 2.00 Cumulative GPA throughout their program of study. When a student receives a final grade of A, B, C, D, or F, they are considered credit hours attempted and earned. "W" and "I" grades earn no credits and are not considered hours completed. Transfer credit hours accepted by SIPI are not calculated in cumulative grade point averages for determining satisfactory progress.

## Academic Probation and Academic Suspension

### Academic Probation

All SIPI students are expected to maintain an overall "C" (2.00) Grade Point Average (GPA) to remain in good academic standing. When the Trimester GPA falls below 2.00, the student is placed on academic probation for the next trimester the student enrolls. The student on academic probation must raise his/her trimester GPA to 2.00 or better by the end of the trimester to return to good academic standing. A student on academic probation:

- Is not eligible to hold office in the Student Senate
- Cannot pre-register for the following trimester of attendance

## **Academic Suspension**

Academic suspension takes place when a student on academic probation fails to bring his/her trimester GPA above 2.00 or better by the end of a probation period.

- The first (1<sup>st</sup>) suspension is for one (1) trimester.
- The second (2<sup>nd</sup>) suspension is for one (1) calendar year.
- The third (3<sup>rd</sup>) suspension is permanent. After one year following the third suspension, if unusual circumstances warrant it, the student may petition the Vice President Academic Programs for readmission, through the Director of Admissions and Financial Aid.

Eligible students applying for readmission to SIPI must go through readmission procedures. All Students readmitted from academic suspension are automatically placed on academic probation for the readmitted trimester. If a readmitted student is placed on academic probation for a readmitted trimester, and the student earns a 2.00 or higher GPA, the student will return to good academic standing at the beginning of the next admitted term. If the readmitted student fails to achieve a 2.00 GPA, the student will be academically suspended as specified by academic standards policy.

**NOTE: ACADEMIC SUSPENSION IS FINAL AND CANNOT BE APPEALED.**

Students placed on Academic Probation or Academic Suspension are subject to additional regulations regarding Financial Aid Satisfactory Academic Progress (SAP). Students should contact the Financial Aid Office for pertinent regulations.

## **Double Degrees**

Students desiring to major in two disciplines concurrently must petition to the appropriate Department Chairs within the first two (2) trimesters of enrollment in the program. The Vice President Academic Programs must approve double degree petitions. The double degree program must be equivalent in its purpose or must be compatible in meeting the student's goals. A student must not be enrolled in more than two (2) programs of study.

## **Change of Program of Studies**

Students are allowed to change an occupational or academic discipline only twice. No student may enroll in more than two programs at SIPI. The Adult Basic Education (ABE), General Equivalency Diploma (GED) and the technical preparation studies do not constitute a discipline, and are considered preparatory.

Students petitioning to transfer from a certificate program to a degree program will not be affected by the criteria cited above. Criteria for transferring from a certificate to a degree program will remain the same, i.e., acceptable math/reading test scores, 2.0 or better cumulative GPA in all course work and/or recommendation from the student's advisor. All petitions to change an occupational or academic discipline must be approved by the Department Chair.

## **Maximum Time Frame**

Students in Adult Basic Education (ABE), developmental, or non-degree status have a maximum of three (3) trimesters of study to enter a certificate or degree program. Students will not be granted extension beyond that timeframe. For Financial Aid purposes the Maximum Time Frame is defined as: A student cannot exceed 150% of the published length of the program measured in academic terms or credit hours. For example, if the length of an associate's degree program is 64 credit hours, the maximum period must not exceed 96 (64X1.5) attempted credit hours. Students should contact the Financial Aid Office for additional information.

## **Grade Replacement**

### **Grade Replacement and Course Repetition**

College courses may be repeated only once, such as to replace a "W" or "F" or to improve a grade of "D". The student must seek approval from the Vice President Academic Programs if a course is to be repeated more than once. Developmental courses may be repeated until mastery (i.e., a passing grade of "C" or better) is achieved.

All grades earned will be recorded in the student's transcript, but only the grade approved for grade replacement will be used to calculate the cumulative grade point average (GPA). Only course work being applied toward an Associate's Degree and/or Certificate may be considered for grade replacement. A grade replacement may be

applied to only 12-hours of course work. Students who have not yet graduated from SIPI are eligible for grade replacement.

Students must initiate the Grade Replacement Petition through their advisor by the end of the add/drop period of the trimester, in which they are repeating the course. The course numbers must be identical, except where equivalencies or a change has been noted in academic policies. Students who have not graduated from SIPI are eligible for a grade replacement. The process is as follows:

- Fill out a Grade Replacement Petition provided by the Department Chair;
- The student and the advisor must sign the petition;
- The Department Chair must sign the petition and forward it to the Admissions and Records Office.

### **Grade Change Appeal**

An appeal made by a student to change a grade may be considered when the possibility of an error exists in the calculation of the grade. No grade will be changed simply as a result of submitting an appeal. An appeal for a grade change made to the Department Chairperson will be considered before it is posted to the transcript.

### **Removal of Incompletes**

The grade of "I" is assigned only during the final grade report period for 101 level courses and above, and only in those instances when the student is doing passing work, but is unable to complete the required work due to circumstances beyond his/her control, such as being involved in an automobile accident on the way to class, a verifiable and documented family emergency, premature labor and delivery during the last few weeks of the trimester, etc.

It is the student's responsibility to notify his/her instructor of the circumstances that will prevent completion of the course on time. The instructor and the student must then prepare an Incomplete Grade Form (IGF) and submit copies to the student's advisor, Director of Admissions, and Department Chair.

The IGF shall list the reason for the course incompleteness, the academic conditions that must be completed by the student to successfully convert the "I" grade to a final grade, and the date that it must be completed within one calendar year. In no instance shall a grade earned from retaking the course replace the "I" grade. Converted "I" grades will be reflected on the student's permanent academic record as a letter grade, complete with grade points, and an adjusted cumulative GPA. It is the student's responsibility to make arrangements with the instructor to convert incomplete grades.

The following is the process for converting an Incomplete:

- When notified by the student, the instructor prepares and files the student's IGF with the student's advisor, the Department Chair, and the Director of Admissions.
- Incomplete grades must be converted by the published ending date of the following trimester in which the student enrolls. An "I" that is not changed within one calendar year from the time the grade is submitted will automatically become a failing, "F" grade.
- When the "I" is converted, the student's permanent record will reflect the grade, its grade points, and an adjusted cumulative grade point average (GPA).

## **Final Examinations**

Final examinations are given at the end of each trimester. Students must take their final examinations during the scheduled time period. Students who fail to take final examinations may receive a failing grade and jeopardize their academic status.

## **Graduation Requirements**

### **Associates Degree:**

1. Must have been formally admitted to SIPI;
2. Must submit a Petition to Graduate by the seventh (7<sup>th</sup>) week of instruction through the student's academic advisor;
3. Must have completed ALL general education and degree requirements in the program of study;
4. Must have "C" grades or better in all courses required by the program of study, and
5. Have a cumulative grade point average of 2.0 or better.

Upon graduation from SIPI with a degree in a given discipline, students will not be allowed to immediately re-enroll at SIPI to pursue another discipline until after one full calendar year has elapsed from their initial completion date. After one year, a SIPI graduate may apply for readmission to upgrade current skills in a non-degree status. Petitioning to enroll in a new area of study will be considered by the Director of Admissions. Decisions will be based on each applicant's needs and merit of each request. An exception will be made for a student who graduated with a certificate of completion.

**Certificate:**

1. Must have been formally admitted to SIPI;
2. Must submit a Petition to Graduate by the seventh (7<sup>th</sup>) week of instruction through the student's academic advisor;
3. Must have completed ALL general education and degree requirements in the program of study;
4. Must have "C" grades or better in all course work used on program of study; and,
5. Have a cumulative grade point average of 2.0 or better.

## **Withdrawing from SIPI**

When a student departs from SIPI for any reason, there is a proper withdrawal procedure, using the Student Action Form. Failure to follow this procedure may result in a failing grade(s). It is the student's responsibility to ensure that everyone involved signs the form. The forms can be picked up in the student's counselor's office.

The procedures are as follows:

1. Report to assigned academic counselor who will give the student a Student Action Form (SAF) and instructions on how to complete it.
2. Follow the instructions given; obtain required signatures and clearances from the librarian, instructors, academic advisor, and department chairperson.

Graduates withdrawing from SIPI are also required to complete the Student Action Form and to:

- Meet with the Counselor to discuss and identify plans after graduation.
- All residential students are to clear with the residential staff for linen, room key, and damages, if any.
- Students receiving financial aid are to clear with SIPI Financial Aid Office.
- When the form is completed, the student is to take it to the Admissions office for processing.

### **Military Withdrawals**

Students who formally withdraw from SIPI before the end of the 12th week of the trimester due to military obligations are entitled to a grade of W in each course in which they are enrolled. Military orders or evidence of enlistment must be made available to the Vice President Academic Affairs. Students who withdraw due to military obligations after completing 12 weeks of instruction will receive full credit for each course in which they are enrolled provided the instructor certifies a grade of C or better for the course at the date of formal withdrawal. They will receive a grade of W if the instructor certifies a grade of less than C. Final trimester students who have satisfactorily completed at least half of the work in the courses, for which they are enrolled that trimester, provided these would complete their degree requirements, may be certified for graduation.

## **ACADEMIC RECOGNITION**

### **President's Honor List**

The President's list honors those students carrying 12 college-level credit hours or more who achieve a trimester GPA of 4.00 at the end of a trimester.

### **Vice President's Honor List**

The Vice President's list honors those students who are carrying 12 or more college-level credit hours who achieve a trimester GPA between 3.50 and 3.99 at the end of a trimester.

The President invites those students who meet the membership requirements to join the Beta Beta Iota Chapter of the Phi Theta Kappa International Honor Society. A student must be:

- carrying 12 credit hours or more;
- must be accepted into a degree program;
- must be at least a second trimester student; and
- must have a cumulative GPA of 3.50 or above at the time of membership enrollment.

## STATEMENT ON GENERAL EDUCATION

SIPI's certificate and undergraduate degree programs include a coherent general education requirement consistent with SIPI's mission. It ensures breadth of knowledge and promotes intellectual inquiry. These general education criteria have also been adopted and deemed appropriate within SIPI's technical programs, GED, Adult Basic Education and Developmental Education Program.

The general education component prepares students to live in and contribute to a dynamic, complex and multicultural world as productive life-long learners and tribal members, in an ever changing global environment. In support of this philosophy, SIPI is committed to providing student learning experiences meant to develop and enhance such abilities as critical thinking, communication (written and oral), interpersonal skills, and an appreciation of their cultural legacy. In addition, the college provides coursework that allows students to explore the modes of inquiry of the major disciplines and have learning experiences that allow them to broaden their education base. General education allows students to gain an appreciation of the creative arts, understand multicultural and diverse perspectives, articulate the human condition, analyze the natural world through mathematics and science, and make meaningful and ethical decisions. SIPI intends those students who complete the general education requirement will possess the knowledge and mental skills essential to their development as an individual, as a tribal member, and as a global citizen.

### Student Learning Outcomes

SIPI has identified four core competencies that all SIPI certificate and associate degree students will demonstrate upon completion of a program of study at SIPI. The competencies are in SIPI's basic mission statement and represent the most deeply held values of the college. The competencies help ensure that our graduates will be informed and committed citizens, prepared for the technological, behavioral and practical needs of modern workplaces and communities. For the certificate programs six (6) credit hours; the associate of applied sciences 15 credit hours and the associate of science and arts 24 credit hours of the four core competencies.

### Core Competencies

Students should select courses from the areas below:

- **Communication:** Students will be able to effectively communicate ideas to others in correct ways.
- **Interpersonal Skills/Teamwork:** Students will demonstrate individual and interpersonal skills to work with others professionally on a community and global level.
- **Cultural Legacy:** Students will demonstrate knowledge of Native American history, cultures and traditions while recognizing the cultures and traditions of others on a national and global level.
- **Critical Thinking:** Students will be able to analyze, synthesize, and interpret verbal information and quantitative data by using critical thinking skills.

## ARTICULATION

### Core Transfer Courses

The following General Education matrix curriculum was developed by the State of New Mexico Higher Education Department (HED) to facilitate the transfer of students between New Mexico's institutions of higher education (Chapter 224 of the Laws of New Mexico 1995). In accordance with policies established by the New Mexico HED, designated general education core courses successfully completed at any regionally accredited public institution of higher education in New Mexico are guaranteed to transfer to any other New Mexico public institution. Students enrolling at a New Mexico institution and wish to prepare for transfer into a baccalaureate degree program at a four-year institution are advised to take these courses during their freshmen and/or sophomore years.

The core matrix of approved courses guaranteed to transfer and meet general education requirements at any New Mexico college or university can be found on the New Mexico Higher Education Department web site at [www.hed.state.nm.us](http://www.hed.state.nm.us).

### GENERAL EDUCATION 35 HOUR TRANSFERABLE CORE

<b>Area I: Communication</b>	<b>9 credits</b>
(a) Freshman Composition (ENGL101)	3 credits
(b) Advanced Composition (ENGL102, ENGL219)	3 credits
(c) Oral Communications (SPCH130)	3 credits
<b>Area II: Mathematics (appropriate to transfer major)</b> (Students may choose 1 course from list)	<b>9 credits</b>
(a) College Algebra (MATH121)	3 credits
(b) Calculus I (MATH162)	3 credits
(c) Other College Level Mathematics (MATH120, 123, 145, 150, 180)	3 credits
<b>Area III: Laboratory Science</b> (Students may choose courses from one or more disciplines)	<b>8 credits</b>
(a) General Biology with laboratory (BIOL 111, 121 or 123)	4 credits
(b) General Chemistry with Laboratory (CHEM 111, 121, or 122)	4 credits
(c) General Physics with Laboratory (PHYS151)	4 credits
(d) Geology/Earth Science with Laboratory (GEOL101)	4 credits
(e) Astronomy with Laboratory (ASTR101)	4 credits
(f) Environmental Science (N/A)	
(g) Other Sciences (NATR200/L)	4 credits
(h) Introduction to Plant Science (AGTC104/L)	4 credits
<b>Area IV: Social/Behavioral Select Science</b>	<b>6-9 credits</b>
Minimum of 6 credits; must have 15 credits total between this area and Humanities and Fine Arts	
(a) Economics (Macro or Micro) ) (ECON 200 or 201)	3 credits
(b) Introductory Political Science (POLS 110 or 200)	3 credits
(c) Introductory Psychology (PSYC105)	3 credits
(d) Introductory Sociology (SOC1 101 or SOC1 210)	3 credits
(e) Introductory Anthropology (ANTH 101 or 130)	3 credits
<b>Area V: Humanities and Select Fine Arts</b>	<b>6-9 credits</b>
Minimum of 6 credits; must have 15 credits total between this area and Social/Behavioral Sciences	
(a) History Survey Western Civilization (HIST101)	3 credits
• U.S. History before 1877 (HIST161), U.S. History since 1877 (HIST162)	3 credits
• History of Pre-Columbian America (HIST218)	
• History of Indian Education (HIST260)	
(b) Introduction Course in History, Theory or Aesthetics of the Arts or Literature	3 credits
• Introduction to Art (ARTH101), Art foundations (ARTH102)	
• Literature: Topics in Literature (Native American, LITR 211)	
• American Literature (LITR 296)	
<b>COMMON CORE REQUIRED TOTAL</b>	<b>35 credits</b>

### New Mexico Business Transfer Courses

The following Business Transfer matrix was developed by the Statewide Business Articulation Committee to facilitate business classes transferring between New Mexico's two and four year institutions. In conjunction with the 35 hour General Education Core, selected business classes will provide students with two-year degrees in Business that transfer to other New Mexico Colleges and Universities. The core matrix of approved courses guaranteed to transfer and meet business requirements at any New Mexico college or university can be found on the New Mexico Higher Education Department web site at [www.hed.state.nm.us](http://www.hed.state.nm.us).

Cross-walk NO.	BUSA 1113	BCIS 1113	ECON 2113	ECON 2123	MKTG 2113	MGMT 2113	ACCT 2113	ACCT 2123	BLAW 2113	MATH 2113
INSTITUTIONS	INTRO TO BUSINESS	INTRO TO COMPUTERS & BUSINESS APPS	MACRO ECONOMICS PRINCIPLES	MICRO ECONOMICS PRINCIPLES	PRINCIPLES OF MARKETING (h)	PRINCIPLES OF MANAGEMENT (h)	PRINCIPLES OF ACCOUNTING I (Financial)	PRINCIPLES OF ACCOUNTING II (Managerial)	BUSINESS LAW I (h) (c)	STATISTICS
SIPI	BADM 114	COSC 107	ECON 200	ECON 201	BADM 242	BADM 130	ACCT 201	ACCT 202	BADM 240	Math 145
Eastern NMU	BUS 151	CIS 151	ECON 221	ECON 222	MKT 301	See notes.	ACCT 212 (d)	ACCT 211	BUS 315	STAT 213
NMHU		MIS 233	ECON 216	ECON 217	MKTG 302	MGT 303	ACCT 287	ACCT 288	BLAW 360	BUS 210
NMSU	BUSA 111	BCS 110G or CS 110G	ECON 251G	ECON 252G	MKTG 303 (j)	MGT 201G	ACCT 252	ACCT 251	BLAW 316 (a) or BLAW 317	STAT 251 or EST 251 or EST 311G
NMMI		BCS 209	ECON 251	ECON 252	MKT 335		ACCT 201	ACCT 202	BA 315	BCS 283 or MATH 283
UNM	MGT 113	CS 150	ECON 105	ECON 106	MGT 222/322 (g)	Free Elective (i)	MGT 202 (e)		MGT 309 (b)	STAT 145 or STAT 245 or STAT 345 or MGT 290
WNMU	BSAD 100	CMPS 111 or CMPS 260	ECON 201	ECON 202	Free Elective (i)	BSAD 350	BSAD 230	BSAD 231	BSAD 300	MATH 321
Clovis CC	BAD 151	CIS 101 or CIS 120	ECON 221	ECON 222	MKT 201	MGT 201	ACCT 201 (d)	ACCT 202 (d)	BAD 215	STAT 213
Diné College	BUS 141	BUS 280	ECO 200	ECO 201			BUS 251	BUS 252	BUS 204	MATH 213
ENMU-Roswell	BUS 151	CIS 185	ECON 221	ECON 222	MKT 201	MGT 201	ACCT 201 (d)	ACCT 202 (d)	BUS 230	STAT 213
Luna CC	BUS 105	CIS 100	ECON 208	ECON 209	MKT 201	MGMT 207	ACCT 200 (d)	ACCT 201 (d)	LAW 242	MATH 130
Mesa Lands CC	BUS 101		ECON 252	ECON 251		MGT 113	ACCT 111	ACCT 210	BLAW 202	
NMJC	BU 113	CS 123A or CS 123D	EC 213	EC 223	BU 223A	BU 213	AC 114	AC 124	BS 213	BU 233
NMMI	BUS 111	CIS 117	ECN 211	ECN 212		BUS 201	BUS 213	BUS 214	BUS 202	MTH 251
NMSU-Alamogordo	OEBU 110 or BUSA 111	CS 110g	ECON 251G	ECON 252G	MKTG 203 or OEBU 210	MGT 201G	ACCT 252	ACCT 251	BLAW 230	STAT 251
NMSU-Carlsbad	BUSA 111	BCS 110G or CS 110G	ECON 251G	ECON 252G	MKTG 203	MGT 201G	ACCT 252	ACCT 251	BLAW 230	STAT 251
NMSU-Dona Ana	BUSA 111 or OEBU 110	CS 110G or OECS 105	ECON 251G	ECON 252G	OEBU 210	MGT 201 or OEBU 140	BOT 120 & BOT 121	ACCT 251	OEBU 231	STAT 251
NMSU-Grants	BA 104	CS 110G	ECON 251G	ECON 252G			ACCT 201	ACCT 202	BA 230	STAT 251
NMCC College	BA 120	BA 225	ECON 200	ECON 201	BA 251	BA 202	BA 130 (d)	BA 131 (d)	BA 266 (d)	MATH 115
SJCC	BADM 114	COSC 111 or COSC 125	ECON 251	ECON 252	BADM 242	BADM 233	ACCT 201 (d)	ACCT 202 (d)	BADM 230 or BADM 210	MATH 251 (d) or BADM 212
SFCC	BSA 111	CIS 111 and 111L, BOIT 131L or BOIT 132L	ECON 200	ECON 201	BSA 240	BSA 211	ACC 121 (d)	ACC 122 (d)	BSA 232	BSA 260L or MATH 135L
CNM	BA 113	BA 150(k) or CSCI 101(k) or CP 176(k)	ECON 200	ECON 201	BA 222	BA 133	ACCT 101A and ACCT 101B	ACCT 102	BA 211	MATH 145 or MATH 245
UNM-Gallup	BUSA 1010	BCIS 1010	ECON 2010	ECON 2020		MGMT 2010	ACCT 2010		BLAW 2010	STAT 2010
UNM-Los Alamos	MGMT 2010	CS 150	ECON 200	ECON 201			MGT 202		BUST 218	MGT 245 or MGT 290
UNM-Valencia	MGT 113	CS 150	ECON 200	ECON 201			MGT 202 or MGT 101 & MGT 102		BUST 218	MATH 245 or MGT 290

- Notes:**
- (a) NMSU BLAW 317 is preferred for accounting majors but BLAW 316 is acceptable.
  - (b) UNM Credit toward BBA degree given for either MGMT 309 or MGMT 310. Accounting majors must take MGT 310.
  - (c) Business Law must be taught by an attorney.
  - (d) Courses carrying four credit hours may transfer as three credits.
  - (e) UNM Students not having completed six credit hours of accounting shall be required to demonstrate appropriate competency in the subject area.
  - (f) CNM ACCT 101 is 6 credits.
  - (g) UNM MGT 222 - Non-BBA majors only/MGT 322 must have ENGL 102, ECON 201 equivalents as prerequisites for conditional waiver.
  - (h) 200 level courses that may be accepted do not count toward upper division core hour requirements.
  - (i) Will accept as free elective credit only.
  - (j) Students entering with MKTG 303 (but lacking managerial accounting and operations management) will be exempted from BUSA 422.
  - (k) In fall 2005, BA 150, CSCI 101, and CP 176 will become IT 101 (same content and credit hours).
- \*All courses except CNM, UNM Gallup, Los Alamos, Valencia transfer in as MATH 145.*

**For more information contact SIPI's Department of Liberal Arts and Business Technologies (505) 346-2353.**

## New Mexico Common Course Numbers for Early Childhood Education

A combination of the 35 hour General Education Core and the required Early Childhood classes will lead students to a two year degree in Early Childhood Education.

SIPI #	CC #	Course Name
ECED 126	ECED 1113	Childhood Growth and Development
ECED 124	ECED 1122	Health, Safety and Nutrition
ECED 202	ECED 1133	Family and Community Collaboration
ECED 218	ECED 1143	Assessment of Children & Evaluation of Programs
ECED 220	ECED 2152	Professionalism
ECED 130	ECED 2163	Curriculum Development & Implementation I
ECED 130P	ECED 2162	Practicum I
ECED 230	ECED 2173	Curriculum Development and Implementation II
ECED 230P	ECED 2172	Practicum II
ECED 214	ECED 2183	Guiding Young Children
ECED 204	READ 2113	Introduction to Reading and Literacy Development

**Note:** SIPI's Early Childhood Education Program has been approved by the New Mexico Early Childhood Education Task Force using the New Mexico Universal Catalogue of Courses for Early Care, Education, and Family Support courses to transfer to other two-year and four-year institutions in New Mexico.

## EXTENDED COLLEGE

### Mission Statement

To meet this mission and in recognition of the diversity of student populations (traditional and adult/non-traditional learners) the SIPI Extended College is organized to provide outreach, responsive educational programming and multiple delivery systems including distance education formats.

### Goals

- Provide support services for adult and nontraditional students
- Initiate opportunities for lifelong learning

- Administer off-campus outreach programs throughout the College's service area
- Facilitate professional development, credit and non-credit programs in response to the needs of federally recognized tribes

To register for classes with academic credit under the SIPI Extended College please refer to the section on General Admissions Requirements. All documents must be submitted to the Admissions office.

*For deadlines, please see the College's academic calendar.*

## COMMUNITY PROGRAMS

### Family Extension and Education Program (FEEP)

Tribal communities in New Mexico are often remote and do not have access to culturally relevant information in the areas of health, family dynamics, early childhood practices, and personal financial management. FEEP is a community-based program that designs and implements interactive distance education programs, site specific workshops, newsletters, a Train the Trainer and a Resource/lending library to disseminate accurate, culturally sensitive information in the areas of family welfare, financial management, child development and health.

The overall objective of FEEP is to develop a model extension and community-based program while developing skills and helping tribal community members strengthen their competencies to become healthy, productive, and financially secure through training at SIPI and via a distance education format for Tribal communities at remote locations.

- **Objective 1:** On-going assessment of family and community needs and identification of additional resources to strengthen family and community partnerships and volunteer network at New Mexico sites and through the American Indian Higher Education Consortium (AIHEC) satellite network.
- **Objective 2:** Develop and disseminate culturally appropriate family extension information and resource materials based on tribal needs and requests
- **Objective 3:** Develop age-appropriate instructional materials lending library based on developmental practices that support the social, emotional, physical, and cognitive growth of children.
- **Objective 4:** Provide interactive broadcasts on identified topics via satellite and by video tapes, newsletters and CD-ROMS.
- **Objective 5:** Collaborate with Tribal leaders on the development and maintenance of a community resource center for family extension and education for use by community members.
- **Objective 6:** Develop an interactive and collaborative relationship with families and educational agencies at tribal communities.
- **Objective 7:** Develop and implement assessment techniques, summative and formative program evaluation to monitor, adjust as needed, document and determine impact on individuals and tribal communities.

### Financially Fit: A Financial Education Program in Indian Country

"Financially Fit" is an expansion of financial education activities that have been conducted for the past seven years under the auspices of FEEP at SIPI. The program addresses not only the financial education needs of college students, but also those of community members in surrounding tribal communities. The program is driven by three goals:

- **Goal 1:** To develop and implement a replicable mandatory 3 hour workshop curriculum for students receiving financial aid at SIPI.
- **Goal 2:** To continue to develop and expand delivery of financial education workshops to students and members of tribal communities in the areas of personal financial management, asset development, taxes, identity theft, car purchases, credit cards, high interest loans, banking services, and entrepreneurialism.
- **Goal 3:** To train a cadre of peer educators who will be able to present workshops on financial education and serve as community resources in this area. "Financially Fit" utilizes well-trained peer educators to implement workshops in all areas of financial education. The curriculum produced in this program will be mandatory for all students who receive financial aid. Better financial management skills should help these students stay in school. Community financial education will empower participants to make knowledgeable choices and not be victimized financially.

## **Talent Search**

The SIPI Educational Talent Search Program is funded by the U. S. Department of Education to serve six hundred (600) middle and high school students who come from low-income families in which neither parent has a four-year college degree. The program works with students as early as sixth grade. It is intended to help students succeed in middle and high school and eventually enroll in a post-secondary institution. This mentoring program is also available to help secondary and postsecondary dropouts re-enroll in middle or high school, pursue a GED, or re-enroll in a post-secondary institution. There is no cost for students to participate in Talent Search. The Talent Search program is open to all potentially college bound students regardless of racial and/or ethnic background, gender or disability.

**SOUTHWESTERN INDIAN POLYTECHNIC INSTITUTE  
CIP CODES**

**01-DEPARTMENT OF GENERAL EDUCATION**

24.0199 Non-degree .....

**02-DEPARTMENT OF DEVELOPMENTAL STUDIES**

53.0201 General Education Development (GED)..... Certificate

**03-DEPARTMENT OF ADVANCED TECHNICAL EDUCATION**

15.1302 Computer Aided Drafting & Design ..... Certificate  
45.0702B Geo-Spatial Information Technologies ..... Certificate  
45.0702 Geo-Spatial Information Technologies ..... AAS Degree  
03.9999G Natural Resources Management, Agribusiness ..... AAS Degree  
03.9999S Natural Resources Management, Crop and Soil Science ..... AAS Degree  
03.9999V Natural Resources Management, Environmental Science..... AAS Degree  
03.9999R Natural Resources Management..... AAS Degree  
11.1002D Network Management ..... AAS Degree  
11.1002B Network Management ..... Certificate  
15.0404 Instrumentation & Control Technology ..... AAS Degree  
15.0613 Computer Integrated Manufacturing Technology ..... AAS Degree  
14.0101 Pre-Engineering..... AS Degree

**04-DEPARTMENT OF APPLIED VOCATIONAL TECHNOLOGIES**

12.0505 Culinary Arts ..... Certificate  
51.1802 Optical Laboratory Technology ..... Certificate  
12.0508 Culinary Arts ..... AAS Degree  
52.0999 Culinary Arts, Hospitality Services Management ..... AAS Degree  
51.1801V Vision Care Technology..... AAS Degree

**05-DEPARTMENT OF LIBERAL ARTS & BUSINESS**

24.0101 Liberal Arts ..... AA Degree  
52.0302D Accounting ..... AAS Degree  
52.0302B Accounting ..... Certificate  
52.0101D Business Administration..... AS Degree  
52.0201D Business Administration..... AAS Degree  
52.0201T Business Administration – Tribal Administration..... AAS Degree  
52.0201B Business Administration..... Certificate  
52.1299D Computer Science Information Systems ..... AS Degree  
52.0407D Office Information Applications ..... AAS Degree  
52.0407B Office Information Applications ..... Certificate

**06-DEPARTMENT OF EXTENDED COLLEGE**

13.1210A Early Childhood Education ..... AA Degree  
13.1299A Early Childhood Education ..... Certificate

# ADULT BASIC EDUCATION AND DEVELOPMENTAL EDUCATION

## Information

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## Mission Statement

To enable adult learners to be literate, productive, and successful in higher education, the workplace, home, and community by delivering responsive adult education programs and services.

## Adult Basic Education and Developmental Education

Southwestern Indian Polytechnic Institute's (SIPI's) Adult Basic Education (ABE) and Developmental Education programs seeks to ensure that students have every opportunity to be successful in achieving their individual goals. "Our goal is to provide students with the basic educational and life skills required for completing their General Education Development (GED), ABE and/or Developmental Education Programs, which will prepare the student to enter or retain employment and/or continue on to a degree or certificate program. The ability for students to better meet these goals is aligned with SIPI's mission and its commitment to develop long-term goals to ensure support and assistance to Tribal communities." SIPI's affirmation of the belief that each person's worth and dignity is of the utmost importance while attending the institution. Understanding that each individual student has the potential to impact the SIPI community, their home community and the global community is what compels SIPI to honor each student and their worth.

SIPI's ABE and Developmental Education programs have competencies and learning objectives that are aligned with its institutional mission as well as the State of New Mexico's Adult Basic Education program. Assurance that its ABE and Developmental Education curricula assist adults in becoming literate; obtaining knowledge and skills necessary for employment and self-sufficiency; obtaining knowledge and skills necessary for entering and being successful in postsecondary training or education; obtaining the educational skills necessary to become full partners in their children's education; and completing their secondary school education are congruent with SIPI's mission and is ensured through curriculum formatting, adopted and monitored by the College's Curriculum Committee.

## Program Goals and Learning Outcomes

### Adult Basic Education and Developmental Education Program Goals:

1. Post-test at least 50% of enrolled students to ensure literacy gains in English, Reading, and Mathematics are occurring.
2. Achieve educational gains completion rate of 32% using the Test of Adult Education as a means of measuring these gains.
3. Increase percentage of students who set and meet GED goal.
4. Increase percentage of students who enter postsecondary education/training.
5. Increase percentage of students who enter employment.

### Adult Basic Education and/or Developmental Education Learning Outcomes:

1. Obtained GED
2. Entered Post-secondary Education/Training
3. Entered Employment
4. Retained Employment

## **ADULT BASIC EDUCATION/DEVELOPMENTAL EDUCATION**

### **Basic Skills Development Classes:**

English 098 - Basic Writing  
English 099 - Basic English Skills  
English 100 - Writing Standard English  
Math 098 - Basic Mathematics I  
Math 099 - Basic Mathematics II  
Math 100 - Mathematics III  
Reading 098 - Basic Reading Skills  
Reading 099 - Reading Improvement  
Reading 100 - Reading and Critical Thinking

### **Employment Skills and Bridge to Postsecondary Classes – Other College Level Classes may be considered as well based on prerequisites:**

BADM 135 – Human Relations  
BUED 102 - Keyboarding  
COSC 107 - Computer Literacy  
PHYS 112, 114, 160, etc.- Health Promotion and Education  
HLTH 164 - First Aid and Safety  
CACS 100 - College and Career Success

## **GENERAL EDUCATION DEVELOPMENT (GED)**

### **General Education Development (GED) (53.0201):**

English 093 - GED Writing  
Social Science 093 - GED Social Science  
Science 093 - GED Science  
Literature 093 - GED Literature  
Math 093 - GED Mathematics

# LIBERAL ARTS AND BUSINESS TECHNOLOGIES

## Information

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## Liberal Arts

### Associate of Arts Degree

The Associate of Arts Degree provides, for transfer purposes, the General Education curriculum of the first two years of baccalaureate study. It also serves as a terminal degree. Additionally, the Liberal Arts curriculum supports degree program requirements in other SIPI instructional departments. The degree includes a General Education curriculum of 35 credit hours, which is accepted by New Mexico's other colleges and universities as the General Education core for degree completion.

The Liberal Arts program provides education to students in a variety of disciplines; including Communications, Mathematics, Laboratory Science, Social Behavioral Science, Humanities and Fine Arts, Technology, Health, and Physical Education.

## Mission Statement

The Liberal Arts requirements for undergraduate degree programs prepare students to live in and contribute to a complex and multicultural world as productive life-long learners in an ever-changing global environment. SIPI is committed to providing student learning experiences meant to develop and enhance such abilities as critical thinking, communication (written and oral), interpersonal skills, cultural appreciation, and analysis of the world through mathematics and science. Those students who complete the Liberal Arts requirements will possess the knowledge and the mental acuity essential to their development as individuals, tribal members, and global citizens.

## Goals

- The Liberal Arts program will prepare students to apply multiple forms of technology including computer programs, internet operations, and word processing techniques.
- Students will demonstrate proficiency in spoken, written, and technological forms of communication.
- They will use critical thinking skills when analyzing verbal, qualitative, quantitative, and visual data to succeed in the academic and professional world.

### Liberal Arts Associate of Arts Degree Outcomes:

- Students will be able to effectively communicate ideas to others in correct ways.
- Students will demonstrate individual and interpersonal skills to work with others professionally on a community and global level.
- Students will demonstrate knowledge of Native American history, cultures, and traditions while recognizing the cultures and traditions of others on a national and global basis.
- Students will be able to analyze, synthesize, and interpret verbal information and quantitative data by using critical thinking skills.
- Students will be able to apply multiple forms of technology including computer applications, internet operations, and word processing techniques.

**LIBERAL ARTS**  
**Associate of Arts Degree (CIP: 24.0101)**

**Area I: Communications Requirements: (12 Cr. Hrs.)**

ENGL	101	Composition	3
ENGL	102	Critical Reading & Writing	3
ENGL	219	Technical Writing	3
SPCH	130	Public Speaking	3

**Area II: Mathematics (appropriate to transfer major) Requirement: (6 Cr. Hrs.)**

MATH	121	College Algebra	3
MATH	_____	Choose one class: MATH 111, 123, 145, 150, 162, 180	3

**Area III: Laboratory Science (appropriate to transfer major) Requirement: (8 Cr. Hrs. from any of the following)**

BIOL	_____	Choose any 2 classes: BIOL 121/L, 123/L, 220/L	4
_____	_____	CHEM 111/L, 121/L, 212, ASTR 101/L, GEOL 101/L, PHYS 151/L	4

**Area IV: Social/Behavioral Science Requirement: (9 Cr. Hrs. from any of the following)**

_____	_____	Choose any 3 classes: ANTH 101, 130, SOSC 101, SOSC 210	3
_____	_____	PSYC 105, POSC 110, 200, ECON 200, 201	3
_____	_____		3

**Area V: Humanities and Fine Arts Requirement: (9 Cr. Hrs. from any of the following)**

_____	_____	Choose any 3 classes: ARTH 101, 102, 131, GEOG 101,	3
_____	_____	HIST 101,161, 162, 181, 260, LITR 211, 270, 296	3
_____	_____	SPAN 101, 102, NAVA 101, 102	3

**Computer Science Requirement: (3 Cr. Hrs.)**

COSC	107	Computer Literacy	3
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**Health & PE Requirements: (4 Cr. Hrs.)**

HLTH	164	First Aid & Safety	2
_____	_____	PE or Health Elective	1
_____	_____	PE or Health Elective	1

**Other Approved College-Level Elective: (12 Cr. Hrs.)**

Approved College-level Elective	3
Approved College-level Elective	3
Approved College-level Elective	3
Approved College-level Elective	3

**TOTAL CREDIT HOURS REQUIRED 63**

**Note:** The Minimum Grade Requirement for awarding a certificate, AA Degree, AS Degree, AAS Degree in Liberal Arts and Business Technologies is a 2.00 GPA (C) or better in all program required courses and a cumulative GPA of 2.00.

## Early Childhood Education

The Early Childhood Education Program offers courses for an Associate of Arts (A.A.) degree in Early Childhood Education. It is designed for students interested in working in this field or those who may transfer to a four year institution to complete a Bachelor's Degree in Early Childhood or a related field. Classes transfer to all New Mexico four (4) year colleges and universities with similar programs. The courses address the seven general early childhood education competency areas required by New Mexico Department of Education licensure in Early Childhood Education (birth to third grade).

Early Childhood courses are delivered through both on-campus instruction and interactive video conferencing (distance education) to tribal nations in New Mexico. Classes are offered in the late afternoons, evenings, and weekends to accommodate adult learners.

The Early Childhood Education Associate of Arts Degree (ECED) prepares students to work in early childhood settings providing services to children from birth to age eight, and their families. The A.A. degree in ECED satisfies the educational requirements for Head Start teachers and educational assistants in elementary school settings.

Completion of the ECED courses also entitles students to receive a vocational certificate in Early Childhood issued by the Office of Child Development, Children, Youth and Families Department of the State of New Mexico.

## Mission Statement

The Early Childhood Education Program provides students access to knowledge, skills and professionalism surrounding the field of child development, family, and community development to assure the provision of quality services that address the complex needs of Native families in the 21<sup>st</sup> century.

## Goals

The Early Childhood Education Program prepares graduates with theory and competencies required to work in specific child and family settings. Areas include: Childcare, Educational Assistants, Head Start and Early Care Teachers, and Family Home Childcare. Work is available with programs such as Head Start, private and public childcare facilities and preschools serving children from birth through age five.

- The AA degree will provide the core courses required for further degrees and may be transferred to other four year institutions in pursuit of a Bachelor of Arts (BA) degree.

**Important:** Federal law requires a background check on all persons seeking employment in child care facilities.

### Associate of Arts in Early Childhood Education Outcomes:

- Understand the basic theory and competencies to work in specific child and family settings.
- Understand appropriate application, knowledge, skills and professionalism surrounding the field of child development, family, and community development to assure the provisions of quality services that address the needs of native families.
- Communicate effectively with others utilizing appropriate forms of communications methods.
- Apply critical thinking skills to engage new ideas and perfecting informed decision making processes.
- Student graduates will meet the needs of employers by presenting themselves in a professional manner based on the education and preparations received and/or succeed at a four-year institution.

## EARLY CHILDHOOD EDUCATION Certificate (CIP: 13.1299A)

### First Trimester

ECED	124	Health Safety and Nutrition	2
ECED	126	Child Growth and Development	3
ENGL	101	Composition	3
Total Credits			8

### Second Trimester

ECED	130	Curriculum Development & Implementation I	3
ECED	130P	Practicum I	2
ECED	202	Family & Community Collaboration	3
SPCH	130	Public Speaking	3
Total Credits			11

### Third Trimester

ECED	204	Intro. Reading & Literacy Development	3
ECED	214	Guiding Young Children	3
MATH	111	Mathematics for Elementary & Middle School Teachers	3
Total Credits			9
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>28</b>

## EARLY CHILDHOOD EDUCATION

### Associate of Arts Degree (CIP: 13.1210A)

<b>First Trimester</b>			
ECED	124	Health, Safety & Nutrition	2
ECED	126	Child Growth and Development	3
ENGL	101	English Composition	3
Total Credits			8
<b>Second Trimester</b>			
ECED	130	Curriculum Development & Implementation I	3
ECED	130P	Practicum I	2
ENGL	102	Critical Reading and Writing	3
Total Credits			8
<b>Third Trimester</b>			
ARTH	101	Introduction to Art	3
SPCH	130	Public Speaking	3
ECED	202	Family & Community Collaboration	3
Total Credits			9
<b>Fourth Trimester</b>			
ECED	204	Introduction to Reading & Literacy Development	3
MATH	111	Mathematics for Elementary & Middle School Teachers	3
ANTH	130	Cultures of the World	3
Total Credits			9
<b>Fifth Trimester</b>			
ECED	218	Assessment of Children & Evaluation of Program	3
ECED	220	Professionalism	2
HIST	260	History of American Indian Education	3
Total Credits			8
<b>Sixth Trimester</b>			
BIOL	111	Biology for Environmental Sciences	3
BIOL	111L	Biology for Environmental Sciences Lab	1
ECED	214	Guiding Young Children	3
GEOG	101	Geography	3
Total Credits			10
<b>Seventh Trimester</b>			
ECED	230	Curriculum Development & Implementation	3
ECED	230P	Practicum II	2
GEOL	101	Physical Geology	3
GEOL	101L	Physical Geology Lab	1
SOSC	101	Sociology	3
Total Credits			12
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>64</b>

## Business Technologies

### Mission Statement

Within a culturally sensitive learning environment, the Business Technologies mission is to educate and prepare professional Native American business students to become informed decision makers, manage complex business operations, and contribute to commerce and business in the global market.

### Goals

- Improving the number of graduates enrolling in the certificate or degree in Accounting, Business Administration, Computer Science, Network Management or Office Information Applications to enter the business world.
- Empower students to pursue a higher education and assist with the transition into a four-year college or university.

- Capitalize on the services of a professional business advisory committee comprised of individuals from business and government agencies utilize their expertise on relevant business practices and leverage member resources to enhance and expand the Business Technologies Department to provide excellent service to students.
- Institutionalize culturally relevant curriculum by offering a Tribal Management program that articulates with other higher education institutions.
- Build strong tribal, state and federal partnerships to strengthen tribal communities in areas such as economic development, leadership, and entrepreneurship.
- Expand articulation agreements with four-year institutions of higher education for course transfer opportunities for Business Technologies students.

Students may select from one of three Certificate programs or from one of six Associate Degree program offerings. If a student enters the Certificate Program but later wishes to continue his/her education after completing a certificate program in Business Technologies, the student will have completed 33 credit hours toward the Associate of Applied Science Degree in the related program area. Example: Completion of the Business Administration Certificate counts as 33 hours towards the Associate of Applied Science Degree Program. Based on certain criteria, a student may go directly into a degree program.

Courses in the Associate of Science Degree programs are transferable to other two-and-four year institutions of higher education in New Mexico and are on the New Mexico Statewide Articulation Matrix. Students must work closely with their transfer institutions and their advisers to assure the best transition to four-year schools.

**Note:** Some courses may have prerequisites. Refer to this catalog and/or consult your advisor.

## **Accounting Certificate**

### **Mission Statement**

The Certificate program in Accounting is a program of study designed to prepare students for entry-level positions in accounting. For students who wish to continue their education and pursue an AAS degree in Accounting, all credit hours from the certificate program may be applied to the Accounting AAS degree program of study.

The Accounting Program will provide training and education to students to enable them to compete and qualify for employment in the accounting field; and to produce well trained and competent professionals to provide services to private, public, and tribal entities.

### **Goals**

- Prepares graduates with general and specific instruction in accounting and related skills necessary to obtain entry-level employment in the field of accounting.
- Prepare students for life-long learning by providing students with a basic general education.
- Prepares graduates with instruction in the fundamental principles of accounting used in business.

### **Accounting Certificate Outcomes:**

- Graduates will demonstrate basic accounting concepts and principles.
- Graduates will demonstrate an understanding of basic accounting practices through analyzing and recording ordinary business transactions.
- Graduates will demonstrate the accounting skills necessary to acquire an entry-level position in accounting.

**ACCOUNTING**  
**Certificate (CIP: 52.0302B)**

<b>First Trimester</b>			
ACCT	101	Fundamentals of Accounting	3
BADM	114	Introduction to Business	3
BUED	125	Business Math	3
ENGL	101	Composition	3
Total Credits			12
<b>Second Trimester</b>			
ACCT	201	College Accounting I	3
ACCT	220	Federal Income Tax	3
COSC	107	Computer Literacy	3
MATH	120	Intermediate Algebra	3
Total Credits			12
<b>Third Trimester</b>			
ACCT	235	Microcomputer Accounting for Small Business	3
BADM	118	Small Business Management	3
_____	_____	COSC 123 (Excel) OR ACCT 280 (Cooperative Education)	3
Total Credits			9
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>33</b>

**Accounting**

**Associate of Applied Science Degree**

The AAS Degree in Accounting is a course of study over five trimesters designed to prepare graduates with the general skills necessary to obtain an entry-level position with one of the tribes or a not-for-profit agency; or work toward completion of a Bachelor's Degree in Accounting. A formal double-entry accounting system is taught using manual and computerized systems. Generally accepted accounting principles and concepts are emphasized. The Tribal Accounting class will further prepare students to successfully obtain employment with the tribes.

According to the U.S. Bureau of Labor Statistics, employment among Accountants, Auditors and Management Analysts will add the most jobs; 326,000 combined by 2011.

**Goals**

- Prepares graduates academically to succeed in four-year degree granting college.
- Prepares graduates with instruction in the fundamental principles of accounting used in business.
- Prepares graduates with a basic ethical foundation in the principles of accounting and business.

**Associate of Applied Science Degree in Accounting Outcomes:**

- Graduates will demonstrate basic accounting concepts and principles.
- Graduates will demonstrate an understanding of basic accounting practices through analyzing and recording ordinary business transactions.
- Graduates will demonstrate that they are academically prepared to succeed in a four-year degree program.

**ACCOUNTING**  
**Associate of Applied Science Degree (CIP: 52.0302D)**

<b>First Trimester</b>			
ACCT	101	Fundamentals of Accounting	3
BADM	114	Introduction to Business	3
BUED	125	Business Math	3
ENGL	101	Composition	3
Total Credits			12

<b>Second Trimester</b>			
ACCT	201	College Accounting I	3
ACCT	220	Federal Income Tax	3
BADM	130	Principles of Management	3
COSC	107	Computer Literacy	3
MATH	120	Intermediate Algebra	3
Total Credits			15
<b>Third Trimester</b>			
ACCT	202	College Accounting II	3
ACCT	235	Microcomputer Accounting for Small Business	3
BADM	118	Small Business Management	3
COSC	123	Excel	3
Total Credits			12
<b>Fourth Trimester</b>			
BFIN	211	Principles of Finance	3
ECON	200	Macroeconomics	3
ENGL	219	Technical Writing	3
SPCH	130	Public Speaking	3
Total Credits			12
<b>Fifth Trimester</b>			
ACCT	250	Tribal Accounting	3
ECON	201	Microeconomics	3
BADM	240	Business Law	3
_____	_____	ACCT 280 (Cooperative Education) OR Elective (Business Course)	3
Total Credits			12
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>63</b>

## Business Administration Certificate

The Certificate program in Business Administration is a program of study designed to prepare students for entry-level skills in business. For students who wish to continue their education and pursue an AAS degree in Business Administration, all credit hours from the certificate program will be applied to the Business Administration AAS degree program of study.

### Mission Statement

The Business Administration Program will provide training and education to students to enable them to compete and qualify for employment in the business administration field; and to produce well trained and competent professionals to provide services to private and public entities. Graduates are prepared to continue working toward completion of a Associates Degree in Business Administration.

### Goals

- Prepares graduates with the appropriate academic knowledge and skills necessary to become productive, independent, and responsible employees in the workforce.
- Gives students the basic entry-level accounting and business skills necessary to gain employment.
- Prepares graduates with the basic managerial skills necessary to operate a business.

### Business Administration Certificate Outcomes:

- Graduates will demonstrate basic business concepts and principles.
- Graduates will demonstrate the business skills necessary to acquire an entry-level position in business/marketing.
- Graduates will perform and be technically proficient in the technology required of business and industry.
- Students will be able to effectively communicate ideas to others in a correct way.
- Students will demonstrate individual and interpersonal skills to work with others professionally on a community and global level.

- Students will demonstrate knowledge of Native American history, cultures and traditions while recognizing the cultures and traditions of others on a national and global level.
- Students will be able to analyze, synthesize, and interpret verbal information and quantitative data by using critical thinking skills.

## **BUSINESS ADMINISTRATION Certificate (CIP: 52.0201B)**

### **First Trimester**

ACCT	101	Fundamentals of Accounting	3
BADM	114	Introduction to Business	3
BUED	125	Business Math	3
ENGL	101	Composition	3
Total Credits			12

### **Second Trimester**

BADM	130	Principles of Management	3
BADM	135	Human Relations	3
BADM	240	Business Law	3
COSC	107	Computer Literacy	3
Total Credits			12

### **Third Trimester**

ACCT	235	Microcomputer Accounting for Small Business	3
BADM	118	Small Business Management	3
_____	_____	BADM 280 (Cooperative Education) OR Elective (Business Course)	3
Total Credits			9
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>33</b>

## **Business Administration**

### **Associate of Applied Science**

The Associate of Applied Science (AAS) degree program in Business Administration is designed to meet the educational needs of those who want to prepare for employment upon graduation. The program helps students attain skills, knowledge, and experience in general business, accounting, and technical training necessary to gain and maintain employment.

#### **Mission Statement**

The Business Administration Program will provide training and education to students to enable them to compete and qualify for employment in the business administration field; and to produce well trained and competent professionals to provide services to private and public entities.

#### **Goals**

- The Business Administration Program prepares graduates with the appropriate academic knowledge and skills necessary to become productive, independent, and responsible employees in the workforce.
- The program also strives to provide graduates with the entry-level skills necessary to gain employment once they have completed the program.
- Prepares graduates with the basic managerial skills necessary to operate a business.

#### **Business Administration Associate of Applied Science Degree Outcomes:**

- Graduates will demonstrate basic business concepts and principles.
- Graduates will demonstrate the business skills necessary to acquire an entry-level position in business/marketing.
- Graduates will have a basic knowledge of running a business from formation to expansion/merger.
- Graduates will perform and be technically proficient in the technology required of business and industry.
- Students will be able to effectively communicate ideas to others in a correct way.

- Students will demonstrate individual and interpersonal skills to work with others professionally on a community and global level.
- Students will demonstrate knowledge of Native American history, cultures and traditions while recognizing the cultures and traditions of others on a national and global level.
- Students will be able to analyze, synthesize, and interpret verbal information and quantitative data by using critical thinking skills.

## BUSINESS ADMINISTRATION

### Associate of Applied Science Degree (CIP: 52.0201D)

#### First Trimester

ACCT	101	Fundamentals of Accounting	3
BADM	114	Introduction to Business	3
BUED	125	Business Math	3
ENGL	101	Composition	3
Total Credits			12

#### Second Trimester

ACCT	201	College Accounting I	3
BADM	130	Principles of Management	3
BADM	135	Human Relations	3
BADM	240	Business Law	3
COSC	107	Computer Literacy	3
Total Credits			15

#### Third Trimester

ACCT	202	College Accounting II	3
ACCT	235	Microcomputer Accounting for Small Business	3
BADM	118	Small Business Management	3
_____	_____	BUED 210 (Word Processing) OR COSC 123 (Excel)	3
Total Credits			12

#### Fourth Trimester

BADM	242	Principles of Marketing	3
BFIN	211	Principles of Finance	3
ECON	200	Macroeconomics	3
MATH	120	Intermediate Algebra	3
Total Credits			12

#### Fifth Trimester

ENGL	219	Technical Writing	3
ECON	201	Microeconomics	3
SPCH	130	Public Speaking	3
_____	_____	BADM 280 (Cooperative Education) OR Elective (Business Course)	3
Total Credits			12

**TOTAL CREDIT HOURS REQUIRED** **63**

## Business Administration

### Associate of Science Degree

The Associate of Science degree in Business Administration is a program of study designed to meet the educational needs of those students who wish to fulfill the lower division requirements for transfer to four-year colleges and universities. Courses in the A.S. degree program are transferable to other two and four-year institutions of higher education in New Mexico, and appear on the New Mexico Statewide Articulation Matrix. Students must work closely with their transfer institutions and their advisors to assure the best transitions to four-year schools.

#### Mission Statement

The Business Administration Program will provide training and education to students to enable them to compete and qualify for employment in the business administration field; and to produce well trained and competent

professionals to provide services to private and public entities. Graduates are prepared to continue working toward completion of a Bachelors Degree in Business Administration.

<b>Goals</b>
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- Design all program of study to meet the educational needs of those students who wish to fulfill the lower division requirements for transfer to four-year colleges and universities.
- Provide graduates with the skills, knowledge, and experience necessary to succeed in a four-year degree granting institution.
- Prepares graduates with the managerial skills necessary to operate a business.

**Business Administration Associate of Science Degree Outcomes:**

- Graduates will successfully transfer business courses to four-year institutions.
- Graduates will demonstrate basic business concepts and principles.
- Graduates will demonstrate the business skills necessary to acquire entry-level positions in business/marketing.
- Graduates will demonstrate that they are academically prepared to succeed in a four-year program.
- Graduates will perform and be technically proficient in the technology required business and industry.
- Graduates will benefit from programmatic networking and advisory committee contacts for employment.

**BUSINESS ADMINISTRATION**

**Associate of Science Degree (CIP: 52.0101D)**

(Transfer degree program: Business Administration or Business Administration with Tribal Emphasis)

**First Trimester**

BADM	114	Introduction to Business	3
COSC	107	Computer Literacy	3
ECON	200	Macroeconomics	3
ENGL	101	Composition	3
Total Credits			12

**Second Trimester**

BADM	130	Principles of Management	3
BADM	240	Business Law	3
ENGL	219	Technical Writing	3
SPCH	130	Public Speaking	3
_____	_____	Humanities and Fine Arts	3
Total Credits			15

**Third Trimester**

ACCT	201	College Accounting I	3
MATH	121	College Algebra	3
PSYC	105	Introduction to Psychology	3
_____	_____	Humanities and Fine Arts	3
Total Credits			12

**Fourth Trimester**

ACCT	202	College Accounting II	3
BADM	242	Principles of Marketing	3
MATH	145	Statistics	3
_____	_____	Laboratory Sciences/with Lab	4
Total Credits			13

**Fifth Trimester**

ECON	201	Microeconomics	3
_____	_____	Laboratory Sciences/with Lab	4
_____	_____	Humanities and Fine Arts	3
_____	_____	Social Behavioral Science	3
Total Credits			13

<b>TOTAL CREDIT HOURS REQUIRED</b>	<b>65</b>
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### **Tribal Emphasis**

The Tribal Emphasis Program was created jointly by SIPI and New Mexico State University (NMSU). Its purpose is to prepare students to enter positions of managerial responsibility in tribal enterprises. Students would take the tribal courses listed below in place of BADM 130, BADM 240, BADM 242, ECON 201.

#### **Tribal Emphasis Courses**

BADM	250	Tribal Leadership	3
BADM	251	Tribal Management	3
BADM	252	Tribal Law	3
BADM	253	Tribal Resources and Economic Development	3

Upon completing these courses students will be able to transfer credits earned to NMSU, where they may complete a Bachelor of Business Administration degree in General Business, with an option in tribal management.

## **Computer Science Information Systems**

### **Associate of Science Degree**

The Associate of Science degree in Computer Science Information Systems is a program of study designed to meet the educational needs of those students who wish to fulfill the lower division requirements for transfer to four-year colleges and universities. It provides general education requirements and basic computer core courses. Courses in the AS degree program are transferable to other two-and-four year institutions of higher education in New Mexico and are on the New Mexico Statewide Articulation Matrix. Students must work closely with their transfer institutions and their advisors to assure the best transitions to four-year schools.

#### **Mission Statement**

The Computer Science Information Systems program will provide training and education to students to enable them to compete and qualify for employment in the Computer Science field, and will produce well trained and competent professionals to provide services to private and public entities. Graduates are prepared to continue working toward completion of a Bachelors Degree in Computer Science.

#### **Goals**

The Computer Science Information Systems program provides students with appropriate academic knowledge and skills necessary to:

- Become productive, independent, and responsible employees in the workforce.
- Articulates program courses with other post-secondary business schools and programs.
- Provides students with the skills, knowledge, and experience needed to succeed in four-year degree granting institutions.
- Provides students with the entry-level skills necessary to gain employment.

#### **Computer Science Information Systems Associate of Science Degree Outcomes:**

- Graduates will successfully transfer to four-year institutions.
- Students will demonstrate advance computer software applications, concepts and principles.
- Students will demonstrate programming concepts and principles.
- Graduates will demonstrate the business skills necessary to acquire entry-level positions in a computer environment.
- Graduates will demonstrate that they are academically prepared to succeed in four-year degree programs.
- Graduates will perform and be technically proficient in the technology required of business and industry.
- Graduates will benefit from programmatic networking and advisory by committee contacts for employment.

## COMPUTER SCIENCE INFORMATION SYSTEMS

### Associate of Science Degree (CIP: 52.1299D)

(Transfer degree program)

#### First Trimester

COSC	107	Computer Literacy	3
ECON	200	Macroeconomics	3
ENGL	101	Composition	3
MATH	121	College Algebra	3
Total Credits			12

#### Second Trimester

BADM	240	Business Law	3
COSC	121	Introduction to Programming	3
ENGL	102	Critical Reading and Writing	3
MATH	145	Statistics	3
_____	_____	Humanities and Fine Arts	3
Total Credits			15

#### Third Trimester

ACCT	201	College Accounting I	3
PSYC	105	Introduction to Psychology	3
SPCH	130	Public Speaking	3
_____	_____	Humanities and Fine Arts	3
Total Credits			12

#### Fourth Trimester

ACCT	202	College Accounting II	3
COSC	185	Database Management Systems	3
MATH	_____	MATH 162 (Calculus) OR MATH 180 (Business Calculus)	3
_____	_____	Laboratory Sciences with Lab	4
Total Credits			13

#### Fifth Trimester

ECON	201	Microeconomics	3
_____	_____	Laboratory Sciences with Lab	4
_____	_____	Humanities and Fine Arts	3
_____	_____	Social/Behavioral Sciences	3
Total Credits			13

**TOTAL CREDIT HOURS REQUIRED**

**65**

## Office Information Applications

### Certificate

The Certificate program in Office Information Applications is a program of study designed to prepare students for entry-level skills in Office Information Applications. For students who wish to continue their education and pursue an AAS in Office Information Application, all credit hours from the Certificate program will be applied to the Office Information Applications AAS degree program of study.

#### Mission Statement

The Office Information Applications Program will provide training and education to students to enable them to compete and qualify for employment using entry-level skills in software, web design, and other Information Technology applications and will produce well trained and competent professionals to provide services to private and public entities.

#### Goals

- The program continues to provide graduates with the entry-level skills necessary to gain employment and prepares graduates with office and IT skills necessary to work in a business.

- The program continues to develop courses that articulate with other post-secondary schools and programs so as to provide graduates with the skills, knowledge, and experience needed to succeed in a four-year degree granting institution.

**Office Information Applications Certificate Outcomes:**

- Graduates will demonstrate advanced computer software application concepts and principles.
- Graduates will demonstrate programming concepts and principles.
- Graduates will demonstrate the computer skills necessary to acquire entry-level positions in a computer environment.
- Graduates will perform and be technically proficient in computer software required in the computer industry.
- Graduates will satisfy the needs of employers based on the education and preparation received.
- Graduates will benefit from programmatic networking and advisory committee contacts for employment.

**OFFICE INFORMATION APPLICATIONS  
Certificate (CIP: 52.0407B)**

<b>First Trimester</b>			
BUED	125	Business Math	3
COSC	107	Computer Literacy	3
ENGL	101	Composition	3
Total Credits			9
<b>Second Trimester</b>			
ACCT	101	Fundamentals of Accounting	3
BUED	210	Word Processing	3
COSC	124	Access	3
SPCH	130	Public Speaking	3
Total Credits			12
<b>Third Trimester</b>			
BUED	130	Records Management	3
BUED	215	Multimedia in Business	3
COSC	123	Excel	3
_____	_____	COSC 280 (Cooperative Education) OR Elective (Business Course)	3
Total Credits			12
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>33</b>

**Office Information Applications**

**Associate of Applied Science Degree**

The Associate of Applied Science degree in Office Information Applications is a program of study designed to meet the educational needs of students who want to prepare for job placement upon graduation. The program provides the general and technical training necessary to gain and maintain employment.

According to the U.S. Bureau of Labor Statistics workers with computer software skills are in high demand as Computer Operators, Customer Service Representative, Data Entry and Information Processing, Desktop Publishing, Medical Records and Health Information Technicians.

**Mission Statement**

The Office Information Applications Program will provide training and education to students to enable them to compete and qualify for employment using entry-level skills in software, web design, and other IT applications and will produce well-trained and competent professionals to provide services to private and public entities.

The degree program is a two-year curriculum (five-trimesters), which includes general education courses in behavior sciences, communications, humanities, mathematics, and computer programming. The degree program provides graduates with the entry-level skills necessary to gain employment.

## Goals

- The Office Information Applications program prepares graduates with the appropriate academic knowledge and skills necessary to become productive, independent, and responsible employees in the workforce.
- The program continues to develop courses that articulate with other post-secondary schools and programs so as to provide graduates with the skills, knowledge, and experience needed to succeed in a four-year degree granting institution.
- The program continues to provide graduates with the entry-level skills necessary to gain employment and prepares graduates with office and IT skills necessary to work in a business.

### Office Information Applications Associate of Applied Science Degree Outcomes:

- Graduates will demonstrate advanced computer software application concepts and principles.
- Graduates will demonstrate programming concepts and principles.
- Graduates will demonstrate the computer skills necessary to acquire entry-level positions in a computer environment.
- Graduates will perform and be technically proficient in computer software required in the computer industry.
- Graduates will satisfy the needs of employers based on the education and preparation received.
- Graduates will benefit from programmatic networking and advisory committee contacts for employment.

### OFFICE INFORMATION APPLICATIONS Associate of Applied Science Degree (CIP: 52.0407D)

#### First Trimester

BADM	114	Introduction to Business	3
BUED	125	Business Math	3
COSC	107	Computer Literacy	3
ENGL	101	Composition	3
Total Credits			12

#### Second Trimester

ACCT	101	Fundamentals of Accounting	3
BUED	210	Word Processing	3
COSC	124	Access	3
SPCH	130	Public Speaking	3
Total Credits			12

#### Third Trimester

BUED	130	Records Management	3
BUED	215	Multimedia in Business	3
COSC	123	Excel	3
_____	_____	Elective (Business Course)	3
Total Credits			12

#### Fourth Trimester

COSC	112	Web Design	3
COSC	121	Introduction to Programming	3
COSC	211	PowerPoint Presentations	3
ENGL	219	Technical Writing	3
MATH	120	Intermediate Algebra	3
Total Credits			15

#### Fifth Trimester

ACCT	235	Microcomputer Accounting for Small Business	3
PSYC	105	Introduction to Psychology	3
COSC	_____	Select one programming course: COSC 119 or COSC 116	3
_____	_____	COSC 280 (Cooperative Education) OR Elective (Business Course)	3
Total Credits			12

**TOTAL CREDIT HOURS REQUIRED**

**63**

## Business Administration – Tribal Administration

### Associate of Applied Science Degree

The Associate of Applied Science (AAS) degree program in Business Administration-Tribal Administration provides courses in general education, business and tribal administration to meet the diverse needs of tribal communities. Specialty areas of concentration or a combination of courses from different program areas allows students flexibility in areas of interest to meet their individual needs.

#### Mission Statement

The Associate of Applied Science Degree program in Business Administration-Tribal Administration creates access to higher education critically important to tribes as they work to maintain economic viability, cultural integrity, self-sufficiency, and self-determination. The program offers students a choice of specialty areas to become program managers, economic development specialists, accountants, or tribal leaders.

#### Goals

- Prepares graduates with the appropriate academic knowledge and skills necessary to become productive, independent, and responsible employees in tribal communities.
- Articulates program courses with other post-secondary business schools and programs.
- Provides graduates with the skills, knowledge, and experience needed to succeed in four-year degree granting institutions.
- Provides entry-level skills needed to gain employment; and prepares graduates with tribal management skills necessary to operate a business.

#### Tribal Administration Associate of Applied Science Degree Outcomes:

- Graduates will demonstrate basic business and tribal concepts and principles.
- Graduates will demonstrate the business and tribal skills necessary to acquire entry-level positions in business or tribal communities.
- Graduates will perform and be technically proficient in the technology required by business, industry, and tribal communities.
- Graduates will satisfy the needs of employers based on the education and preparation received.
- Graduates will be able to benefit from programmatic networking and advisory committee contacts for employment.

### BUSINESS ADMINISTRATION-TRIBAL ADMINISTRATION EMPHASIS

#### Associate of Applied Science Degree (CIP: 52.0201T)

##### First Trimester

BADM	114	Introduction to Business	3
BADM	251	Tribal Management	3
BADM	252	Tribal Law	3
ENGL	101	Composition	3
Total Credits			12

##### Second Trimester

COSC	107	Computer Literacy	3
BADM	240	Business Law	3
ECON	_____	ECON 200 (Macroeconomics) OR ECON 201 (Microeconomics)	3
ENGL	219	Technical Writing	3
Total Credits			12

##### Third Trimester

ACCT	_____	ACCT 101 (Fundamentals of Accounting) OR ACCT 201 (College Accounting I)	3
BADM	118	Small Business Management	3
MATH	120	Intermediate Algebra	3
PSYC	105	Introduction to Psychology	3
Total Credits			12

<b>Fourth Trimester</b>			
BADM	250	Tribal Leadership	3
SPCH	130	Public Speaking	3
_____	_____	Specialty Areas of Concentration	3
_____	_____	Specialty Areas of Concentration	3
Total Credits			12
<b>Fifth Trimester</b>			
ACCT	250	Tribal Accounting	3
BADM	253	Tribal Resource & Economic Development	3
_____	_____	BADM280 (Tribal Leadership Co-op) OR Elective (Business Course)	3
_____	_____	Specialty Areas of Concentration	3
_____	_____	Specialty Areas of Concentration	3
Total Credits			15
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>63</b>

Students may select a specialty area of concentration or combination of courses such as:

- Agriculture, Business Administration, Natural Resources
- Small Business, Management
- Environmental Science
- Accounting
- Renewable Technology, Networking
- Geospatial Information Technologies
- Office Information Applications

## Opportunities

- Provides access to higher education and tools for managing tribal governments and tribal enterprises.
- Provides culturally relevant curriculum.
- Promotes increased graduation of Native Americans in the area of Tribal Administration.
- Provides opportunities for Native American students nationwide to network with other students and work together to become successful.

# ADVANCED TECHNICAL EDUCATION

## Information

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## Mission Statement

The mission of the Advanced Technical Education (ATE) Department is to provide students with a comprehensive and up-to-date technical and scientific education in their program areas. This education is based on a rigorous general education component that allows our graduates to transfer to four-year baccalaureate programs, and/or enter the workforce. The ATE Program supports students through their crucial first two years of college, providing them with both the necessary academics and the student success skills they will need to complete a four-year degree.

Students who transfer from SIPI to a four-year school clearly demonstrate the success of this strategy. Graduates are also well prepared to directly enter the competitive 21st century workforce, whether on or off the reservation. Many SIPI graduates return home to seek employment on their own tribal lands, where they constitute a workforce prepared for a future with changing technologies, economies, and demographics. The department utilizes external advisory committees for each program. The committees advise faculty and administration on matters such as advancements in technology, current private industry requirements, career possibilities within federal and state agencies, and the personnel needs of tribal government entities.

**ATE's Science and Technology Building.** As of September 2003, the ATE science programs are housed in a 72,540 square-foot building, equipped with excellent classrooms and laboratories for Biology, Environmental Science, Chemistry, Engineering and Physics. The building also houses state of the art labs for Electronics, Manufacturing Technology, Instrumentation and Control Technology, Networking and Engineering. Other features include a 500-seat auditorium, two conference rooms, and administration and faculty offices. Two distance-learning classrooms with video conferencing capability help SIPI expand course offerings to tribes around the country. Two computer labs, one dedicated to Geographic Information Systems and one for general computer applications, are available to students.

## Program Areas

The Department of Advanced Technical Education consists of seventeen technology programs that are designed to lead toward either a certificate or an associate degree.

Two degree programs in Applied Vocational Technologies are:

- **Vision Care Technology**, A.A.S. in Vision Care Technology or Certificate in Optical Laboratory Technology
- **Culinary Arts**, A.A.S. in Culinary Arts, A.A.S. in Hospitality Services Management, or Certificate in Institutional Cooking and Baking

The five degree programs in Advanced Technical Education are:

- **Pre-Engineering**, A.S. in Pre-Engineering or Certificate in Computer Aided Drafting and Design
- **Electronics Technology**, A.A.S. in Instrumentation and Control Technology, A.A.S. in Computer Integrated Manufacturing Technology.
- **Geospatial Information Technology**, A.A.S. or Certificate in Geospatial Information Technology.
- **Natural Resources Management**, A.A.S. with emphases in Natural Resource Management of forests, range and wildlife, Agribusiness, Crop and Soil Science, or Environmental Science
- **Network Management**, A.A.S. or Certificate in Network Management

## Vision Care Technology Program

The Vision Care Technologist, known as the Ophthalmic Dispenser or the Optician, provides vision care correction to the patient. The optician engages in the analyzing of a doctor's eye correction prescription. The optician interprets prescriptions, measures, adapts, selects and fits eyeglasses or contact lenses for the correction of visual and ocular anomalies.

The Vision Care Technology Program provides students with the special knowledge and skills necessary to the practice of optician. The Vision Care Technology Program combines knowledge of theory and clinical procedures with skills and the ability to work well with patients in the fitting and adapting of ophthalmic lenses, contact lenses, and devices that aid in providing comfortable and effective vision.

The Vision Care Technology Program offers the only nationally accredited opticianry curriculum within the state of New Mexico. The program is one of the finest and best equipped optical teaching facilities in the nation. The A.A.S. degree in Vision Care Technology prepares students for successful careers in the expanding and lucrative field of Vision Care.

Graduates of the program may become proprietors of ophthalmic dispensing firms or may secure positions as ophthalmic dispensers or contact lens fitters in professional offices of ophthalmology, optometry or in a large corporate facility. Many of our graduates pursue additional degrees in general science, health science, economics, business or education.

The Associate Degree prepares students for national certification. Graduates of the Associate Degree program are eligible to take national examinations administered by the ABO (American Board of Opticianry) and NCLE (National Contact Lens Examination) examinations.

The Vision Care Technology Program also offers a Certificate of Completion in Optical Laboratory Technology. Students receive theoretical and laboratory experiences in optics, enabling them to explore the practical and laboratory experiences in the optical technology profession.

### Goals

The primary goal of the Vision Care Technology Programs is to educate all individuals for technical competencies and capabilities to enable them to compete and qualify for employment in the optical and ophthalmic industry. The program also strives to eliminate hazardous waste and to reduce non-hazardous waste to minimum levels where economically and technically practical, and to be in full compliance with all federal and state environmental regulations.

### Accreditation

The Commission on Opticianry Accreditation (COA) accredits the Vision Care Technology Programs. The COA exists to assess and verify educational quality in optical programs. The web site is <http://www.coaccreditation.com/>.

## Optical Laboratory Technology

### Certificate

The Certificate in Optical Laboratory Technology is a course of study over three trimesters designed to train students to work in lab areas of optical establishments as technicians fabricating eyewear to ophthalmic lens prescriptions.

Students learn how to lay out, generate and polish optical lenses to prescription specifications. Students also learn how to edge and mount lenses into various types of frames and to apply various lens enhancements such as lens tints or coatings. The lab technician student is required to take all advanced level courses in lens fabrication. Lab technicians are generally employed by wholesale facilities. The technician generally works independently as a member of a technical team.

Some technicians are employed by contact lens manufacturing plants as contact lens lathe operators. Lathe operators use jeweler's lathes to cut the inside or outside curvature in the contact lens blanks. Skills learned within the program qualify graduates for entry-level employment.

## Goals

The Optical Laboratory Technology program will educate students in technical competencies and skills to enable them to compete and qualify for employment as optical laboratory technicians; gain skills and confidence in use of optical instruments, machinery, material, procedures and techniques to optical industry standards. The program also strives to eliminate hazardous waste and to reduce non-hazardous waste to minimum levels where economically and technically practical, and to be in full compliance with all Federal and State environmental regulations.

### Optical Laboratory Technology Certificate Outcomes:

- Students will be able to layout, generate and polish optical lenses to prescription specifications.
- Students will be able to verify, spot, layout, edge, and mount lenses into various types of frames and to apply various tints and coatings
- Students will be able to maintain and repair various optical instruments and equipment; plan and establish a routine maintenance schedule.
- Students will be able to establish and maintain production schedules, inventory control, and quality control compliance with OSHA and environmental regulations and relationships with eye care professionals relating to laboratory management.

## OPTICAL LABORATORY TECHNOLOGY

### Certificate (CIP: 51.1802)

#### First Trimester

COSC	107	Computer Literacy	3
OPTI	101	Introduction to Optics w/Lab	5
OPTI	105A	Ophthalmic Finishing & Surfacing I w/Lab	5
Total Credits			13

#### Second Trimester

ENGL	101	Composition	3
HLTH	164	First Aid and Safety	2
OPTI	205	Ophthalmic Finishing & Surfacing II w/Lab	5
OPTI	112	Opticianry Environment & Safety Issues	2
Total Credits			12

#### Third Trimester

OPTI	225	Management for Opticians	3
OPTI	240	Optical Laboratory Technology Internship	3
SPCH	130	Public Speaking	3
Total Credits			9
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>34</b>

## Vision Care Technology

### Associate of Applied Sciences Degree

## Mission Statement

The Vision Care Technology Program will provide training and education to students to enable them to compete and qualify for employment in the Ophthalmic/Opticianry/Optical field; and to produce well-trained, competent professionals to provide professional services to the public.

## Goals

The Vision Care Technology curriculum will train individuals for technical competencies and skills that will enable them to compete and qualify for employment as Ophthalmic Dispensers; become certified by the American Board of Opticianry (ABO) and the National Contact Lens Examiner (NCLE); and become state licensed where applicable

and required. The program also strives to eliminate hazardous waste and to reduce non-hazardous waste to minimum levels where economically and technically practical, and to be in full compliance with all Federal and State environmental regulations.

## Associate of Applied Science Degree

The Vision Care Technology curriculum educates students to become optician/ophthalmic dispensers. A dispenser accurately interprets and evaluates the consumer's prescription for the fitting of eyeglasses and contact lenses. This involves selecting the correct ophthalmic lenses, frames and lens enhancements to fit each individual's needs and wants. Students learn a variety of dispensing skills; including product knowledge, fashion, optical eyewear fabrication, salesmanship, customer relations and retail optical management. Retail optical stores usually employ dispensers in shopping malls or retail outlets. Dispensers generally work independently with consumers.

The degree program is a two-year curriculum (five- trimesters) that includes General Education courses in Behavior Sciences, Communications, Humanities, Mathematics, and Science. The degree program, in addition to providing for transferability to advanced study, also provides an excellent foundation for students desiring to become optical managers, entrepreneurs. The program also provides a foundation for students who want to continue their education and become doctors of Optometry.

### Vision Care Technology Associate of Applied Science Degree Outcomes:

- Students will be able to use the knowledge of the human visual system, theory of refraction, optical theories and mathematics to interpret prescriptions written by licensed practitioners to determine the frame and lens combinations that would be beneficial to the consumer.
- Students will be able to demonstrate the ability to use optical instruments, equipment, materials, procedures and techniques to industry standards in the practice of proper lens selection and design, insertion, removal, and care of contact lenses while adhering to OSHA and environmental regulations.
- Students will be able to establish and maintain good working relationships with doctors, managers, supervisors, and other opticians and to employ a good recordkeeping system for office supply control, business finance and operating expenses, and inventory needs.
- Students will be able to demonstrate the ability to use communications skills, both oral and written, which include interpreting, recording, instructing, designing, verifying, and transmitting facts or concepts and the ability to recognize and analyze consumer needs and wants.

## VISION CARE TECHNOLOGY

### Associate of Applied Science (CIP: 51.1801V)

#### First Trimester

COSC	107	Computer Literacy	3
ENGL	101	Composition	3
HLTH	164	First Aid & Safety	2
OPTI	101	Introduction To Optics w/Lab	5
OPTI	112	Opticianry Environmental & Safety Issues	2
Total Credits			15

#### Second Trimester

MATH	120	Intermediate Algebra	3
OPTI	105A	Ophthalmic Finishing & Surfacing I W/Lab	5
OPTI	110A	Ophthalmic Dispensing I w/Lab	4
OPTI	115	Ophthalmic Sales	2
Total Credits			14

#### Third Trimester

OPTI	205A	Ophthalmic Finishing & Surfacing II w/ Lab	5
OPTI	220A	Ophthalmic Dispensing II w/Lab	4
OPTI	225	Management for Opticians	3
OPTI	215	Anatomy & Physiology of the Eye	3
Total Credits			15

<b>Fourth Trimester</b>			
OPTI	235	Contact Lenses W/Lab	4
ENGL	_____	ENGL102 (Critical Reading & Writing) OR ENGL219 (Technical Writing)	3
_____	_____	Choose one class: PHYS102, BIOL121/L, BIOL123/L, CHEM111/L	3
_____	_____	Social Behavioral Science	3
Total Credits			13
<b>Fifth Trimester</b>			
OPTI	236	Introduction to Refraction W/Lab	4
OPTI	245	Ophthalmic Dispensing Internship	3
BADM	_____	Choose one class: BADM114, 118, 130, 135, 242	3
_____	_____	Humanities and fine Arts	3
Total Credits			13
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>70</b>

## Culinary Arts Program

An Associate of Applied Science Degree covers commercial food preparation, baking, and food service management and can lead to higher education. A three-trimester Certificate program concentrates on immediate employment in commercial food preparation and baking, providing students with training in the skills required to handle all types of baking in a restaurant or institutional setting.

### Mission Statement

The Culinary Arts Program will provide training and education so that students may be enabled to compete and qualify for employment in the Hospitality and Food Service Industry; so therefore, through education should produce a supply of well-trained, competent, and professional prospective employees for the world of work.

### Goals

The primary goal of the Culinary Arts Program is to educate all individuals for technical and vocational competences and capabilities to enable them to compete, qualify, and secure employment in the Hospitality and Food Service industries.

## Culinary Arts Certificate

The Certificate of Completion program in Institutional Cooking and Baking is a course of study over three trimesters designed to prepare students for employment in the food service industry at a functional level such as a cook's helper, host/hostess, cashier, waiter/waitress, or short-over cook.

### Goals

The Institutional Cooking and Baking program will provide students with comprehensive theoretical foundation in sanitation, safety, and food production bolstered by hands-on laboratory and internship experience to give them a thorough understanding of the responsibilities of a food service employee.

#### **Certificate of Completion Culinary Arts Outcome Objectives:**

- Be able to apply the fundamental principles of commercial kitchen operations including safety and sanitation applications; use and care of equipment, tools, utensils, and knives; recipe conversion and use; organization of work; and basic cooking methods.
- Be able to demonstrate fundamental knowledge and skill of bread, cake, pie, pastry, and cookie production.
- Be able to apply sanitation standards and safety procedures regarding food-borne illnesses; safe temperatures; procedures to prevent food-borne illnesses; and local, state, and federal health codes.

## INSTITUTIONAL COOKING AND BAKING

### Certificate (CIP: 12.0505)

#### First Trimester

CULI	101	Culinary Arts I	4
CULI	102L	Culinary Arts I Lab	1
MATH	120	Intermediate Algebra	3
ENGL	101	Composition	3
Total Credits			11

#### Second Trimester

CULI	105	Culinary Arts II	3
CULI	106L	Culinary Arts II Lab	1
CULI	106I	Culinary Arts II Internship	1
HLTH	164	First Aid & safety	2
SPCH	130	Public Speaking	3
Total Credits			10

#### Third Trimester

CULI	201	Culinary Arts III	3
CULI	202L	Culinary Arts III Lab	1
CULI	202I	Culinary Arts III Internship	1
BADM	114	Intro to Business	3
Total Credits			8

**TOTAL CREDIT HOURS REQUIRED** **29**

## Culinary Arts

### Associate of Applied Science

The Associate in Applied Science Degree program in Culinary Arts is a course of study over five (5) trimesters designed for students preparing for entry-level food service management positions or higher education in the field. The degree program is designed to provide students with a broad range of management, business and technical skills applicable to the food service industry. The curriculum emphasizes institutional cooking and baking, food service management, basic supervisory practices, customer relations, sales promotion and marketing, merchandising, and distribution. Students learn to consider human characteristics along with those of raw materials and equipment to produce quality consumable food products and services efficiently.

#### Mission Statement

The Culinary Arts Program will provide training and education so that students may be enabled to compete and qualify for employment in the Food Service Industry through education should produce a supply of well-trained, competent, and professional prospective employees for the world of work.

#### Goals

The Culinary Arts program will provide students with education and training to develop knowledge and skills necessary to produce quality food products provide quality customer service and procedures needed for maintaining a profitable business environment.

#### Associate of Applied Science Outcome Objectives:

- Be able to demonstrate knowledge and skill in menu planning, preparation, and exercise controls in commercial food operations.
- Be able to demonstrate knowledge and skills in buying food, equipment, and supplies for institutional and commercial food service related operations.
- Be able to demonstrate knowledge and skills in handling personnel, financial and general management responsibilities in institutional and commercial service operations.
- Be able to apply nutrition and sanitation principles to food choices that support institutional food operations.

## CULINARY ARTS

### Associate of Applied Science (CIP: 12.0508)

<b>First Trimester</b>			
CULI	101	Culinary Arts I	4
CULI	102L	Culinary Arts I Lab	1
MATH	120	Intermediate Algebra	3
ENGL	101	Composition	3
Total Credits			11
<b>Second Trimester</b>			
CULI	105	Culinary Arts II	3
CULI	106L	Culinary Arts II Lab	1
CULI	106I	Culinary Arts II Internship	1
HLTH	164	First Aid & Safety	2
ENGL	_____	ENGL102 (Critical Reading & Writing) OR ENGL219 (Technical Writing)	3
Total Credits			10
<b>Third Trimester</b>			
CULI	201	Culinary Arts III	3
CULI	202L	Culinary Arts III Lab	1
CULI	202I	Culinary Arts III Internship	1
BADM	114	Introduction to Business	3
PSYC	105	Introduction to Psychology	3
ARTH	101	Introduction to Art	3
Total Credits			14
<b>Fourth Trimester</b>			
BADM	118	Small Business Management	3
BADM	130	Principles of Management	3
SOSC	101	Introduction to Sociology	3
BIOL	123	Biology for Health Sciences	3
BIOL	123L	Biology for Health Sciences Lab	1
Total Credits			13
<b>Fifth Trimester</b>			
BADM	135	Human Relations	3
BADM	240	Business Law	3
ACCT	101	Fundamentals of Accounting	3
COSC	107	Computer Literacy	3
Total Credits			12
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>60</b>

## Hospitality Services Management

### Associate of Applied Science Degree

The Associate in Applied Science Degree program in Hospitality Service Management is a course of study over five (5) trimesters designed for students preparing for entry-level food service management positions or higher education in the field. The degree program is designed to provide students with a broad range of management, business and technical skills applicable to the food service industry. The curriculum emphasizes institutional cooking and baking, food service management, basic supervisory practices, customer relations, sales promotion and marketing, merchandising, and distribution. Students learn to consider human characteristics along with those of raw materials and equipment to produce quality consumable food products and accomplish a one (1) trimester co-op/OJT site on a part-time basis.

#### Mission Statement

The Culinary Arts Program will provide training and education so that students may be enabled to compete and qualify for employment in the Hospitality Industry; so therefore, through education should produce a supply of well-trained, competent, and professional prospective employees for the Hospitality Industry.

## Goals

The Culinary Arts program will provide students with education and training to develop knowledge and skills necessary to produce quality food products provide co-op/OJT site on a part-time basis for one trimester to gain practical experience in the field, and also provide quality customer service and procedures needed for maintaining a profitable business environment.

### Hospitality Services Management Outcome Objectives:

- Be able to apply the fundamental principle of commercial kitchen operations including safety and sanitation applications; use of care of equipment, tools, utensils, and knives; recipe conversion and use; organization of work; and basic cooking methods
- Be able to demonstrate fundamental knowledge and skill of bread, cake, pie, pastry, and cookie production.
- Be able to apply sanitation standards and safety procedures regarding food-borne illnesses; safe temperatures; procedures to prevent food-borne illnesses; and local, state, and federal health codes.
- Be able to demonstrate through actual co-op/OJT practical experience knowledge and skills necessary to produce quality food products in a real world job atmosphere.

### HOSPITALITY SERVICES MANAGEMENT Associate of Applied Science Degree (CIP: 52.0999)

<b>First Trimester</b>			
CULI	101	Culinary Arts I	4
CULI	102L	Culinary Arts I Lab	1
MATH	120	Intermediate Algebra	3
ENGL	101	Composition	3
Total Credits			11
<b>Second Trimester</b>			
CULI	105	Culinary Arts II	3
CULI	106L	Culinary Arts II Lab	1
CULI	106I	Culinary Arts II Internship	1
HLTH	164	First Aid & Safety	2
ENGL	_____	ENGL102 (Critical Reading & Writing) OR ENGL219 (Technical Writing)	3
ARTH	101	Introduction to Art	3
Total Credits			13
<b>Third Trimester</b>			
CULI	201	Culinary Arts III	3
CULI	202L	Culinary Arts III Lab	1
CULI	202I	Culinary Arts III Internship	1
CULI	280	Culinary Arts Co-op	3
BADM	114	Introduction to Business	3
PSYC	105	Introduction to Psychology	3
Total Credits			14
<b>Fourth Trimester</b>			
COSC	107	Computer Literacy	3
BADM	130	Principles of Management	3
SOSC	101	Introduction to Sociology	3
BIOL	123	Biology for Health Sciences	3
BIOL	123L	Biology for Health Sciences Lab	1
Total Credits			13
<b>Fifth Trimester</b>			
BADM	135	Human Relations	3
BADM	240	Business Law	3
BADM	118	Small Business Management	3
Total Credits			9
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>60</b>

# Electronics Technology Program

Electronics Technology consists of a Associate of Applied Science degree in Instrumentation and Control Technology Program and Associate of Applied Science degree in Computer Integrated Manufacturing Technology (CIMT).

## Instrumentation and Control Technology

### Associate of Applied Science Degree

The Associate of Applied Science degree in Instrumentation and Control Technology is a program of study requiring a suggested minimum five trimesters to satisfy the requirements of the program. The technical course requirements of 30 credit hours are theory and lab courses in Basic DC Electronics, Basic AC Electronics, Semiconductor Fundamentals, Digital Electronics, Microprocessors, Electromechanical Control Devices, and Electromechanical Control Systems. Students completing the courses are educated in operational theory, maintenance, troubleshooting, and repair of electronic equipment and communication systems.

The program endeavors to prepare students for entry-level employment in an engineering environment to construct, test, and maintain electronic devices and systems developed by engineers. The program is microprocessor-oriented providing the background necessary to understand and operate robotic and automated equipment. The technical courses can be transferable to four-year institutions toward a Baccalaureate degree in Electronics Engineering Technology. The college level courses are all transferable to a university for those students wishing to pursue advanced degrees.

### Goals

The Instrumentation and Control Technology program strives to prepare students to apply the learned theoretical foundations and skills of their discipline to solve practical electronic circuit and system problems by using existing technology knowledgeably, confidently, and effectively.

### Instrumentation and Control Technology Outcomes:

- Students will be able to communicate analytical theory and verification effectively in both oral and written form.
- Students will be able to use common electronic instrumentation to test and measure electronic circuit functions and phenomenon and to analyze the resulting data.
- Students will be able to apply various AC and DC principles and the fundamental laws of electronic circuits to troubleshooting procedures to identify faults in a variety of non-functional circuits and systems.
- Students will be able to identify microprocessor elements, their operation in a basic CPU-Memory configuration and the relationship between hardware operation and the instruction set.

## INSTRUMENTATION AND CONTROL TECHNOLOGY

### Associate of Applied Science (CIP: 15.0404)

#### First Trimester

MATH	121	College Algebra	3
ELEC	101A	Basic Electronics DC	3
ELEC	101L	Basic Electronics DC Lab	1
ITCT	111	IT Essentials I (A+)	3
ENGL	101	Composition	3
Total Credits			13

#### Second Trimester

MATH	123	Trigonometry	3
ELEC	105A	Basic Electronics AC	3
ELEC	105L	Basic Electronics AC Lab	1
ITCT	112	IT Essentials II (Server+)	3
_____	_____	Social Science or Humanities Elective	3
Total Credits			13

<b>Third Trimester</b>			
COSC	121	Introduction to Programming	3
ELEC	110A	Semiconductor Fundamentals	4
ELEC	110L	Semiconductor Fundamentals Lab	2
ENGL	219	Technical Writing	3
MATH	150	Advanced College Algebra	3
Total Credits			15
<b>Fourth Trimester</b>			
COSC	145	Intro to UNIX/Administration	3
ELEC	201A	Digital Electronics I	2
ELEC	201L	Digital Electronics I Lab	1
ELEC	205A	Microprocessors	3
ELEC	206L	Microprocessors Lab	1
ELEC	118L	Electromechanical Control Devices	3
Total Credits			13
<b>Fifth Trimester</b>			
ELEC	203	Digital Electronics II	2
ELEC	203L	Digital Electronics II Lab	1
ELEC	218L	Electromechanical Control Systems	3
MATH	162	Calculus I	4
PHYS	151	General Physics	3
PHYS	151L	General Physics Lab	1
Total Credits			14
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>68</b>

## **Manufacturing Technology Program**

The technological advances and developments in the world of manufacturing have created a different approach to the study of technologies in general, and in manufacturing in particular. The trends toward automation in every aspect of technological development combine the study of diverse components of instruction to enable the student to acquire a basic knowledge of several subjects in order to compete with their peers. The Manufacturing Technology Program at SIPI offers an Associate of Applied Science degree in Computer Integrated Manufacturing Technology (CIMT).

## **Computer Integrated Manufacturing Technology Associate of Applied Science Degree**

This is a two-year program developed to prepare students for advanced employment in the manufacturing industry. This program is designed to provide instruction in the following subjects: Computer Numerical Controls (CNC), Computer-Aided Design (CAD), Computer-Aided Manufacturing (CAM), and Statistical Process Control (SPC). Metalworking, Robotics, Automated Technologies, and Laser-optics will aid the student in this pursuit. The student will also receive instruction in the theory and operation of Programmable Logic Controllers. Additional topics for the degree include interpretation of engineering prints using Geometric Dimensioning and Tolerancing (GD&T). A well-rounded curriculum in General Education through required and elective courses enables students toward further advancement into the pursuit of a Baccalaureate degree in Mechanical Engineering, Production Engineering, Manufacturing Engineering, or Industrial Engineering.

Possible options for employment include, but are not limited to, Computer Numerical Control (CNC) Programmer, Machinist, Toolmaker or Millwright. Experience with processes required in high technology equipment and CAD, CAM, and CNC are invaluable contributions. The manufacturing industry is increasingly becoming more sophisticated due to the rapidly expanding trend toward automation throughout the nation.

Desirable basic skills as preparation for this program are high school machine shop, sequenced operations, setup, and operation of conventional and machine tool. The prerequisites for this course of study are satisfactory completion of entry-level language and math skills, high school diploma or GED Certificate, and placement test completion.

## Computer Integrated Manufacturing Technology Outcomes:

- Be able to communicate analytical theory and verification effectively in both oral and written form.
- Be able to use common electronic instrumentation to test and measure electronic circuit functions and phenomenon and to analyze the resulting data.
- Be able to apply various AC and DC principles and the fundamental laws of electronic circuits to troubleshooting procedures to identify faults in a variety of non-functional circuits and systems.
- Be able to apply Computer Numerical Control principles to print production and part manufacturing.
- Be able to interpret engineering prints using Geometric Dimensioning and Tolerancing.

## COMPUTER INTEGRATED MANUFACTURING TECHNOLOGY

### Associate of Applied Science Degree (CIP: 15.0613)

#### First Trimester

MATH	121	College Algebra	3
ELEC	101A	Basic Electronics DC	3
ELEC	101L	Basic Electronics DC Lab	1
MT	105	Manufacturing Concepts I	3
ENGL	101	Composition	3
Total Credits			13

#### Second Trimester

MATH	123	Trigonometry	3
ELEC	105A	Basic Electronics AC	3
ELEC	105L	Basic Electronics AC Lab	1
MT	115	Manufacturing Concepts II	3
Total Credits			10

#### Third Trimester

MT	201	AutoCAD and Blueprint Reading for Machine Trades	3
PHYS	151	General Physics	3
PHYS	151L	General Physics Lab	1
ENGL	219	Technical Writing	3
MATH	150	Advanced College Algebra	3
Total Credits			13

#### Fourth Trimester

MT	120L	Manufacturing Processes and Equipment	4
MT	211L	Introduction to Computer Numerical Control	4
ELEC	118L	Electromechanical Control Devices	3
_____	_____	Humanities/Social Science	3
Total Credits			14

#### Fifth Trimester

DDET	281	Statistical Process Control	3
MT	212L	Advanced Computer Numerical Control	4
MT	247	Materials Science and Analysis	3
ELEC	218L	Electromechanical Control Systems	3
Total Credits			13

**TOTAL CREDIT HOURS REQUIRED**

**63**

## Geospatial Information Technology

Geospatial Information Technology (GIT) takes the locations of our lives and maps them, utilizing methods and technology from Geography, Mathematics and Computer Science. SIPI's GIT students learn skills to help them work in a variety of fields. Our students work on exercises ranging from resource management to economic development to homeland security. SIPI's GIT program prepares students to enter the workforce and to be leaders in their communities. The GIT program also offers research internships, where students research a wide range of topics.

SIPI's science and technology building houses state-of-the-art computer facilities, laboratories and classrooms that provide excellent teaching and research facilities, which combined with practical training, make the GIT program unique among community colleges.

If one enjoys science and computers, one can make a significant difference and have a well-paid job by choosing a career in geospatial information technology. One can be a part of efforts to conserve, manage and improve resources such as wildlife, fisheries, forests, rangelands, and water, or go to work for businesses analyzing their target markets, product distribution network, or financial lending patterns. SIPI students in GIT obtain a sound academic foundation and get extensive real-world experience.

GIT graduates are well prepared to transfer their Associate of Applied Science degrees to four-year universities and complete their Bachelor of Science degrees. SIPI has transfer programs in place that help students complete the transition to their four-year school. Career opportunities for students in geospatial fields are excellent. Most graduates are employed by federal land management agencies, local tribes, or local industry.

## **Mission Statement**

The overall objective of Geospatial Information Technology (GIT) Program is to provide technology transfer through the use of short courses, distance education, community based demonstration projects, and the Internet in conjunction with the development of relevant geospatial applications in agriculture on the Southwestern Indian Polytechnic Institute (SIPI) campus for use on Indian reservation lands.

## **Goals**

The geospatial industry has been identified by the Department of Labor as a high-growth industry. The GIT program's diversity of coursework will prepare students to enter the industry at an entry level with a good basic grounding in the principles and practical aspects of geospatial technologies. These technologies are taught as they relate to a wide range of fields, including Natural Resources, Renewable Energy, Land Management, Business, and others in which degree and certificate graduates can find employment.

The GIT program will prepare the student with a desire to further their education in Geo-spatial Information Systems, GIS, or one of the many related fields, at a four-year university.

## **Associate of Applied Science Degree and Certificate Program**

The Geospatial Information Technology (GIT) Program offers an Associate of Applied Science degree and a Certificate in GIT. The Associate of Applied Science degree in GIT is a course of study over five trimesters designed for students who want to enter the fast-growing field of geospatial information technology. This program prepares students for a career in GIT by learning the processes used in data capture, editing, and analysis. Students take a variety of classes including GIS/GPS, Photogrammetry and Remote Sensing. The graduates are prepared to enter into either entry-level technical positions or four-year institutions for further education.

### **Geospatial Information Technology Certificate Outcomes:**

- Students will have an understanding of the principles of mapping and cartography and be able to apply that to map design, production and interpretation.
- Students will have knowledge of the history and development of GIS, GPS and remote sensing technologies and understand the diversity of applications that can be addressed through the utilization of these technologies.
- Students will be familiar with GIS and GPS software, data formats, data collection, equipment, concepts and their application.
- Students will be able to describe the importance of GIT in various environments, understand GIT terminology and explain characteristics and components of GIT.
- Students will have an understanding of various GIT analytical components and be able to put this into action with various projects in several disciplines including Natural Resources, Environmental Sciences, Business, Renewable Energy and governmental management issues.

## GEOSPATIAL INFORMATION TECHNOLOGY

### Certificate (CIP: 45.0702B)

#### First Trimester

ENGL	101	Composition	3
GIT	101	Digital Cartography	3
COSC	107	Computer Literacy	3
GIT	111	Introduction to GIS/GPS Technology	3
Total Credits			12

#### Second Trimester

COSC	—	COSC185 (Database Management Systems) OR COSC121 (Introduction to Programming)	3
MATH	120	Intermediate Algebra	3
GIT	121	Advanced GIS/GPS Technology	3
GIT	201	Principles and Theory of GIS/GPS Applied	3
Total Credits			12

#### Third Trimester

GIT	202	Photogrammetry & Mapping	3
GIT	203	Remote Sensing	3
GIT	280	Practicum/Internship	3
Total Credits			9

#### **TOTAL CREDIT HOURS REQUIRED**

**33**

#### **Geospatial Information Technology Degree Outcomes:**

- Students will have an understanding of the principles of mapping and cartography and be able to apply those to map design, production and interpretation.
- Students will have knowledge of the history and development of GIS, GPS and remote sensing technologies and understand the diversity of applications that can be addressed through the utilization of these technologies.
- Students will be familiar with GIS and GPS software, data formats, data collection, equipment, concepts and their application.
- Students will be able to describe the importance of GIT in various environments, understand GIT terminology and explain characteristics and components of GIT.
- Students will have an understanding of various GIT analytical components and be able to put this into action with various projects in several disciplines including Natural Resources, Environmental Sciences, Business, Renewable Energy and governmental management issues.
- Students will have an understanding of the Photogrammetry and Remote Sensing concepts and principles.
- Students will have practical application of real world GIS/GPS/Remote Sensing projects.

## GEOSPATIAL INFORMATION TECHNOLOGY

### Associate of Applied Science Degree (CIP: 45.0702)

#### First Trimester

ENGL	101	Composition	3
GIT	101	Digital Cartography	3
COSC	107	Computer Literacy	3
GIT	111	Introduction to GIS/GPS Technology	3
Total Credits			12

#### Second Trimester

ENGL	102	Critical Reading and Writing	3
GIT	121	Advanced GIS/GPS Technology	3
GIT	201	Principles and Theory of GIS/GPS Applied	3
COSC	121	Introduction to Computer Programming	3
Total Credits			12

<b>Third Trimester</b>			
GIT	202	Photogrammetry & Mapping	3
GIT	203	Remote Sensing	3
GIT	280	Practicum/Internship	3
MATH	121	College Algebra	3
_____	_____	Select from: COSC/ITCT/ENGR courses	3
Total Credits			15
<b>Fourth Trimester</b>			
COSC	185	Data Base Management Systems	3
MATH	_____	MATH 123 (Trigonometry) OR MATH 145 (Statistics)	3
_____	_____	Laboratory Science	4
_____	_____	Humanities/ Social Science	3
Total Credits			13
<b>Fifth Trimester</b>			
GIT	290	Special Topics in GIT	3
_____	_____	Laboratory Science	4
_____	_____	SELECT 2 from: COSC/ITCT/ENGR courses	6
Total Credits			13
<b>TOTAL CREDITS HOURS REQUIRED</b>			<b>65</b>

## Network Management Certificate

The Certificate program in Network Management allows students the option of obtaining the CISCO Certified Network Association (CCNA) certification. For students who wish to continue their education and pursue an AAS in Network Management, all credit hours from the Certificate may be applied to the Network Management AAS degree program of study.

### Network Management Certificate Outcomes:

- Understand end user systems/servers and how they connect to the network/Internet. Be able to identify applications/services that network servers provide. Be able to physically connect the system using appropriate cables and configure for network/Internet access.
- Network topologies and cabling. Must be able to use a network map to cable and connect Layer 2/Layer 3 devices so that end user systems have a network path to other systems. Must be able to use tools to troubleshoot network connectivity problems.
- Building IP networks by configuring Layer 3 devices (routers). Must be able to identify and connect multiple LANs by using WAN technologies. Additionally, must be able to route all traffic properly to ensure network traffic flows without errors. Use commands to verify operation.
- Advanced routing concepts and traffic segmentation. Must be able to configure and use classless routing protocols to enhance network traffic patterns. Must configure switches and routers to create unique VLANs to isolate traffic within the same geographical area. Use commands to verify operation. Document all network configurations and logical/physical design (map).

## NETWORK MANAGEMENT Certificate Program (CIP: 11.1002B)

<b>First Trimester</b>			
COSC	107	Computer Literacy	3
ITCT	111	IT Essentials I (A+)	3
ITCT	151	Network Management/Cisco I	3
MATH	120	Intermediate Algebra	3
Total Credits			12

<b>Second Trimester</b>			
COSC	121	Introduction to Programming	3
ITCT	112	IT Essentials II (Server+)	3
ITCT	152	Network Management/Cisco II	3
_____	_____	COSC/ITCT Elective OR COSC 280 (Cooperative Education)	3
Total Credits			12
<b>Third Trimester</b>			
COSC	145	Introduction to UNIX/Administration	3
ITCT	153	Network Management/Cisco III	3
ENGL	101	Composition	3
Total Credits			9
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>33</b>

## Network Management

### Associate of Applied Science Degree

The Associate of Applied Science degree in Network Management will train students in computer network technologies that will qualify graduates for job opportunities in industry. Both the degree and certificate programs are based on the CISCO Systems Networking Academy Program.

#### Network Management Degree Outcomes:

##### Networking

- Understand end user systems/servers and how they connect to the network/Internet. Be able to identify applications/services that network servers provide. Be able to physically connect the system using appropriate cables and configure the NIC for network/Internet access.
- Network topologies and cabling. Must be able to use a network map to cable and connect Layer 2/Layer 3 devices so that end user systems have a network path to other systems. Must be able to use tools to troubleshoot network connectivity problems.
- Building IP networks by configuring Layer 3 devices (routers). Must be able to identify and connect multiple LANs by using WAN technologies. Additionally, must be able to route all traffic properly to ensure network traffic flows without errors. Use commands to verify operation.
- Advanced routing concepts and traffic segmentation. Must be able to configure and use classless routing protocols to enhance network traffic patterns. Must configure switches and routers to create unique VLANs to isolate traffic within the same geographical area. Use commands to verify operation. Document all network configurations and logical/physical design (map).
- WANs and Network Troubleshooting. Must be able to configure advanced WAN circuits (ISDN, Frame Relay) using simulators. Perform NAT and DHCP configurations on routers to support network operations. Identify and fix unique network problems using a team-oriented, methodical approach. Use commands to verify operation.

##### System Administration

- Plan a computer network to meet a variety of business needs.
- Demonstrate knowledge of how to integrate computer network technologies and services.
- Provide operational support and management for users, applications and equipment in a network.
- Protect network resources using security technologies and disaster planning.
- Employ troubleshooting and monitoring techniques to ensure high availability and optimized performance of a network.

## NETWORK MANAGEMENT

### Associate of Applied Science Degree (CIP: 11.1002D)

<b>First Trimester</b>			
COSC	107	Computer Literacy	3
ITCT	111	IT Essentials I (A+)	3
ITCT	151	Network Management/Cisco I	3
ENGL	101	Composition	3
Total Credits			12

<b>Second Trimester</b>			
COSC	121	Introduction to Programming	3
ITCT	112	IT Essentials II (Server+)	3
ITCT	152	Network Management/Cisco II	3
MATH	120	Intermediate Algebra	3
Total Credits			12
<b>Third Trimester</b>			
COSC	145	Introduction to UNIX/Administration	3
ITCT	153	Network Management/Cisco III	3
MATH	121	College Algebra	3
_____	_____	COSC/ITCT Elective OR COSC 280 (Cooperative Education)	3
Total Credits			12
<b>Fourth Trimester</b>			
ITCT	154	Network Mgmt. CISCO IV	3
ENGL	_____	ENGL102 (Critical Reading & Writing) OR ENGL219 (Technical Writing)	3
_____	_____	Select from (COSC/ELEC/ENGR/ITCT/GIT) courses	3
_____	_____	Select from (COSC/ELEC/ENGR/ITCT/GIT) courses	3
Total Credits			12
<b>Fifth Trimester</b>			
SPCH	130	Public Speaking	3
_____	_____	Select 3 from (COSC/ELEC/ENGR/ITCT/GIT) courses	9
_____	_____	Humanities/Social Science Requirement	3
Total Credits			15
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>63</b>

## Pre-Engineering

### Associate of Applied Science Degree

The Pre-Engineering program offers an Associate of Science degree in Pre-Engineering and a Certificate of Completion in Computer Aided Drafting and Design.

#### Goals

The Pre-Engineering Program provides the Technical, Mathematics, Science, and General Education courses required in the first two (2) years of most university four-year engineering programs. The Associate of Science degree in Pre-Engineering is a program of study requiring a suggested minimum of five (5) trimesters to satisfy the requirements of the program. The technical course requirements of 28 credit hours consist of theory and lab courses designed to prepare students for careers as engineers. A minimum of 18 credit hours of Calculus-based technical electives are chosen by the student in consultation with an Academic Advisor, depending on the student's area of engineering interest. Available electives are applicable to several engineering disciplines including Civil Engineering, Mechanical Engineering, Electrical Engineering, and Computer Engineering. Most courses are fully transferable for those students wishing to pursue four-year baccalaureate degrees at a university. For students requiring additional preparation, an initial enrichment year is also provided.

The Pre-Engineering program strives to equip students with necessary skills in Math, Physics, Chemistry, Computer-aided Design, and lower division engineering courses. These skills prepare students to apply the learned theoretical foundations and skills of their disciplines to solve practical engineering problems by using existing technology knowledgeably, confidently, and effectively.

#### Pre-Engineering Degree Outcomes:

- Communicate analytical theory and problem solutions effectively in both oral and written form.
- Use general mathematical, engineering, and physical concepts.
- Use common engineering instrumentation to test and measure phenomena and then to analyze the resulting data.
- Be prepared to continue in a Bachelor of Science in Engineering or Engineering Technology degree program.

## PRE-ENGINEERING ENRICHMENT YEAR

### Non-Degree (CIP: 24.0199E)

<b>First Trimester</b>			
COSC	107	Computer Literacy	3
ENGR	105	Introduction to Engineering and Design	3
ENGL	101	Composition	4
MATH	121	College Algebra	3
Total Credits			13
<b>Second Trimester</b>			
PHYS	102	Introduction to Physics	3
COSC	121	Introduction to Programming	3
ENGL	219	Technical Writing	4
MATH	123	Trigonometry	3
Total Credits			13
<b>Third Trimester</b>			
CHEM	111	Introduction to Chemistry***	3
CHEM	111L	Introduction to Chemistry Lab***	1
ENGR	101	Introduction to CAD	3
MATH	150	Advanced College Algebra	3
_____	_____	Humanities/Social/Behavioral Sciences Elective	3
Total Credits			13
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>39</b>

## PRE-ENGINEERING

### Associate of Science Degree (CIP: 14.0101)

<b>First Trimester</b>			
ENGR	102	Advanced CAD	3
CHEM	121	General Chemistry I	3
CHEM	121L	General Chemistry I Lab	1
ENGL	101	Composition	3
MATH	162	Calculus I	4
Total Credits			14
<b>Second Trimester</b>			
ENGL	102	Critical Reading and Writing	3
PHYS	160	Engineering Physics I	3
PHYS	160L	Engineering Physics I Lab	1
COSC	195	C Language	3
MATH	163	Calculus II	4
Total Credits			14
<b>Third Trimester</b>			
ENGR	110	Computer Aided Problem Solving	3
ENGR	211	Circuit Analysis I	3
ENGR	211L	Circuit Analysis I Lab	1
ENGL	219	Technical Writing	3
MATH	270	Ordinary Differential Equations	4
Total Credits			14
<b>Fourth Trimester</b>			
ECON	_____	ECON 200 (Macroeconomics) OR ECON 201 (Microeconomics)	3
_____	_____	Select 2 to 3 courses: Technical Elective(s) (See Note Below)	6 to 9
_____	_____	Social/Behavioral Science Elective	3
Total Credits			12 to 15
<b>Fifth Trimester</b>			
_____	_____	Social/Behavioral Science Elective	3
_____	_____	Technical Electives (See Note Below)	9 to 12
Total Credits			12 to 15
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>69</b>

**Note:** Consult Academic Advisor. Select from: ENGR 205, Engineering Statics; ENGR 212/212L, Circuit Analysis II and Lab; ENGR 213/213L, Electronics I and Lab; ENGR 215/215L, Strength of Materials and Lab; ENGR 222/222L, Digital Design I and Lab; ENGR 225, Engineering Dynamics; ENGR 231, Introduction to Fluid Mechanics; ENGR 280, Engineering Internship; or ENGR 295, Thermodynamics (Optional to include 3 credit hours from ENGR 280, Engineering Internship; ENGR 285, Design Project; ENGR 290, Special Topics; ELEC 101A/101L, Basic Electronics DC and Lab, or above; GIT 101, Digital Cartography, or above; ITCT 111, IT Essentials I, or above; RENG 220/220L, Introduction to Renewable Energy and Lab; or RENG 230/230L, Advanced Renewable Energy Systems)

## Computer-Aided Drafting and Design

### Certificate

The Computer-Aided Drafting and Design (CADD) Certificate program is intended to provide students with marketable skills in approximately three (3) trimesters. There is an on-going industry demand for individuals certified in computer aided drafting or design. Industry trends indicate that CADD Certification can lead to well-paying immediate full-time or part-time employment, allowing one to concurrently pursue a two-year or four-year degree. Students can follow the CADD program of study as they are transitioning from the Developmental Education Program into the Pre-Engineering Associate of Science Degree program or into a technical program such as Electronics Technology, Manufacturing Technology, Geospatial Information Technology, or Network Management.

#### Goals

The Computer Aided Drafting and Design Certification Program endeavors to equip students with necessary skills in: Math; English; Technical & Engineering Drawings; Computer Aided Design (CAD); Mechanical, Architectural and Electrical Drawing Applications. These skills prepare students to apply the foundations and skills of this discipline to develop detailed CAD drawings by using existing technology and software knowledgeably, confidently, and effectively.

#### Computer Aided Drafting and Design Outcomes:

- Demonstrate knowledge of the fundamental technology related to CAD.
- Demonstrate the use of conventional Dimensioning, Notation & Sectioning techniques
- Learn and apply: Modern Design Techniques & Computer Numerical Technology
- Collect, organize and manage sheet sets.
- Develop technical and engineering drawings in multi-view and 3D.
- Develop how-to and utilize the e-transmittal CAD resources.
- Demonstrate knowledge of related software to enhance CAD productivity.
- Demonstrate the use of Standardized Data and Information on Technical Fields.
- Develop technical drawings using standard drafting techniques.
- Develop technical drawings using standard CAD software.
- Demonstrate knowledge of various disciplines and related Applications of CAD.

### COMPUTER AIDED DRAFTING AND DESIGN

#### Certificate of Completion (CIP: 15.1302)

##### First Trimester

ENGL	101	Composition	3
ENGR	101	Introduction to CAD	3
ENGR	105	Introduction to Engineering and Design	3
MATH	120	Intermediate Algebra	3
Total Credits			12

<b>Second Trimester</b>			
ENGR	102	Advanced CAD	3
ENGR	103	Engineering Graphics	4
MT	211L	Introduction to Computer Numerical Control	4
MATH	121	College Algebra	3
Total Credits			14
<b>Third Trimester</b>			
COSC	121	Introduction to Programming	3
ENGR	104	Mechanical and Electrical Drawing Applications	4
ENGR	106	Solid Modeling	3
MT	212L	Advanced Computer Numerical Control	4
Total Credits			14
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>40</b>

## Natural Resources Management

### Associate of Applied Science Degree

The Natural Resources Program prepares students to work as agricultural, natural resource, or environmental technicians in a variety of field careers. To ensure student success in an academic and workplace setting, students must have a solid general education foundation in the area of communications, laboratory science, mathematics, computer literacy, and social/behavioral science. In addition to the required General Education requirements, the natural resources curriculum provides individuals with knowledge and skills to enable them to communicate and function as technicians. The program core, elective and supportive courses develop advanced career skills specific to the program specialty. The specialties in Natural Resources include:

- Agribusiness
- Soil and Crop Science
- Natural Resource Management
- Environmental Science

The campus greenhouses, classroom and laboratory facilities, arboretum, orchard, and demonstration sites, combined with the surrounding tribal lands and collaborative program partners, in addition to the Rio Grande Bosque, mountains, rangeland and riparian areas provide natural resource students with practical outdoor field training opportunities.

#### Program Goals

The primary goal of the Natural Resources Program curriculum is to prepare students to enter the field at a technical level with knowledge and skills required to meet current employment standards, while recognizing and supporting academic achievement options through articulation.

## Agribusiness

### Associate of Applied Science Degree

The Associate in Applied Science (AAS) degree in Natural Resources Management, Agribusiness is a six-trimester course of study designed to be responsive to Tribal, public and federal agency needs. The first year of the program involves General Education requirements and program core courses, and the second year is devoted to intensive specialized course work and field labs to meet specific training needs in resource management. The curriculum is designed to train technicians to work with professionals in the field or laboratories, and to provide a strong academic program for students planning to pursue higher degrees.

#### Mission Statement

The Agribusiness Program will provide students with current knowledge and skills to be proficient in technical aspects of agribusiness and produce individuals with scientific base knowledge to perform successfully in tribal, private, non-government organizations (NGO's), state, and federal organizations.

## Goal

The Agribusiness Program will prepare students to enter the agricultural field at the technical level with the knowledge and skills required to meet current employment standards.

## Associate in Applied Science Degree

The Associate in Applied Science (AAS) degree program in Natural Resources Management, Agribusiness is designed to provide students with the skills needed to enter the work force directly. The curriculum includes a required general education component, science foundation, business, accounting, and a supervised internship requirement. To receive the AAS degree, a minimum grade of "C" is required in all coursework.

### Agribusiness Associate of Applied Science Degree Outcomes:

- Students should use basic theory, terminology, and principles to demonstrate their application toward business management goals in agriculture.
- Students should demonstrate competence in oral and written communication skills for successful job performance.
- Students should use a broad range of technological tools to research, document, record, and collect data to maximize work efficiency.
- Students should function independently or work cooperatively as a team, and use problem solving and critical thinking skills to make decisions or resolve conflicts.

## NATURAL RESOURCES MANAGEMENT - AGRIBUSINESS

### Associate of Applied Science Degree (CIP: 03.9999G)

#### First Trimester

ENGL	101	Composition	3
COSC	107	Computer Literacy	3
BIOL	121/L	General Biology w/Lab	4
MATH	121	College Algebra	3
Total Credits			13

#### Second Trimester

ENGL	219	Technical Writing	3
CHEM	121/L	General Chemistry w/Lab	4
GIT	111	Introduction to GIS/GPS Tech.	3
AGTC	104/L	Introduction to Plant Science w/Lab	4
Total Credits			14

#### Third Trimester

MATH	145	Statistics	3
HLTH	164	First Aid & Safety	2
GEOL	101/L	Physical Geology w/Lab	4
_____	_____	NATR200 (General Ecology) OR ENV5101 (Environmental Science I)	3
_____	_____	Agricultural Elective	3
Total Credits			15

#### Fourth Trimester

AGTC	102	Fundamentals of Soils	3
BADM	130	Principles of Management	3
ACCT	201	College Accounting I	3
ECON	201	Microeconomics	3
Total Credits			12

#### Fifth Trimester

ACCT	202	College Accounting II	3
AGTC	124	Agricultural Economics I	3
Total Credits			6

#### Sixth Trimester

AGTC	280	Agricultural Internship	3
Total Credits			3
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>63</b>

# Crop and Soil Science

## Associate of Applied Science Degree

The Associate in Applied Science (AAS) degree in Natural Resources Management, Crop and Soil Science is a six-trimester course of study designed to be responsive to Tribal, public and federal agency needs. The first year of the program involves General Education requirements and program core courses, and the second year is devoted to intensive specialized course work and field labs to meet specific training needs in resource management. The curriculum is designed to train technicians to work with professionals in the field or laboratories, and to provide a strong academic program for students planning to pursue higher degrees.

### Mission Statement

The Crop and Soil Science Program will provide students with current knowledge and skills to be proficient in technical aspects of agronomy and produce individuals with scientific base knowledge to perform successfully in tribal, private, non-government organizations (NGO's), state, and federal organizations.

### Goal

The Crop and Soil Science Program will prepare students to enter the agricultural field at the technical level with the knowledge and skills required to meet current employment standards.

### Associate in Applied Science Degree

The Associate in Applied Science (AAS) degree program in Natural Resources Management, Crop and Soil Science is designed to provide students with the skills needed to enter the work force directly. The curriculum includes a required general education component, science foundation, field techniques, and a supervised internship requirement. To receive the AAS degree, a minimum grade of "C" is required in all coursework.

#### Crop and Soil Science Associate of Applied Science Degree Outcomes:

- Students should use basic theory, terminology, principles, and techniques to demonstrate their application toward sustainable management goals in agriculture.
- Students should demonstrate competence in oral and written communication skills for successful job performance.
- Students should use a broad range of technological tools to research, document, map, measure, record, and collect data to maximize work efficiency.
- Students should function independently or work cooperatively as a team, and use problem solving and critical thinking skills to make decisions or resolve conflicts.

### NATURAL RESOURCES – CROPS AND SOILS SCIENCE

#### Associate of Applied Science Degree (CIP: 03.9999S)

<b>First Trimester</b>			
ENGL	101	Composition	3
COSC	107	Computer Literacy	3
BIOL	121/L	General Biology w/Lab	4
MATH	121	College Algebra	3
Total Credits			13
<b>Second Trimester</b>			
ENGL	219	Technical Writing	3
CHEM	121/L	General Chemistry w/Lab	4
GIT	111	Introduction to GIS/GPS Tech.	3
AGTC	104/L	Introduction to Plant Science w/Lab	4
Total Credits			14
<b>Third Trimester</b>			
NATR	200	General Ecology	3
MATH	145	Statistics	3
GEOL	101/L	Physical Geology w/Lab	4
Total Credits			10

<b>Fourth Trimester</b>			
AGTC	102	Fundamentals of Soils	3
NATR	220/L	Principles of Range Management w/Lab	4
_____	_____	GIT Elective	3
_____	_____	Agricultural Elective	3
Total Credits			13
<b>Fifth Trimester</b>			
NATR	225	Advanced Field Topics in Range Management	3
AGTC	202	Introduction to Soil Science w/Lab	4
_____	_____	Laboratory Science Elective (in Program or Liberal Arts)	4
Total Credits			11
<b>Sixth Trimester</b>			
AGTC	280	Agricultural Internship	3
Total Credits			3
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>61</b>

## Natural Resources Management

### Associate of Applied Science Degree

The Associate in Applied Science (AAS) degree in Natural Resources Management is a six-trimester course of study designed to be responsive to Tribal, public and federal agency needs. The first year of the program involves General Education requirements and program core courses, and the second year is devoted to intensive specialized course work and field labs to meet specific training needs in resource management. The curriculum is designed to train technicians to work with professionals in the field or laboratories, and to provide a strong academic program for students planning to pursue higher degrees. Many program courses are accepted directly or as electives upon transfer to universities within New Mexico, Arizona, and Colorado.

#### Mission Statement

The Natural Resources Management Program will provide students with current knowledge and skills to be proficient in technical aspects of management of resources and produce individuals with scientific base knowledge to perform successfully in tribal, private, non-government organizations (NGO's), state, and federal organizations.

#### Goal

The Natural Resources Management Program will prepare students to enter the natural resources field at the technical level with the knowledge and skills required to meet current employment standards.

#### Associate in Applied Science Degree

The Associate in Applied Science (AAS) degree program in Natural Resources Management is designed to provide students with the skills needed to enter the work force directly. The curriculum includes a required general education component, science foundation, field techniques, and a supervised internship experience. To receive the AAS degree, a minimum grade of "C" is required in all coursework.

#### Natural Resources Management Associate of Applied Science Degree Outcomes:

- Students should use basic theory, terminology, principles, and techniques to demonstrate their application toward sustainable management goals.
- Students should demonstrate competence in oral and written communication skills for successful job performance.
- Students should use a broad range of technological tools to research, document, map, measure, record, and collect data to maximize work efficiency.
- Students should perform field identification and inventory of common southwestern flora and/or fauna.
- Students should function independently or work cooperatively as a team, and use problem solving and critical thinking skills to make decisions or resolve conflicts.

## NATURAL RESOURCES MANAGEMENT

### Associate of Applied Science Degree (CIP: 03.9999R)

<b>First Trimester</b>			
ENGL	101	Composition	3
COSC	107	Computer Literacy	3
BIOL	121/L	General Biology w/Lab	4
MATH	121	College Algebra	3
Total Credits			13
<b>Second Trimester</b>			
ENGL	219	Technical Writing	3
GIT	111	Introduction to GIS/GPS Tech.	3
NATR	200	General Ecology	3
AGTC	104/L	Introduction to Plant Science w/Lab	4
Total Credits			13
<b>Third Trimester</b>			
AGTC	102	Fundamentals of Soils	3
CHEM	121/L	General Chemistry w/Lab	4
MATH	_____	MATH123 (Trigonometry) OR MATH145 (Trigonometry)	3
NATR	_____	NATR221 (Identification of Grasses & Shrubs) OR NATR202 (Trees of North America)	3
Total Credits			13
<b>Fourth Trimester</b>			
GIT	121	Advanced GIS/GPS Technology	3
NATR	_____	Select from: NATR201/L, NATR230/L, NATR230/L	4
_____	_____	Social/Behavioral Science or Humanities Elective	3
_____	_____	Laboratory Science Elective (in Program or Liberal Arts)	4
Total Credits			14
<b>Fifth Trimester</b>			
NATR	_____	Select from: NATR201/L, NATR220/L, NATR230/L	4
NATR	_____	Select from: NATR205, NATR225, NATR235	3
Total Credits			7
<b>Sixth Trimester</b>			
NATR	280	Natural Resources Program Internship	3
Total Credits			3
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>63</b>

## Environmental Science

### Associate of Applied Science Degree

The Associate in Applied Science (AAS) degree in Natural Resources Management, Environmental Science is a six-trimester course of study designed to be responsive to Tribal, public and federal agency needs. The first year of the program involves General Education requirements and program core courses, and the second year is devoted to intensive specialized course work and field labs to meet specific training needs in resource management. The curriculum is designed to train technicians to work with professionals in the field or laboratories, and to provide a strong academic program for students planning to pursue higher degrees.

#### Mission Statement

The Environmental Science Program will provide students with current knowledge and skills to be proficient in technical aspects of environmental science and produce individuals with scientific base knowledge to perform successfully in tribal, private, non-government organizations (NGO's), state, and federal organizations.

#### Goal

The Environmental Science Program will prepare students to enter the environmental science field at the technical level with the knowledge and skills required to meet current employment standards.

## Associate in Applied Science Degree

The Associate in Applied Science (AAS) degree program in Natural Resources Management, Environmental Science is designed to provide students with the skills needed to enter the work force directly. The curriculum includes a required general education component, science foundation, field techniques, and a supervised internship requirement. To receive the AAS degree, a minimum grade of “C” is required in all coursework.

### Environmental Science Associate of Applied Science Degree Outcomes:

- Students should use basic theory, terminology, principles, and techniques to demonstrate their application toward environmental management goals.
- Students should demonstrate competence in oral and written communication skills for successful job performance.
- Students should use a broad range of technological tools to research, document, map, measure, record, collect data, and sample specimen to maximize work efficiency.
- Students should function independently or work cooperatively as a team, and use problem solving and critical thinking skills to make decisions or resolve conflicts.

### NATURAL RESOURCES MANAGEMENT- ENVIRONMENTAL SCIENCE

#### Associate of Applied Science Degree (CIP: 03.9999V)

<b>First Trimester</b>			
ENGL	101	Composition	3
COSC	107	Computer Literacy	3
BIOL	121/L	General Biology w/Lab	4
MATH	121	College Algebra	3
Total Credits			13
<b>Second Trimester</b>			
ENGL	219	Technical Writing	3
GIT	111	Introduction to GIS/GPS Technology	3
ENVS	101	Environmental Science I	3
AGTC	104/L	Introduction to Plant Science w/Lab	4
HLTH	164	First Aid & Safety	2
Total Credits			15
<b>Third Trimester</b>			
CHEM	121/L	General Chemistry w/Lab	4
GEOL	101/L	Physical Geology w/Lab	4
MATH	145	Statistics	3
NATR	200	General Ecology	3
Total Credits			14
<b>Fourth Trimester</b>			
AGTC	102	Fundamentals of Soils	3
ENVS	102	Environmental Regulations	3
ENVS	103	Sampling and Monitoring	3
ENVS	104	Environmental Science II	3
ENVS	109	Environmental Management Practicum	3
Total Credits			15
<b>Fifth Trimester</b>			
ENVS	130	Sustainability	3
ENVS	200	Contemporary Issues in Environmental Science	3
ENVS	210	Tribal Environmental Management and Planning	3
NATR	280	Natural Resources Program Internship	3
Total Credits			12
<b>Sixth Trimester</b>			
ENVS	280	Environmental Internship	3
Total Credits			3
<b>TOTAL CREDIT HOURS REQUIRED</b>			<b>72</b>

# COURSE DESCRIPTIONS

## ACCOUNTING

### **ACCT 101 Fundamentals of Accounting (3)**

*Prerequisites: None*

The basic elements for a service business including the complete accounting cycle and payroll procedures. Students will complete several problems from each chapter for a thorough presentation of each step in the accounting cycle. (Not transferable) Offered-Fall, Spring, and Summer

### **ACCT 201 College Accounting I (3)**

*Prerequisites: ACCT 101*

This course gives the student a solid foundation in generally accepted accounting principles, beginning with basic double entry concepts, classification of accounts, preparation of financial statements, closing entries, payroll, special purpose journals and the measurement and reporting of assets and current liabilities. Emphasis is on the sole proprietorship, including both service and merchandising entities. Offered-Fall, Spring, Summer

### **ACCT 202 College Accounting II (3)**

*Prerequisites: ACCT 201*

Financial accounting for partnerships and corporations, and an introduction to managerial accounting concepts and techniques. Offered-Fall, Spring

### **ACCT 220 Income Tax (3)**

*Prerequisites: ACCT 101*

Federal income taxation of individuals and proprietorships under the Internal Revenue Code and regulation, including accounting periods, methods, income deductions, property transactions, tax credits, and research and planning. Offered-Spring

### **ACCT 235 Microcomputer Accounting for Small Business (3)**

*Prerequisites: ACCT 101*

Upon completion of this course, the student will be able to set up a computerized accounting system for a small business using Peachtree Accounting Software. The purpose of this course is to teach the student how to set up and use an accounting software program to keep financial records of a small business. Offered-Summer

### **ACCT 250 Tribal Accounting (3)**

*Prerequisites: ACCT 101*

This is a compilation of accounting topics specifically selected for students contemplating employment in a tribal accounting office. The course addresses those skills specifically needed to succeed in that environment. Accounting principles as prescribed by the Governmental Accounting Standards Board and the Financial Accounting Standards Boards will be covered. Offered-Spring

### **ACCT 280 Cooperative Education (3)**

*Prerequisites: None*

A supervised cooperative work program coordinated by the student's advisor in an approved accounting or related occupation. Offered-On Demand

## AGRICULTURE

### **AGTC 102 Fundamentals of Soils (3)**

*Prerequisites: Chem111, CHEM 111L*

Introduces formation, classification and mapping, physical, chemical, and biological properties of soils, as related to use, conservation, and plant growth. This course includes lecture and laboratory exercises to correspond with basic soil concepts and principles.

### **AGTC 104 Introduction to Plant Science (3)**

*Prerequisites: ENGL 100, COSC 107; Co-requisites: AGTC 104L*

Students are introduced to plants and plant biology with an emphasis on economically important crops. Basic structure, function, morphology, growth, and propagation of plants will be emphasized.

**AGTC 104L Introduction to Plant Science Lab (1)**

*Prerequisites: ENGL 100, COSC 107; Co-requisites: AGTC 104*

Labs will provide hands-on exercises and observations to reinforce underlying principles and practices in plant science.

**AGTC 124 Agricultural Economics I (3)**

*Prerequisites: ACCT 201, ECON 201*

An introduction to basic economic theory and principles with special emphasis on practical applications in the food and agriculture industry. Topics will investigate consumer behavior, natural resources and the environment, policy, and agricultural issues.

**AGTC 202 Introduction to Soil Science (3)**

*Prerequisites: CHEM 121, CHEM 121L; Co-requisites: AGTC 202L*

Introduction to Soil Science - Comprehensive introduction of soils as a natural resource emphasizing physical, chemical, mineralogical, and biological properties. Course will emphasize soil-plant relationships, soil management in arid environments, and land use practices. Partially duplicates AGTC 102.

**AGTC 202L Introduction to Soil Science Lab(1)**

*Prerequisites: CHEM 121, CHEM 121L; Co-requisites: AGTC 202*

Field and laboratory techniques to coincide with lecture topics, cultural practices in agriculture, and practical applications in soil management are implemented and observed.

**AGTC 280 Agricultural Internship (3)**

*Prerequisites: Second year standing*

This course is designed to give students supervised research or work training experience to support academic and professional development. Students participate in a paid or volunteer position with an approved mentor at a university or agency (Non-governmental organization, public, private, or tribal).

**AGTC 290 Special Topics in Agriculture (1-4)**

*Prerequisites: Second year standing*

This elective course enables the program to address current issues and topics in agriculture.

## ANTHROPOLOGY

**ANTH 101 Introduction to Anthropology (3)**

*Prerequisites: ENGL 100*

Survey of the entire field of anthropology including archeology, biological anthropology, cultural anthropology, ecological anthropology and linguistics.

**ANTH 130 Cultures of the World (3)**

*Prerequisites: ENGL 100*

Basic concepts and methods of cultural anthropology with a focus on selected cultures, ranging from preliterate societies to aspects of urban civilization.

## ART HISTORY

**ARTH 101 Introduction to Art (3)**

*Prerequisites: ENGL 100*

A beginning course in the fundamental concepts of the visual arts; the language of form and the media of artistic expression. Reading and slide lectures supplemented by museum exhibition attendance.

**ARTH 102 Art Foundations (3)**

*Prerequisites: ARTH 101*

Introduces hands-on art experience to include techniques of drawing pencil and charcoal to basic principal of using color.

**ARTH 131 Overview of World Art (3)**

*Prerequisites: ARTH 101*

Through slide presentations and lectures students explore art forms from various world cultural areas, with greater emphasis an American Indian and Pre-Columbian art.

**ARTH 251 Art Traditions of the American Southwest (3)**

*Prerequisites: None*

Survey of major artistic traditions and interrelationships among Southwest cultures from prehistoric to modern times using slide lecture, video films, discussion to review the arts of basketry, pottery, architecture, jewelry, textiles, sculpture, painting and photography in their historical and cultural contexts.

**ASTRONOMY****ASTR 101 Introduction to Astronomy (3)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: ASTR 101L*

This course provides an introduction to Astronomy by studying astronomical objects beginning with the Earth and Moon and proceeding to the farthest known objects in the universe, quasars. The course includes discussion on the birth and death of the universe. A basic understanding of algebra is helpful.

**ASTR 101L Introduction to Astronomy Lab (1)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: ASTR 101*

The Astronomy Lab will include making qualitative observations with the naked eye and telescope, quantitative measurements of the position and motion of heavenly bodies, drawing conclusions based on observations and measurements, utilizing a sky chart/planisphere and explaining the motions of heavenly bodies.

**BIOLOGY****BIOL 111 Biology for Environmental Sciences (3)**

*Prerequisites: ENGL 100; Co-requisites: BIOL 111L*

An introduction to ecology, current environmental problems and control measures. Emphasis on human impact, modern technology, natural ecosystems, social, political, and economic processes. The student will have the knowledge to become environmentally responsible and contribute to the quality of human life. Appropriate laboratory work and demonstrations to implement the fundamental principles and concepts learned in theory.

**BIOL 111L Biology for Environmental Sciences Lab (1)**

*Prerequisites: BIOL 111, ENGL 100; Co-requisites: BIOL 111*

Laboratory, which may require dissection, is an integral and required part of this course.

**BIOL 121 General Biology (3)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: BIOL 121L*

An introduction to the fundamental concepts and principles of general biology. The course will cover basic morphological and physiological aspects of cells, tissues, organs, systems and living organisms. The course will progress from the cellular level to the population level of living organisms.

**BIOL 121L General Biology Lab (1)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: BIOL 121*

Laboratory, which may require dissection, is an integral and required part of this course.

**BIOL 123 Biology for Health Sciences (3)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: BIOL 123L*

Through the investigation and examination of basic structural and functional characteristics of the human body, its cells, tissues, organs, and systems the student will be able to apply basic biological principles to all subject material covered throughout this course. Appropriate laboratory work and demonstrations to implement the fundamental principles and concepts learned in theory.

**BIOL 123L Biology for Health Sciences Lab (1)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: BIOL 123*

Laboratory, which may require dissection, is an integral and required part of this course.

**BIOL 220 General Zoology (3)**

*Prerequisites: ENGL 100, MATH 100, BIOL 121, CHEM 111; Co-requisites: BIOL 220L*

Through systematic investigation of major animal groups, the student will apply structural, physiological, embryological, ecological characteristics, which exist in the field of zoology. The course will cover invertebrate and vertebrate representatives beginning at the microscopic level and advancing to the ecological realm. Offered-Spring

**BIOL 220L General Zoology with Lab (1)**

*Prerequisites: BIOL 121, CHEM 111; Co-requisites: BIOL 220*

Laboratory, which may require dissection, is an integral and required part of this course.

**BIOL 237 Anatomy and Physiology (3)**

*Prerequisites: None*

This course is an advanced study of the structures and functions of the human body. The student will recognize and describe anatomical and physiological processes that occur in the cells, tissues, organs and systems of the human body. This course is designed for students in the fields of physical education, physical therapy, nursing or related pre-professional fields. Laboratory work, which requires dissection, is an essential part of this course.

**BIOL 237L Anatomy and Physiology Lab (1)**

*Prerequisites: BIOL 121 or BIOL 123 with a C grade or better; Co-requisites: BIOL 237*

Laboratory, which may require dissections, which is an integral and required part of this course.

## BUSINESS ADMINISTRATION

**BADM 114 Introduction to Business (3)**

*Prerequisites: None*

A survey course presenting an integrated picture of American business and its operations. Included are topics such as forms of ownership, management, internal organization, production, personnel, labor relations, marketing, finance, insurance, accounting and law. Offered-Fall, Spring, Summer

**BADM 118 Small Business Management (3)**

*Prerequisites: ENGL 100, MATH 100*

The Small Business Management Entrepreneurship course is designed to help students learn what it takes to be an entrepreneur. The structure of the course gives students who are interested in starting their own businesses the opportunity to learn the basics of entrepreneurship by developing a business plan. The course is also helpful for students who desire to learn about small business ownership and management as an academic discipline, as well as a career choice. Students of free enterprise will develop an appreciation of the role entrepreneurship has played in shaping our nation. Offered-Summer

**BADM 130 Principles of Management (3)**

*Prerequisites: ENGL 100*

Introduces the basic theory of organizations and the functions of planning, organizing, directing, staffing and controlling. The evolution of management and management styles are also examined. Offered-Spring

**BADM 135 Human Relations (3)**

*Prerequisites: None*

Focuses on the personal and interpersonal competencies and skills needed in a business setting to understand oneself, one's co-workers, employers, and customers. Offered-Fall, Spring, and Summer

**BADM 240 Business Law (3)**

*Prerequisites: ENGL 101*

Business Law deals with the application of legal principles and procedures common to business practices. Primary areas of study include an overview of the American legal system, contract law and the Uniform Commercial Code, Property and Bailment's and Business Entities. Offered-Spring

**BADM 242 Principles of Marketing (3)**

*Prerequisites: BADM 114*

Presents processes, functions and principles in the current marketing system from the perspective of a marketing director. This includes the production of a product or service, its pricing, distribution and promotion. Offered-Fall

**BADM 250 Tribal Leadership (3)**

*Prerequisites: ENGL 100*

This course will focus on the theories, practices and styles of Leadership, compared to the cultural theories and cultural styles of leadership among tribal leaders. Styles of leadership characteristics of tribal leaders of the past are also covered. Offered-Fall

**BADM 251 Tribal Management (3)**

*Prerequisites: ENGL 100*

This course will focus on basic management principles of tribal governments, including the functions of management within tribal reservations, tribal councils, tribal casinos and other business ventures. Offered-Fall

**BADM 252 Tribal Law (3)**

*Prerequisites: ENGL 100*

This course will examine the special relationship that exists between the federal government and tribal governments. It includes jurisdiction in Indian country, state tribal relations and tribal governing structures. Offered-Fall

**BADM 253 Tribal Resources and Economic Development (3)**

*Prerequisites: ENGL 100*

This course will focus on current economic issues confronting tribes and the larger Indian society. Students will analyze and study the traditional economic systems in order to compare tribal and Western economic systems and concepts within cultural, legal and historical content. Students will explore new visions for the tribe and create a vision plan for economic development. Offered-Spring

**BADM 280 Cooperative Education (3)**

*Prerequisites: ENGL 100*

A supervised cooperative work program that is coordinated by a student's advisor in an approved business or related occupation. Offered-On Demand

**BFIN 211 Principles of Finance (3)**

*Prerequisites: ACCT 201 or Instructor's permission*

This course gives the student a solid foundation in the principles of finance, beginning with an overview of financial management, understanding financial statements and cash flow, valuing future cash flows, valuing stocks and bonds, and capital budgeting.

## BUSINESS EDUCATION

**BUED 102 Keyboarding (3)**

*Prerequisites: ENGL 099, MATH 098*

Keyboarding is an intensive course designed to help students develop a strong technique of keyboarding skills needed for today and reinforced by applying word-processing functions to business correspondence, tables, reports, and administrative and employment documents. Other features include communication activities, a workplace simulation, Welcome to Windows, File Management, and news on employment topics. Offered-Fall, Spring, and Summer

**BUED 125 Business Math (3)**

*Prerequisites: MATH 98*

Fundamentals of business mathematics including percentage formula applications, discounts, markup, bank reconciliation, simple and compound interest, depreciation methods, employee earnings, money management and their applications on electronic calculators. Offered-Fall, Spring, and Summer

**BUED 130 Records Management (3)**

*Prerequisites: COSC 107*

This course covers the fundamentals of filing by learning ten basic filing rules and applying these rules to names. It covers the alphabetic, numeric, subject, and geographic filing systems. A computer Microsoft program is used to enforce and emphasize rules and filing methods used in a business environment. Offered-Summer

**BUED 210 Word Processing (3)**

*Prerequisites: COSC 107*

Specialized class featuring experimental learning of Microsoft Word 2003 or later software through lecture, manufacturer's operating instructions, and hands-on assignments. Students will use Microsoft Word to produce business documents, merging, segment assembly, sort, database, graphic insertions, and basic macros. Knowledge of basic business formats is required. Offered-Spring

**BUED 215 Multimedia in Business (3)**

*Prerequisites: BUED 102, BUED 210, COSC 107*

This course is designed to introduce students to desktop publishing through the use of multimedia. This course focuses on the use of word processing software features, digital camera, scanner, colored printer, black and white printer, various photo editors and the use of the Internet to create a variety of professional-looking documents. It combines the roles of page designer and typesetter and allows the user to produce professional-looking document for both the home and business office. Offered-Summer

**BUED 280 Cooperative Education (1-6)**

*Prerequisites: None*

A supervised cooperative work program that is coordinated by the student's advisor in an approved office or business related occupation. Offered-On Demand

**COLLEGE AND CAREER PREPARATION****CACS 099 Introduction to Online Learning (1)**

*Prerequisites: None*

The Introduction to Online Learning course is an asynchronous 4-week course designed to introduce students to the Blackboard online learning system. The course introduces the student to all the Blackboard Course Tools, and has the student's complete exercises to reinforce the use of the tools. This course will help students with all other online classes.

**CACS 100 College and Career Success (2)**

*Prerequisites: None*

This course provides an opportunity to learn and adopt methods for success in school and the workplace. Topics include time management, test taking, note taking techniques, the development of a personal study system, exploring careers, resume writing, and interview skills. The course will focus on assisting you in developing practical college and career skills and techniques that will enhance academic and workplace success and increase your enjoyment of learning.

**CHEMISTRY****CHEM 111 Elements of Chemistry (3)**

*Prerequisites: MATH 120; Co-requisites: CHEM 111L*

This course covers qualitative and quantitative areas of non-organic general chemistry. Instruction includes: atomic and molecular structure, the Periodic Table, acids and bases, mass relationships, and solutions. The course will satisfy the Chemistry requirement for an A.A. degree. It is designed for non-science majors and nursing students.

**CHEM 111L Elements of Chemistry Lab (1)**

*Prerequisites: MATH 120; Co-requisites: CHEM 111*

Laboratory work will require working with chemicals, laboratory simulations and computer activities.

**CHEM 121 General Chemistry I (3)**

*Prerequisites: CHEM 111 or MATH 121; Co-requisites: CHEM 121L*

The first of a two-step course sequence required for students majoring in sciences, engineering or pre-med. Includes atomic and molecular structure, stoichiometry, mass and energy relationships, chemical reactions, and states of matter, acids and bases, and reaction rates.

**CHEM 121L General Chemistry Lab (1)**

*Prerequisites: CHEM 111 or MATH 121; Co-requisites: CHEM 121*

Laboratory work will require working with chemicals, laboratory simulations and computer activities.

**CHEM 122 General Chemistry II (3)**

*Prerequisites: CHEM 121, CHEM 121L; Co-requisites: CHEM 122L*

A continuation of CHEM 121 and CHEM 121L, that includes the study of chemical periodicity, equilibrium, Chemical bond theory, solubility, electro- and nuclear chemistry. Introduction to coordination and organic chemistry.

**CHEM 122L General Chemistry II Lab (1)**

*Prerequisites: CHEM 121, CHEM 121L; Co-requisites: CHEM 122*

Laboratory work will require working with chemicals, laboratory simulations and computer activities.

**CHEM 212 Introduction to Organic Chemistry or Biochemistry (4)**

*Prerequisites: CHEM 111, CHEM 111L, CHEM 121, CHEM 121L*

Introduction to the basics of organic and biological chemistry via discussion of the structure, bonding, properties and reactivity of the basic families of organic and biologically important compounds with special emphasis toward interests of students in health sciences, including, saturated and unsaturated hydrocarbons, oxygenated hydrocarbons, carbohydrates, fats and proteins.

## COMPUTER SCIENCE

### **COSC 107 Computer Literacy (3)**

*Prerequisites:* BUED 102 or Instructor's permission

The purpose of the Computer Literacy course is to expose students to the capabilities of modern data processing hardware and software. The course focuses on four types of software; operating system software, word-processing, spreadsheet, and presentation software. Offered-Fall, Spring, Summer

### **COSC 111 Principles of Computing (3)**

*Prerequisites:* None

This is a technical introduction to the discipline of computing concepts and design. The course is intended for Computer Science, Network Management, Business Information Systems, Civil Engineering, Electronics and other select majors as indicated in those degree requirements. Offered-On Demand

### **COSC 112 Web Design (3)**

*Prerequisites:* BUED 102, COSC 107

The course will be taught as if students are absolute beginners in web page design using Hypertext Markup Language (HTML) and will progress to more advanced material. The book used for this course is written so HTML skills can be developed quickly and easily. It integrates the Secretary's Commission on Achieving Necessary Skills workplace competencies and foundation skills. Students will use HTML and Notepad (text editor) to create the web pages. They will use an Internet provider to get clip art and preview their web pages. Offered-Fall

### **COSC 116 Java Programming Language for Non-Programmers (3)**

*Prerequisites:* COSC 107, MATH 100

Java Programming for non-programmers provides first time programmers an excellent choice for learning programming using the Java Programming language and scripting. This course helps students understand the significance of the Java Programming language and scripting. With this knowledge students will develop programming skills in the areas of object-orientated and Java Technology. This course satisfies the requirements for COSC 121. Offered-On Demand

### **COSC 119 Visual Basic (3)**

*Prerequisites:* MATH 100

This course is an introduction to object oriented, event-driven business application programming and graphical user interfaces in the Windows environment. This course is intended for Computer Science, Network Management, Business Information Systems, Civil Engineering, Electronics and other select majors as indicated in those degree requirements. Offered-Spring

### **COSC 121 Introduction to Programming (3)**

*Prerequisites:* COSC 107, MATH 100

An introduction to programming. It includes computer vocabulary, operating system concepts, structured programming techniques, programming logic, and control. Offered-Fall, Spring

### **COSC 123 Excel (3)**

*Prerequisites:* COSC 107

This course is designed to enhance student skills in working with spreadsheets to the specialist and expert level. The textbook used for this course has been approved by the Microsoft Office Specialist program. It is designed to prepare students to take the Excel Microsoft Office Specialist exam. This exam is not currently offered at SIPI. Offered-Summer

### **COSC 124 Access (3)**

*Prerequisites:* COSC 107

This course is designed to enhance student skills in working with database/information management software to the intermediate and advanced level. The textbook used for this course has been approved by the Microsoft Office Specialist program. It is designed to prepare students to take the Access Microsoft Office Specialist exam. This exam is not currently offered at SIPI. Offered-Spring

### **COSC 145 Intro to UNIX/Administration/Linux (3)**

*Prerequisites:* COSC 121

The goal of this course is to provide students with a comprehensive overview of the UNIX operating system while working with a PC-friendly system. By the end of the course, students will not only be familiar with the UNIX command-line environment, utilities, and applications, but also with the graphical X Window environment. Students will also learn how to use Linux as a powerful programming environment. Programming topics include introducing at shell scripting, as well as the PERL, C, and C++ programming languages. Offered-On Demand

**COSC 185 Database Management Systems (3)**

*Prerequisites: COSC 107*

Designing and writing programs in a fourth generation database language. Students learn to create their own menu systems for data input and output, create custom formatted reports, manipulate files and data outside the standard application menus, and plan projects using structured analysis and design techniques.

**COSC 195 C Language Programming (3)**

*Prerequisites: COSC 107, MATH 120*

This course provides a thorough and comprehensive introduction to the developments of structured programming. Syntax, I/O functions, control statements, variables and arrays are covered.

**COSC 211 PowerPoint Presentations (3)**

*Prerequisites: COSC 107, BUED 102*

The PowerPoint course is designed to teach students the use and purpose of presentation software. They will use presentation software to organize and present information. Students will learn to create slides for on-screen presentation, overhead or slide projectors, and to print handouts, outlines, or entire presentations.

**COSC 275 Java Programming Language I (3)**

*Prerequisites: COSC 107, MATH 120*

The Java Programming Language I course teaches students the syntax of the Java programming language, object oriented programming with the Java Programming language. Creating graphical user interfaces, exceptions, file input and output, threads and networking. Programmers familiar with object-oriented concepts can learn how to develop Java applications. Offered-On Demand

**COSC 276 Java Programming Language II (3)**

*Prerequisites: COSC 275*

The Java Programming Language II course provides students with the experience of the software development methodology called Extreme Programming while learning the Java Programming language. The course provides students with information about the syntax of Java programming language, object oriented programming with the Java programming language, and creating graphical user interfaces, exceptions, file input and output and threads and networking. Programmers familiar with object-oriented concepts can learn how to develop Java applications. The course prepares students for the Java Certification Exam.

**COSC 280 Cooperative Education (1-4)**

*Prerequisites: None*

A supervised cooperative work program that is coordinated by the student's advisor in an approved computer or related occupation.

## CULINARY ARTS

**CULI 099M Culinary Arts Technical Math (3)**

*Prerequisites: Acceptance into the program*

Prepare for the math requirements encountered in study of recipe conversions and calculating amounts with a review of the basic arithmetic operations of whole numbers. The following topics are then covered in greater detail: fractions, decimals, percentages, weights and measures, calculation of recipes, recipe conversions, and costs. Course emphasis is on specific math applications in the food service industry.

**CULI 101 Culinary Arts I Theory (4)**

*Prerequisites: Acceptance into the program*

Emphasis is on sanitation and safety practices and procedures, terminology, cooking and baking methods and techniques, recipes, and recipe conversions. Importance is on comprehending and following a recipe in an organized manner.

**CULI 102L Culinary Arts I Lab (2)**

*Prerequisites: None; Co-requisites: CULI 101*

Practical application in both cooking and baking. Instruction includes safety procedures, correct use and care of cooking/baking hand tools, utensils, and equipment. Emphasis is on following recipes in an organized manner and on developing confidence in cooking and baking skills.

**CULI 105 Culinary Arts II Theory (3)**

*Prerequisites: CULI 101, CULI 102L*

More complex cooking and baking terminology and methods, acquire knowledge of sanitation requirements, and learn to evaluate and judge a recipe with confidence. Emphasis is placed on gaining and using the acquired skills with greater independent judgment.

**CULI 106I Culinary Arts II Internship (1)**

*Prerequisites: CULI 101, CULI 102L*

Considered as on-the-job training. The student will be directly involved in food production in the school's kitchen and bakery areas, working with food service personnel. Emphasis will be on gaining job skills and abilities through actual work performed in food production.

**CULI 106L Culinary Arts II Lab (2)**

*Prerequisites: CULI 101, CULI 102L*

Apply learned skills in cooking and baking methods and techniques. Students will participate in hands-on training in preparing large quantity kitchen and bakery products. Emphasis is placed on development of individual skills, judgment, and confidence.

**CULI 201 Culinary Arts III Theory (3)**

*Prerequisites: CULI 105, CULI 106I, CULI 106L*

Classroom work involves theory and related instruction. General knowledge of dietary nutrition, complex cooking and baking terminology and procedures, and interpretation of complex recipes and recipe conversions. Emphasis is on gaining knowledge of all phases of the food service industry.

**CULI 202I Culinary Arts III Internship (1)**

*Prerequisites: CULI 105, CULI 106I, CULI 106L*

Coursework represents on-the-job training received by the students working alongside cooks and food service personnel in actual food production activities in the school's bakery and kitchen facilities. The emphasis continues to be on individual skill development and the building confidence of students' judgment. Students' ability to work independently and with minimum supervision is stressed.

**CULI 202L Culinary Arts III Lab (2)**

*Prerequisites: CULI 105, CULI 106I, CULI 106L*

Coursework represents individual tutorship utilizing specific recipes provided by the instructor in a formal lab setting. Reliance on personal judgment and the ability to work with confidence with minimum supervision is stressed.

**CULI 280 Co-op/OJT (3)**

*Prerequisites: CULI 105, CULI 106I, CULI 106L*

Culinary Arts students may be assigned to a Co-Op or OJT site on a part-time or full-time basis for one (1) trimester to gain practical work experience in the field. This is most valuable for students with no prior work experience. These assignments are made on a site-availability basis for third trimester students.

## EARLY CHILDHOOD EDUCATION

**ECED 124 Health, Safety and Nutrition (2)**

*Prerequisites: None*

Provides information related to standards and practices that promotes children's physical and mental health. It examines the many nutritional factors that are important for children total development, healthy eating habits, and physical activity. Information is included for developing sound management procedures for the prevention of childhood illnesses and communicable diseases. Students gain knowledge necessary for creating safe learning environments for decreasing risk and preventing childhood injury. Offered-Fall

**ECED 126 Childhood Growth/Development and Learning (3)**

*Prerequisites: None*

Provides foundation for becoming an early childhood professional with knowledge of how young children develop and learn. Major developmental theories are integrated with all aspects of development including psychosocial, physical/motor, cognition, language and literacy. Offered-Fall

**ECED 130 Curriculum Development and Implementation I (3)**

*Prerequisites: None; Co-requisites: ECED 130P*

Focuses on developmentally appropriate content relevant for childbirth to age eight. Integrates content into teaching and learning experiences. Adapts content areas for children with special needs and includes the development of IFSPs and IEPs. Offered-Spring

**ECED 130P Practicum I (2)**

*Prerequisites: ECED 130 or as co-requisite: ECED 130*

Students apply knowledge gained from Curriculum Development and Implementation I. Students develop skills in planning learning experiences in all content areas from birth through age eight, including young children with special needs. Offered-Spring

**ECED 190 Special Topics (1-3)**

*Prerequisites: None*

Special topics related to Early Childhood Development at the freshman year. Offered-On Demand

**ECED 202 Family & Community Collaboration (3)**

*Prerequisites: None*

Collaborative relationships with parents and others involved with children in early childhood settings are discussed. Strategies for communicating with parents and guardians from diverse cultural and linguistic backgrounds to incorporate family goals for their children into the early childhood program will be included. Offered-Summer

**ECED 204 Introduction to Reading/Literacy Development (3)**

*Prerequisites: None*

Teaches emergent literacy and reading skills development. Addresses ways professionals can teach phonemic awareness, literacy problem solving skills, fluency, vocabulary, and comprehension, including Native language learners. Offered-Summer

**ECED 214 Guiding Young Children (3)**

*Prerequisites: None*

Explores various theories of child guidance and covers appropriate methods for guiding children. Appropriate strategies for preventing and dealing with violence, aggression, anger, and stress will be included. Emphasis is placed on helping children become responsible, competent, independent, and cooperative learners. Offered-Fall

**ECED 218 Assessment of Children & Evaluation of Programs (3)**

*Prerequisites: None*

Class covers a variety of culturally appropriate assessment methods and instruments, including systemic observation. The course addresses the development and use of formative and summative program evaluation to ensure comprehensive quality of the total environment for children, families and the community. Students will develop skills for evaluating the assessment process and involving other teachers, professionals and families in the process. Offered-Summer

**ECED 220 Professionalism (2)**

*Prerequisites: None*

Course provides orientation to the field of early care and education. History, philosophy, ethics and advocacy are introduced. Principles of early childhood systems are explored. Professional responsibilities such as cultural responsiveness and reflective practice are examined. Offered-Fall

**ECED 230 Curriculum Development and Implementation II (3)**

*Prerequisites: ECED 130, ECED 130P*

Students will use their knowledge of content, developmentally appropriate practices, and language and culture to design and implement experiences and environments that promote optimal development and learning for children from birth through age eight, including children with special needs. Various curriculum models and learning strategies will be included. Offered-Spring

**ECED 230P Practicum II (2)**

*Prerequisites: ECED 130, ECED 130P, ECED 230; Co-requisites: ECED 230*

Students apply knowledge gained from Curriculum Development and Implementation II. Students develop skills in planning learning experiences in all content areas from birth through age eight, including young children with special needs. Offered-Spring

**ECED 290 Special Topics (1-3)**

*Prerequisites: Instructor's permission*

Special topics related to Early Childhood Development at the sophomore year. Offered – On Demand

## ECONOMICS

### **ECON 200      Macroeconomics (3)**

*Prerequisites: ENGL 100, MATH 100*

This course covers macroeconomic theory in areas of national income, employment, price stability and growth. The role of money and banking is studied to provide an understanding of the banking systems contributions to our national economy. Unemployment, inflation, supply and demand, the business cycle, fiscal policy, monetary policy and the money supply are all covered. The international sector is also discussed. Offered-Fall

### **ECON 201      Microeconomics (3)**

*Prerequisites: ENGL 100, MATH 100*

This course covers Microeconomic Theory in the areas of the market system, market structure and pricing, resource markets, market failure and public policy. Price elasticity of demand and supply are covered, perfection completion, monopoly, monopolistic competition, oligopoly, economies of scale, economic regulation and antitrust activity. Income distribution, poverty and the problems with measuring income.

## ELECTRONICS

### **ELEC 100      Exploratory Electronics (3)**

*Prerequisites: ENGL 100 or Instructor's permission; Co-requisites: MATH 100*

This course introduces students with limited math and science backgrounds to basic electronic fundamentals. The course covers schematic reading, mathematics needed in the further study of electronics, elementary circuit analysis, soldering and interconnecting techniques. The course is primarily for preparatory students and is not a degree or certificate requirement.

### **ELEC 101A      Basic Electronics DC (3)**

*Prerequisites: ENGL 100, MATH 120*

This course addresses the basic concepts essential for mastering the principles of electronics applicable to DC circuit analysis. The emphasis is on the basic physics of matter applicable to electronics, application of the fundamental laws of electronics to discrete electrical components, and the network theorems used in circuit analysis. The course provides a detailed description of how direct current (DC) functions in an electrical circuit.

### **ELEC 101L      Basic Electronics DC Lab (1)**

*Prerequisites: ENGL 100, MATH 120; Co-requisites: ELEC 101A*

This course provides practical application of learned DC theory in a controlled lab setting.

### **ELEC 105A      Basic Electronics AC (3)**

*Prerequisites: ELEC 101A, ELEC 101L*

This course begins with the fundamental concepts learned in DC theory and lab and progresses through the principles of alternating current (AC), transformer applications, and capacitive/inductive filter circuits with emphasis on AC circuit analysis.

### **ELEC 105L      Basic Electronics AC Lab (1)**

*Prerequisites: ELEC 101A, ELEC 101L; Co-requisites: ELEC 105A*

This course places emphasis on the lab analysis of sinusoidal waveforms and their applications in an AC electrical circuit.

### **ELEC 110A      Semiconductor Fundamentals (4)**

*Prerequisites: ELEC 105A, ELEC 105L*

This theory course provides the student with a background in solid-state electronic devices, starting with semiconductor physics, diode and transistor characteristics and applications, and progressing to operational amplifiers.

### **ELEC 110L      Semiconductor Fundamentals Lab (2)**

*Prerequisites: ELEC 105A, ELEC 105L; Co-requisites: ELEC 110A*

This course provides practical application of learned semiconductor fundamentals theory, with emphasis on the development of troubleshooting skills for electronic circuits.

**ELEC 118L      Electromechanical Control Devices (3)**

*Prerequisites: ELEC 110A, 110L*

This course covers the theory and application of mechanical devices and their electrical control circuits. Topics include hydraulics, pneumatics, AC and DC motors, stepper motors, mechanical drive systems and servomechanisms. Students develop skill in the assembly, operation, and troubleshooting of small-scale electromechanical and fluid power systems.

**ELEC 201A      Digital Electronics I (2)**

*Prerequisites: MATH 120 or Instructor's permission*

This course is a study of digital logic, its operations, principles and applications. The emphasis is on the analysis of number systems and codes, Boolean Algebra, followed by combinational logic design using Karnaugh maps, PLDs, and FPGAs.

**ELEC 202L      Digital Electronics I Lab (1)**

*Prerequisites: MATH 120 or Instructor's permission; Co-requisites: ELEC 201A*

The digital electronics lab provides direction and strategies on how to apply troubleshooting techniques. The applications include utilizing Boolean Algebra to implement combinational logic circuits and using Karnaugh maps for circuit reduction.

**ELEC 203      Digital Electronics II (2)**

*Prerequisites: ELEC 201A, ELEC 202; Co-requisites: ELEC 203L*

The digital logic concepts and design techniques learned in the previous course are applied to logic devices such as flip-flops, code converters, counters, timers, multiplexers, and shift registers. The course concludes with an introduction to microprocessor interfacing circuits and techniques and TTL and CMOS circuit characteristics.

**ELEC 203L      Digital Electronics II Lab (1)**

*Prerequisites: ELEC 201A, ELEC 202L; Co-requisites: ELEC 203*

The digital Applications include expansion from four-bit to multi-bit circuits to demonstrate adaptability of each logic device. The student will be working with converters, encoders, counters, and registers. An operational knowledge of these devices is essential to a better understanding of the functions and operations with logic devices applied to microprocessor circuits.

**ELEC 205A      Microprocessors (3)**

*Prerequisites: ELEC 201A, ELEC 202L or Instructor's permission*

The emphasis in this course is on the development of skills needed to maintain and repair microprocessor based electronic equipment and systems. The theory covers fundamentals of microprocessor design and operating principles, including assembly language programming.

**ELEC 206L      Microprocessors Lab (1)**

*Prerequisites: ELEC 201A, ELEC 202L or Instructor's permission; Co-requisites: ELEC 205A*

This lab is designed to provide introductory experimentation in the Intel 80486 and later VLSI microprocessor architectures and interfacing to develop proficiency in the application of logical instructions, assembly language programming, problem solving, and I/O management.

**ELEC 218L      Electromechanical Control Systems (3)**

*Prerequisites: ELEC 118L*

This course provides the student with hands-on experience using electromechanical systems similar to those utilized in the manufacturing industry, using schematics for analysis, maintenance procedures and developing troubleshooting skills.

**ELEC 280      Co-Op/OJT (3)**

*Prerequisites: Successful completion of first year of electronics instruction with a minimum cumulative GPA as required by the industry internship partner.*

This course is used to provide the qualifying student with an internship or on-the-job training for gaining related experiences in the electronics industry at an approved industrial facility. This may be accomplished any time after the first year of training.

## ENGLISH

### **ENGL 093      GED Writing Skills (3)**

*Prerequisites: None*

Prepares students to pass the English and writing section of the GED exam. This course includes spelling, capitalization, grammar, punctuation, usage, sentence structure, and combining sentences. Teaches students the process of writing and developing an essay.

### **ENGL 098      Basic Writing and Reading Skills (4)**

*Prerequisites: None*

Focuses on basic reading and writing for practical use in school and life. Provides students the opportunity to practice reading strategies, improve their sentence and paragraph skills in their own writing, use of computers for word processing and research, practice oral language skills, and improve English usage and punctuation. (TABE Writing Grade Equivalent 3.0-6.5/TABE Reading Grade Equivalent 3.0-6.5; ACT Compass Writing Score 0-17/ACT Compass Reading 0-57)

### **ENGL 099      Basic English Skills (4)**

*Prerequisites: None*

Focuses on writing tasks related to daily life, school and the workplace to achieve a variety of practical and academic goals. Presents English grammar, usage and punctuation to improve their sentence and paragraph skills in organized pieces of writing. Includes use of computers for word processing and research. (TABE Grade Equivalent 6.7-11.9; ACT Compass Score 18-69)

### **ENGL 100      Writing Standard English (4)**

*Prerequisites: None*

Prepares students for first-year college composition and/or advanced career skills by providing practice of the rhetorical and grammatical skills necessary to write purposeful, reader-centered essays. Covers effective use of a writing process in essays. Incorporates readings for discussion of ideas and for information to be used in student's writings. Includes use of computers for word processing and research. (TABE Grade Equivalent 12.1-12.9 ACT Compass Score 70-99)

### **ENGL 101      Composition (3)**

*Prerequisites: ENGL 100*

Integrates reading and writing to improve comprehension and self-expression. Selected readings include two novels and exemplary samples of rhetorical patterns students shall be expected to emulate on their compositions with focus upon logical organization and use of supporting ideas. Also covered is the research paper, including how to document external sources through internal citation and a works cited list.

### **ENGL 102      Critical Reading and Writing (3)**

*Prerequisites: ENGL 101*

Emphasizes improving skills of recognizing persuasive prose. Commercialized ads and readings on controversial subject matter are carefully analyzed orally and in writing until arguments are reduced to basic syllogisms. Inductive and deductive reasoning as well as probability and logical fallacies are explained. Students compose analytical and argumentation essays.

### **ENGL 219      Technical Writing (3)**

*Prerequisites: ENGL 101*

Prepares a foundation in reading, writing, and speaking skills needed in the professional workplace. Includes writing business memos and letters, summarizing information, developing description, definition, and process analysis paragraphs, making reports and proposals, understanding visuals, perfecting résumés and delivering oral presentation.

## ENVIRONMENTAL SCIENCE

### **ENVS 101      Environmental Science I (3)**

*Prerequisites: ENGL 100, MATH 100*

An introduction to the field of environmental science. Topics include ecosystems and ecology, air, water and soil pollution, and risk assessment and management.

### **ENVS 102      Environmental Regulations (3)**

*Prerequisites: ENVS 101*

A survey course of history development and current state of environmental regulations. Covers a broad range of laws and legislative acts including the National Environmental Policy Act in depth and the Clean Air Act, Clean

Water Act, Safe Drinking Water Act, Resource Conservation and Recovery Act Superfund and others in some detail. A broad study of regulations affecting tribal environmental issues is included.

**ENVS 103 Environmental Sampling and Monitoring (3)**

*Prerequisites: CHEM 111, CHEM 111L, ENGL 100, ENVS 101, MATH 100*

An introduction to proper sampling techniques for environmental samples in various media including air water and soil. Includes analytical training in field and laboratory settings using portable testing kits and stationary lab instrumentation. Basic monitoring and data analysis and calculations are covered.

**ENVS 104 Environmental Science II (3)**

*Prerequisites: ENVS 101*

A continuation of ENVS 101 with more in-depth studies of environmental factors encompassing solid, toxic and hazardous waste management, food and natural resource assessment and protection, and energy resources. Addresses more complex issues in environmental science that are often highly interdependent and poorly understood. Approaches current issues that are developing or theoretical.

**ENVS 109 Environmental Practicum (3)**

*Prerequisites: ENVS 101*

This course is an amalgam of short courses that are chosen by the student and his/her academic advisor. Two hundred (200) actual contact hours are required. These short courses are also a part of the developing Continuing Education program and enable the student to specialize in a particular area of the environmental field, such as waste management, environmental law, or water resources. Some of the short courses to be offered include training in HAZMAT, Asbestos, Lead and Radiation.

**ENVS 130 Sustainability (3)**

*Prerequisites: ENVS 101*

This class covers basic concepts of sustainability, analyzing local and global approaches to minimization of resource use. Ethics, culture and natural philosophy figure prominently in addressing human impact on the environment through: attitudes on disposability, reuse, recycling, waste production and treatment, renewable energy, design for longevity, pollution culpability, transportation, biological diversity and human population.

**ENVS 200 Contemporary Issues in Environmental Science (3)**

*Prerequisites: ENGL 100, Instructor's permission*

This course is designed to provide a forum for introduction to and discussion of some controversial contemporary topics in environmental science. Each of these topics may be selected by class consensus or by the instructor. Each will have its own homework, class exercises and discussion. Topical essays are required and are the major portion of the grade. Typical topics include: wilderness Preservation, Recycling, Deforestation, Acid Rain, Global Warming, Cancer Etiology, Air Pollution, Pesticides, Ozone Depletion, Water Use/Pollution.

**ENVS 210 Tribal Environmental Management and Planning (3)**

*Prerequisites: ENVS 101, ENVS 102, ENGL 100, MATH 100, Instructor's Permission*

A broad overview of the machinations of Tribal Environmental programs and the necessary skills required to operate them successfully. Covers resource management, planning and goal development, regulations, rights and sovereignty issues and holism and cultural issues. Communications in the form of grant and report writing, governmental (agency) correspondence and data gathering are also discussed.

**ENVS 280 Environmental Internship (3)**

*Prerequisites: Second year standing*

This course is designed to give students supervised research or work training experience to support academic and professional development. Students participate in a paid or volunteer position with an approved mentor at a university or agency (Non-Governmental Organization, public, private or tribal).

## **GEOGRAPHY**

**GEOG 101 Introduction to Geography (3)**

*Prerequisites: ENGL 100*

Introduces students to the natural environment: weather systems, climatic regions, vegetation, soils, water resources, plate tectonics and volcanic, structural, erosion, fluvial, coastal, desert, and glacial landforms.

## GEOLOGY

### **GEOL 101 Introduction to Physical Geology (3)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: GEOL 101L*

Introduction to the materials and processes of the earth. Introduces students to the geological environment: rock types and rock forming processes, minerals and mineral identification, crystal formation and classification, volcanism, sedimentation, lakes, streams and water systems, plate tectonics, glacier and wind formations, and mass wasting.

### **GEOL 101L Introduction to Physical Geology Lab (1)**

*Prerequisites: ENGL 100, MATH 100; Co-requisites: GEOL 101*

Labs will cover rocks and minerals, map reading and geomorphology. Lab times and days may vary.

## GEOSPATIAL INFORMATION TECHNOLOGY

### **GIT 101 Digital Cartography (3)**

*Prerequisites: ENGL 100*

The course is designed to provide the student with a vocabulary and comprehensive understanding of basic and fundamental mapping principles, historical evolution of maps, and understanding the direction and future of map-making and the technologies and data sources that support it.

### **GIT 111 Introduction to GIS/GPS Technology (3)**

*Prerequisites: COSC 107, TECH 103*

An introduction to the methods and techniques currently used in the applications of Geographical Information Systems (GIS) and Global Positioning Systems (GPS).

### **GIT 121 Advanced GIS/GPS with Applications (3)**

*Prerequisites: GIT 111*

An advanced look at Geographical Information Systems (GIS) and Global Positioning Systems (GPS). This course will review the initial concepts covered in ATE 111 and continue through a complete GIS GPS project. The students will develop a GIS/GPS project from conception to final presentation.

### **GIT 180 Practicum/Internship (3)**

*Prerequisites: GIT 111*

This course offers the students the opportunity to take short courses to further their knowledge in geospatial informational technologies, or the opportunity to further knowledge by working at an agency utilizing and working with geospatial technologies.

### **GIT 201 Principles and Theory of GIS and GPS Applied (3)**

*Prerequisites: GIT 121*

Principles and Theory of GIS and GPS Applied is a course that is designed to enhance the student knowledge of hands on application of GIS principles as well as build upon the principles and theories learned in the previous Introduction and Advanced GIS and GPS classes.

### **GIT 202 Photogrammetry and Mapping (3)**

*Prerequisites: GIT 101*

An introduction to the fundamental principles of photogrammetry with specialized applications in new technologies and Geographic Information Systems GIS.

### **GIT 203 Remote Sensing (3)**

*Prerequisites: GIT 101*

An introduction to the fundamental principles of remote sensing with specialized applications in new technologies and Geographic Information Systems (GIS).

### **GIT 280 Cooperative Education Internship (3)**

*Prerequisites: GIT 121*

This course offers the students the opportunity to take short courses to further their knowledge in geospatial informational technologies or the opportunity to further knowledge by working at an agency utilizing and working with geospatial technologies.

### **GIT 290 Special Topic in Geospatial Technologies (3)**

*Prerequisites: GIT 121*

This is a course that is designed to introduce the student to different application of GIS principles. The class is designed to enhance GIS skills learned in the previous Introduction and Advanced GIS and GPS classes.

## HEALTH

### **HLTH 099 Health Promotion and Education (2)**

*Prerequisites: None*

Instruction focuses on wellness and habit practices, which help maintain good physical and mental health. Dangers of habit-forming substances are emphasized.

### **HLTH 164 First Aid and Safety (2)**

*Prerequisites: None*

Instruction in standard First Aid, Safety and CPR. Students successfully passing the course become Red Cross certified.

### **HLTH 165 Advanced First Aid and Safety (2)**

*Prerequisites: HLTH 164, Must have First Aid Certification*

Instruction in use of pocket-mask, two-man rescuer CPR, giving CPR to both children and infants. Students passing both hands on and written examination with 80% or better will receive certification for Red Cross Community CPR.

### **HLTH 191 Survey of Health Careers (3)**

*Prerequisites: None*

Designed to assist students making health career choices, providing an overview of career opportunities in health promotion, recreation, fitness and other related health careers. Included are site visits to local tribal health centers, Native American health promotion and wellness facilities, etc. as well as integrated cultural activities with Native American speakers and Elders. Health career job shadowing may be incorporated. Emphasis will be introducing a variety of recreation, fitness, and health career opportunities in Native American communities.

### **HLTH 192 Nutrition for Health (3)**

*Prerequisites: None*

This course is designed to provide general concepts of nutrition applied to food choices that support health. Nutrition for health will assist students in making informed decisions about the foods they eat, and give the ability to evaluate nutrition claim, and distinguish food myths from nutrition facts. Popular fad diets, cultural, psychological and economic implications of food choices are also discussed.

### **HLTH 193 Personal Health Management (3)**

*Prerequisites: None*

This course is designed to assist students in understanding the concepts of a healthy lifestyle. After covering the course subject material the students will identify nutrition basics, exercise and weight management, human body systems and aging as it is related to a healthy lifestyle.

## HISTORY

### **HIST 101 Western Civilization (3)**

*Prerequisites: ENGL 100*

This course will survey the history of Western Civilization from pre-history until the end of Antiquity. Special emphasis will be placed on the social evolution of pre-historic humans, the evolution of ancient civilizations, world religions, the Greek city-states, and Alexander the Great.

### **HIST 161 United States History Before 1877 (3)**

*Prerequisites: ENGL 100*

This course will survey United States history from the early inhabitants of the continent through the conclusion of the Civil War.

### **HIST 162 United States History Since 1877 (3)**

*Prerequisites: HIST 161.*

Surveys the economic, political, intellectual and social development of the United States during the period of industrialism, including its role in world affairs from 1877 to the present. Emphasis is placed upon ideas, processes, and causation.

### **HIST 181 History of Pre-Columbian America (3)**

*Prerequisites: HIST 161*

A survey of the economic, political and social conditions of the indigenous peoples of North and South America prior to 1492.

**HIST 260 History of Indian Education (3)**

*Prerequisites: ENGL 100*

Overview of American Indian Education as established by the Federal Government and up to the current status of Indian Education during the 20th and 21st centuries. Legal and cultural issues are covered.

**HIST 270 American Indian History (3)**

*Prerequisites: ENGL 100*

The purpose of this course is to provide an overview of American Indian history from pre-Colonial times until the present. Emphasis is placed on Indian-Anglo cultural interaction, U.S. policy development, and the roles played by Indian peoples to ensure their survival and ongoing cultural integrity into the 21<sup>st</sup> Century. Offered-Fall

## LANGUAGES

**NAVA 101 Elementary Navajo (4)**

*Prerequisites: ENGL 100*

Develops listening comprehension, and speaking skills in the Navajo language.

**NAVA 102 Intermediate Navajo (4)**

*Prerequisites: NAVA 101*

A continuation of NAVA 101. Builds on NAVA 101.

**SPAN 101 Elementary Spanish I (4)**

*Prerequisites: ENGL 100*

Develops listening, comprehension, and speaking skills with introduction to the grammar of Spanish. Designed for students with no previous exposure to Spanish.

**SPAN 102 Elementary Spanish II (4)**

*Prerequisites: SPAN 101*

Students continue developing listening and grammatical skills. Emphasis is placed on speaking.

## LITERATURE

**LITR 093 GED Literature (3)**

*Prerequisites: None*

Prepares students to pass the literature section of the GED exam. This course focuses on fiction, non-fiction, poetry, drama, and commentaries.

**LITR 211 Topics in Literature (3)**

*Prerequisites: ENGL 101*

Surveys short stories, poetry, novels, and dramatic works by Native American writers. Students learn to read literary material with enhanced appreciation and to make well-founded literary judgments. Material includes romance and war, history and mystery, Native American narratives and women's fiction. Student papers compare and interpret readings.

**LITR 270 Introduction to Modern Literature (3)**

*Prerequisites: ENGL 101*

Introduces the student to major works of modern European and American playwrights, essayists, poets, and novelists of the 20th and 21st century. In addition to reading and analyzing specific selections, students will learn about and discuss the social, cultural and intellectual currents which influenced these writers.

**LITR 296 American Literature (3)**

*Prerequisites: ENGL 101*

Focuses on 400 years of literary writing in America from the Colonial period to 20<sup>th</sup> century, including works by American Indians and other minority groups. Includes five genres of prose, poetry, short story, novel and drama. After listening to class lectures and participating in class discussions, students compose analytical essays based on reading assignments.

## MANUFACTURING TECHNOLOGY

### **DDET 281 Statistical Process Control (3)**

*Prerequisites: MATH 100*

Students learn to use hardware and software as they apply to quality assurance in the manufacturing process. Students study design of experiments, sampling technique, SPC, control chart applications and developments, and process reliability.

### **MT 105 Manufacturing Concepts and Practices I (3)**

*Prerequisites: MATH 100, ENGL 100*

This is an introductory course providing exposure to the basic history, development, and knowledge of the manufacturing industry and providing a study of the manufacturing process in a general manner.

### **MT 115 Manufacturing Concepts and Practices II (3)**

*Prerequisites: ENGL 101, MT 105*

Topics presented are engineering metrology and instrumentation, testing and evaluating practices, safety and product liability, human factor engineering, manufacturing in a competitive environment, developments in CNC and robotics, material handling methods, cellular manufacturing, and just-in-time production methods.

### **MT 120L Manufacturing Processes and Equipment (4)**

*Prerequisites: MT 115, MT 201*

Presents the history of manufacturing from the standpoint of the type of facilities, the methods used in the selection of materials, and the processes and equipment selected for projects. The integration of Computer-Integrated systems is presented in detail along with group technology, cellular manufacturing, and just-in-time production methods.

### **MT 201 AutoCAD and Blueprint Reading for the Machine Trades (3)**

*Prerequisites: MT 115*

This course offers the necessary knowledge to draw, read, and interpret blueprints, machine layouts, and engineering drawings. A clear progression from the simplest to the most complex multidimensional drawings is provided. Advanced Geometric Dimensioning and Tolerancing are presented.

### **MT 211L Introduction to Computer Numerical Control (4)**

*Prerequisites: ENGR 101, MATH 100 or Instructor's permission*

Exposure to current CNC mill and lathe lab equipment and training software is blended into the theory to provide immediate experience and reinforcement of the concepts of Computer Numerical Control of industrial machines.

### **MT 212L Advanced Computer Numerical Control (4)**

*Prerequisites: ENGR 102, MT 211L or Instructor's permission*

This class covers advanced manufacturing technology tools including CNC Mill, Lathe & LASER. First, in using the machining processing method, the advanced CNC mills and lathe laboratory tools with their training software will be used. Second, the CNC LASER as another alternative advanced manufacturing technology tool will be utilized. The various projects will be completed on advanced CNC technologies. This class also covers CNC technical terms, related equipment, accessories & tooling, automated software, programming, quality control & safe operation.

### **MT 247 Materials Science and Analysis (3)**

*Prerequisites: MT 120L*

This course explores the science associated with the materials that are available for processing in the manufacture of components, methods of joining and bonding materials, and the chemical properties of those materials.

## MATH

### **MATH 093 GED Math (3)**

*Prerequisites: None*

Prepares students to pass the math section of the GED exam. This course covers fractions, percents, decimals, graphs, algebra, and geometry.

### **MATH 098 Foundations of Mathematics (I)**

*Prerequisites: None*

Focuses on performing arithmetic with whole numbers, fractions, and decimals, and on using those operations to solve problems. Exposure to integers, ratios, percents and proportions and other equations lays the groundwork for later development of these concepts. (TABE Grade Equivalent 3.0-6.4; ACT Compass Score 0-24)

**MATH 099 Basic Mathematics II (4)**

*Prerequisites: None*

Develops an understanding of the critical math ideas needed at home, in the workplace, and in future math courses. Fractions, decimals, and percents are seen as different but related ways to show the same thing. Understanding arithmetic with numbers leads to appreciating the power and grasping the methods of algebra. (TABE Grade Equivalent 6.7-10.7; ACT Compass Score 25-45)

**MATH 100 Basic Mathematics III (4)**

*Prerequisites: None*

Presents linear equations, formulas, exponents, operations with polynomials, factoring, quadratic equations, graphing, and word problems. (TABE Grade Equivalent 10.9-12.9; ACT Compass Score 46-65)

**MATH 111 Mathematics for Elem. and Middle School Teachers (3)**

*Prerequisites: None*

This course is designed to allow prospective elementary school teachers the opportunity to develop a conceptual understanding of the mathematics that they will be teaching to their students. The course will provide hands-on experiences through which the students will discover the basic concepts and their applications in the real world. The course is taught with the use of manipulatives so that the students can experience learning the way that their students will. Computational skills will also be emphasized during the course.

**MATH 120 Intermediate Algebra (3)**

*Prerequisites: MATH 100*

After a short review of introductory algebra, the following are examined: fractional expressions and equations, exponents, powers, roots, quadratic equations and graphs.

**MATH 121 College Algebra (3)**

*Prerequisites: MATH 120*

Topics include: coordinates and graphing; equations and inequalities; functions of one variable and their inverses; polynomial and irrational functions; exponential and logarithmic functions. Facility with word problems is developed. This course is preparatory for MATH 150. Use of TI-83+ Calculator. Complex numbers are introduced.

**MATH 123 Trigonometry (3)**

*Prerequisites: MATH 121*

A study of trigonometric functions, radian and degree measure, polar coordinates, graphs, basic trigonometric identities, inverse functions, modeling and applications. Complex numbers are introduced.

**MATH 145 Statistics (3)**

*Prerequisites: MATH 120*

Introduction to basic concepts of statistics and probability, analysis of numerical data, models, sampling, and statistical inferences, test of hypothesis, probability distributions, regression and correlation.

**MATH 150 Advanced College Algebra (3)**

*Prerequisites: MATH 121, Math 123*

Is a preparation for Math 162-Calculus. Includes a study of functions, coordinates, graphs, polynomials, the fundamental theorem of algebra, exponentials, logarithms, and complex numbers, as well as analytic geometry.

**MATH 162 Calculus I (4)**

*Prerequisites: MATH 123, MATH 150*

Examines concepts of college calculus: application of limits and continuity; the chain rule; finding extreme; the mean value theorem; integration of functions and calculation of functions and area under curves and volumes and surface area of standard geometric shapes.

**MATH 163 Calculus II (4)**

*Prerequisites: MATH 162*

A continuation of MATH162 with concentration on concepts that will enable students to solve problems through the study of integration techniques, solution of differential equations, calculus-based methods of approximation and infinite series.

**MATH 180 Business Calculus (3)**

*Prerequisites: MATH 121*

This is a three hour course that utilizes applications of calculus. Differentiation limits and integration are introduced.

**MATH 270      Ordinary Differential Equations (4)**

*Prerequisites: MATH 163*

This course provides an introduction to the algorithmic theory of ordinary differential equations. Topics to be covered are elementary theory of ordinary differential equations, numerical methods, phase-plane analysis and an introduction to Laplace transformations.

## NATURAL RESOURCES

**NATR 200      General Ecology (3)**

*Prerequisites: BIOL 121, ENGL 101*

Ecological principles and concepts for organisms, populations, and communities are introduced. Ecosystem structure and function, population dynamic, species interactions, species diversity and habitat associations, evolutionary ecology, and classical hypothesis dominating the field of ecology are emphasized.

**NATR 200L      General Ecology Lab (1)**

*Prerequisites: BIOL 121, ENGL 101; Co-requisites: NATR 200*

Basic field ecology and laboratory methods are emphasized. Laboratory exercises correspond with major lecture topics presented in NATR 200, and field studies and data analysis will be introduced.

**NATR 201      Introduction to Forestry (3)**

*Prerequisites: NATR 200; Co-requisites: NATR 201L*

An overview of forest ecology principles and forest resources management. Topics include biology and ecology of forest ecosystems, sustainable forestry management principles, forest health, silviculture, and timber management.

**NATR 201L      Introduction to Forestry Lab (1)**

*Prerequisites: NATR 200; Co-requisites: NATR 201*

Forestry management applications and techniques are implemented and observed using NATR laboratory and field sessions to local forests. Southwest forest ecosystems and tribally managed forestry management projects are emphasized. Saturday fieldtrips may be required.

**NATR 202      Trees of North America (3)**

*Prerequisites: BIOL 121, AGTC 104*

Introduction to tree identification, nomenclature, classification, and ecology of woodland and forest ecosystems of North America. This class combines lecture and field trips for tree identification exercises. Two Saturday field trips are required.

**NATR 205      Advanced Field Topics in Forestry (3)**

*Prerequisites: NATR 201 or Instructor's permission, ENGL 219*

Field techniques in sustainable forestry management principles, forest health, silviculture, and timber management. Field trips required.

**NATR 220      Principles of Range Management (3)**

*Prerequisites: NATR 200; Co-requisites: NATR 220L*

Principles and practices to managing rangeland resources are introduced. The course provides a broad overview of rangeland management, encompassing history and rangeland characteristics, range plant physiology and ecology, range inventory and monitoring, stocking rate and carrying capacity, and rangeland watersheds. Offered: Fall

**NATR 220L      Principles of Range Management Lab (1)**

*Prerequisites: NATR 200; Co-requisites: NATR 220*

Rangeland management applications and techniques are implemented and observed using the NATR laboratory and field sessions to local range sites. Southwest range ecosystems and tribally managed range management projects are emphasized. Saturday fieldtrips may be required.

**NATR 221      Identification of Grasses and Shrubs (3)**

*Prerequisites: AGTC 104*

Plant classification principles, identification and specimen collection techniques of common New Mexico forbs, grasses and shrubs will be emphasized. Course is a combination of lectures, field trips, and laboratory plant identification exercises. Two Saturday field trips are required.

**NATR 225      Advanced Field Topics in Range Management (3)**

*Prerequisites: NATR 220 or Instructors permission, ENGL 219*

Field techniques used to manage rangeland resources are introduced. Topics include stocking rates, range improvements, economics, noxious weeds, and survey methods. Field trips required.

**NATR 230 Introduction to Fish and Wildlife Management (3)**

*Prerequisites:* NATR 200; *Co-requisites:* NATR 230L

Ecological principles related to conservation and management of wildlife and fisheries are introduced. The course provides a broad overview of natural history, biology, policy, behavior and habitat of fish and wildlife species common to the Intermountain West.

**NATR 230L Introduction to Fish and Wildlife Management Lab (1)**

*Prerequisites:* NATR 200; *Co-requisites:* NATR 230

Fish and wildlife management applications and techniques are implemented and observed using the NATR laboratory and field sessions to local habitats. Monitoring techniques, habitat classification and requirements, and identification of fish, birds, and mammals are emphasized. Saturday field trips may be required.

**NATR 235 Advanced Field Topics in Wildlife Management (3)**

*Prerequisites:* NATR 230 or Instructor's permission, ENGL 219

Field and laboratory techniques used in conservation and management of fish and wildlife. Field trips required.

**NATR 280 Natural Resources Program Internship (3)**

*Prerequisites:* Second year standing

This course is designed to give students supervised research or work training experience to support academic and professional development. Students participate in a paid or volunteer position with an approval mentor at a university or agency (NGO, public, private, or tribal).

**NATR 290 Special Topics in Natural Resources (1-4)**

*Prerequisites:* Second year standing

Course subject and credits to be announced in the Trimester Schedule of Classes. This elective course enables the program to address current issues and topics in natural resources.

## Network Management

**ITCT 111 IT Essentials I (A+, Core) (3)**

*Prerequisites:* COSC 107 or Instructor's permission

This course is designed to cover the advanced material on the CompTIA A+ Certification Exams. The course requires self study obtained through completing practice test exams and hands-on labs. It is preparing the student to take and pass the A+ certification exams. The updated CompTIA A+ credential requires two tests: CompTIA A+ Essentials Exam plus CompTIA A+ 220-602 Exam. A+ Exams cover PC hardware and software with elements of security, software skills, safety and environmental issues.

**ITCT 112 IT Essentials II (Network Operating Systems) (3)**

*Prerequisites:* ITCT 111

This is a lab-based course designed to be an overview of Network Operating Systems. Included in the course is an introduction to the Linux operating system; an overview of the Windows 2000 Network Operating System is provided; and concepts in TCP/IP processes and network administration are covered. Also presented are LAN and WAN topologies. This course may be used as preparation for an industry certification exam.

**ITCT 151 Network Management/CISCO I (3)**

*Prerequisites:* ITCT 111

Students learn both the practical and conceptual skills that build the foundation for understanding basic networking. They examine human versus network communication and see their parallels. Introduced to the two major models used to plan and implement networks: OSI and TCP/IP. Gain an understanding of the "layered" approach to networks and examine the OSI and TCP/IP layers in detail to understand their functions and services. Become familiar with the various network devices, network addressing schemes and the types of media used to carry data across the network. Students gain experience using networking utilities and tools, such as Packet Tracer and Wireshark®, to explore networking protocols and concepts. These tools allow students to develop an understanding of how data flows in a network.

**ITCT 152 Network Management/CISCO II (3)**

*Prerequisites:* ITCT 151

By covering routing and routing protocols, students develop an understanding of how a router learns of remote networks and determines the best path to those networks. This course includes static routing and dynamic routing protocols. By examining multiple routing protocols, students gain a better understanding of each of the individual routing protocols and a better perspective of routing in general. The routing protocols such as RIP, RIP v2, EIGRP and OSPF are covered extensively in lecture and lab.

**ITCT 153 Network Management/CISCO III (3)**

*Prerequisites: ITCT 152*

This course is a continuation of studies in network administration. Topics include advanced router configurations, LAN switching, network management, and advanced network design. This course may be used as preparation for an industry certification exam.

**ITCT 154 Network Management/CISCO IV (3)**

*Prerequisites: ITCT 153*

This course is a continuation of studies in network administration. Topics include Wide Area Networks, advanced network design projects, and advanced network management projects. This course may be used as preparation for an industry certification exam.

## PHYSICAL EDUCATION

**PHED 111 Team Sports (1)**

*Prerequisites: None*

Instruction and practice in basketball, team handball, volleyball, soccer, softball, indoor hockey and stickball.

**PHED 112 Individual Sports (1)**

*Prerequisites: None*

Instruction and practice of weight training, bowling, tennis, golf, running, archery, badminton and conditioning exercises.

**PHED 115 Social Sports (1)**

*Prerequisites: None*

Instruction and practice designed to promote social skills and etiquette in mixed company. Includes aerobics and dancing; country-western and folk.

**PHED 140 Golf (1)**

*Prerequisites: None*

Instruction in basic skills, rules, equipment, etiquette and shot making.

**PHED 114 Tennis (1)**

*Prerequisites: None*

Basic instruction in the rules and skills of tennis.

**PHED 150 Introduction to Archery (1)**

*Prerequisites: None*

An easily learned physical activity that is relatively inexpensive and can be practiced throughout the year. Nomenclature and development of physical skills required for PHED 152-Advanced Archery

**PHED 160 Weight Training (1)**

*Prerequisites: None*

Training programs for the development of general strength, tone, endurance, and weight control.

**PHED 161 Advanced Weight Training (1)**

*Prerequisites: PHED 160*

Training with emphasis on muscle tone weight control.

**PHED 191 Taiji Quan: Yang Style Short Form (1)**

*Prerequisites: None*

This class will learn the basics of taiji, the single most practiced exercise form in the world! This set of dance-like movements is practiced to improve your flexibility and balance both physically and mentally. The "short form" is a set of 37 movements, usually done slowly and softly, which can be learned in a single semester. This practice can improve your health, reduce your stress, and is the basis of a powerful martial art.

**PHED 192 Taiji Quan: Yang Style Short Form (1)**

*Prerequisites: None*

This class will continue with the basics of taiji, the single most practiced exercise form in the world! This set of dance-like movements is practiced to improve your flexibility and balance both physically and mentally. The "short form" is a set of 37 movements, usually done slowly and softly, which can be learned in a single semester. This practice can improve your health, reduce your stress, and is the basis of a powerful martial art.

## PHYSICS

### **PHYS 102      Introductory Physics (3)**

*Prerequisites: MATH 120*

Intended for students with minimum previous exposure to physical science does not fulfill the requirement for lab sciences in the Associate of Arts Degree. Introduces the basic concepts and phenomena of physics, including mechanics, heat, sound, optics, electricity and magnetism. Also covered are atomic physics, nuclear physics and relativity. Includes demonstrations and practical applications.

### **PHYS 151      General Physics (3)**

*Prerequisites: MATH 123, MATH 150, PHYS 151L*

A non-calculus study of mechanics, sound and heat. Includes three-hour lab.

### **PHYS 151L      General Physics Lab (1)**

*Prerequisites: MATH 123, MATH 150, PHYS 151L; Co-requisites: PHYS 151*

Study of mechanics, sound and heat.

### **PHYS 160      Engineering Physics I (3)**

*Prerequisites: MATH 162*

This course offers a calculus-based treatment of kinematics, work and energy, particle dynamics, conservation principles, and simple harmonic motion.

### **PHYS 160L      Engineering Physics I Lab (1)**

*Prerequisites: MATH 162*

Requires laboratory experiments associated with the material presented in PHYS 160.

## POLITICAL SCIENCE

### **POSC 110      Political World (3)**

*Prerequisites: ENGL 100*

An introduction to politics, with emphasis on ways people can understand their own political system and the political systems of others.

### **POSC 200      American Politics (3)**

*Prerequisites: ENGL 100*

Survey of American politics, including political behavior of the American electorate, the theory of democracy, the structure and function of the American political institutions and contemporary issues.

## PRE-ENGINEERING

### **ENGR 101      Introduction to CAD (3)**

*Prerequisites: COSC 107 or Instructor's permission, MATH 100*

Introduces the student to the computer as a tool to create basic 2D technical drawings using AutoCAD® 2007, one of the most widely used computer aided design software programs. Provides a basic understanding of the operating system's user interface, managing drawing files, setting up a drawing, using create and modify commands to construct a drawing, adding text and dimensions, and plotting or printing a drawing.

### **ENGR 102      Advanced CAD (3)**

*Prerequisites: ENGR 101 or Instructor's permission*

Presents intermediate to advanced CAD concepts and commands designed to increase the user's productivity. Emphasis will be placed on the tools used for advanced dimensioning techniques, editing features, blocks, external references, drawing standards, drawing collaboration, e-transmittal, and pictorial drawing. Also allows an experienced user to enhance existing skills.

### **ENGR 103      Engineering Graphics (4)**

*Prerequisites: ENGR 101, MATH 100 or Instructor's permission*

Introduces drawing standards, specifications and the importance of design communications. This course covers: concept sketches, computational sketches, design sketches, layout drawings, part drawings, working drawings, electrical drawings, installation drawings and assembly drawings. Multi-view drawing is utilized to represent three-dimensional objects onto the two-dimensional plane. This method of representation is the basis of engineering drawing. It also introduces the use of proper Dimensioning, Notation, Sectioning and the methodology of standard technical drawings.

**ENGR 104 Mechanical and Electrical Drawing Applications (4)**

Prerequisites: ENGR 101, ENGR 102

This advanced drawing course covers industrial applications and will consist of a CAD graphic design project in a selected area of study such as: mechanical, structural, civil, MEP (Mechanical, Electrical, Plumbing), architecture, construction and industrial design areas. The student will be responsible for the complete project development, necessary calculations, presentation and written report. This may be accomplished through an intern program at a local company.

**ENGR 105 Introduction to Engineering and Design (3)**

Prerequisites: MATH 100 or Instructor's permission

This course focuses on the systematic approach to problem solving required in engineering practice and discusses the traits of a successful engineer and the engineering design method. The students will have introductions to bridge building (civil engineering), robotics (electrical engineering) and fluid mechanics (civil and mechanical engineering).

**ENGR 106 Solid Modeling (3)**

Prerequisites: ENGR 101, ENGR 102

Introduces terminology and methods used to produce solid modeling and the creation of parts, assemblies, and drawings. Geometric models in three dimensions provide accurate information on the shape of a part for use in computer-aided engineering (CAE) or computer-aided manufacturing (CAM) applications. It also introduces other in-use industrial CAD/CAE applications to enhance productivity and multi-functional application usage.

**ENGR 110 Computer Aided Problem Solving (3)**

Prerequisites: ENGR 105, COSC 121, COSC 195; Co-requisites: MATH 162

Covers the evolution and application of computers, social and economic implications, and introduction to programming using engineering workstations. Provides extensive practice in writing programs to solve engineering problems. Includes computer interfaces to real-world systems.

**ENGR 205 Engineering Statics (3)**

Prerequisites: PHYS 160, PHYS 160L, MATH 162

This course will employ vector math to cover equilibrium of particles, rigid bodies and structures, the analysis of beams and cables, centroids, centers of gravity, distributed forces and moments of inertia. The application of Mohr's circle will also be discussed.

**ENGR 211 Circuit Analysis I (3)**

Prerequisites: MATH 162; Co-requisites: ENGR 211L, MATH 270

The basic electrical elements and sources and the concepts of energy and power are introduced. Topics addressed include Ohm's Law and Kirchhoff's Laws, resistive networks, node and loop analysis, network theorems, first-order and second-order circuits, sinusoidal sources, complex representations of impedance, phasors, and complex power, and three-phase circuits.

**ENGR 211L Circuit Analysis I Lab (1)**

Prerequisites: MATH 162; Co-requisites: ENGR 211, MATH 270

Provides practical application of learned circuit theory in a controlled lab setting.

**ENGR 212 Circuit Analysis II (3)**

Prerequisites: ENGR 211, ENGR 211L, MATH 270; Co-requisites: ENGR 212L

Provides experience in general transient analysis of electrical circuits. Utilizes state-space equations and Fourier series analysis to examine the network function, convolution, and frequency response.

**ENGR 212L Circuit Analysis II Lab (1)**

Prerequisites: ENGR 211, ENGR 211L, MATH 270; Co-requisites: ENGR 212

This course places emphasis on the lab analysis of sinusoidal and other transient waveforms and their applications.

**ENGR 213 Electronics I (3)**

Prerequisites: ENGR 212, ENGR 212L; Co-requisites: ENGR 213L

Diodes and bipolar and field-effect transistors are introduced. Analysis and design of digital gates, circuits, flip-flops, and memory circuits are included. Circuits employing operational amplifiers and analog-to-digital and digital-to-analog converters will also be covered.

**ENGR 213L Electronics I Lab (1)**

Prerequisites: ENGR 212, ENGR 212L; Co-requisites: ENGR 213

Provides practical application of learned semiconductor theory, with emphasis on the development of troubleshooting skills.

**ENGR 215          Strength of Materials (3)**

Prerequisites: ENGR 205, MATH 270; Co-requisites: ENGR 215L

A lecture course, which looks at the response of static systems, composed of various materials to the application of loading forces.

**ENGR 215L        Strength of Materials Lab (1)**

Prerequisites: ENGR 205, MATH 270; Co-requisites: ENGR 215

This laboratory course utilizes professional lab equipment to illustrate such concepts as tension and compression of loaded members, stress/strain relationships in axially and torsion ally loaded members, and shear/bending moments in beams.

**ENGR 222          Digital Design I (3)**

Prerequisites: COSC 121; Co-requisites: ENGR 222L

Introduces binary number systems and Boolean algebra. Covers combinational logic and state machine design. Includes implementation of VHDL, programmable logic devices, Arithmetic/Logic units, memories, computer organization, input-output, microprocessors, and microcontrollers.

**ENGR 222L        Digital Design I Lab (1)**

Prerequisites: COSC 121; Co-requisites: ENGR 222

Provides direction and strategies in the application of troubleshooting techniques. The applications include expansion from four-bit to multi-bit circuits to demonstrate adaptability of each logic device. The student will be working with converters, encoders, counters, registers, memories, input-output, microprocessors, and microcontrollers.

**ENGR 225          Engineering Dynamics (3)**

Prerequisites: ENGR 205

This course examines kinematics and dynamics of particles, solid bodies and structures utilizing vector methods and momentum and energy methods.

**ENGR 231          Introduction to Fluid Mechanics (3)**

Prerequisites: ENGR 205; Co-requisites: ENGR 225

Introduction to basic fluid mechanics including statics, continuity, velocity of continuous fluids, laminar and turbulent flow, hydrostatic forces and friction.

**ENGR 280          Engineering Internship (3)**

Prerequisites: Second year standing in engineering and successful completion of all required non-elective 200-level engineering courses or successful completion of minimum required trimesters with a minimum cumulative GPA as required by the industry internship partner.

This course provides the qualifying student with an internship or on-the-job training for gaining related experience in the engineering industry at an approved industrial facility.

**ENGR 285          Design Project (3)**

Prerequisites: Second year standing in engineering and successful completion of all required non-elective 200-level engineering courses.

Design methodology and development of professional project-oriented skills including communication, team management and economics. Working in teams, a proposal for a large design is prepared in response to an industrial or in-house sponsor.

**ENGR 290          Special Topics (1-4 credits)**

Prerequisites: Second year standing in engineering and successful completion of all required non-elective 200-level engineering courses and permission of instructor.

This course covers new topics, trends, methodology, skills, practices, industry certifications, etc., of interest in engineering and engineering technology fields.

**ENGR 295          Thermodynamics (3)**

Prerequisites: CHEM 121, CHEM 121L, PHYS 160, MATH 163

This course provides development of thermodynamic analysis, the first and second laws of thermodynamics, entropy and application to engineering power cycles. Related topics include: real gases; Rankine steam cycle; regenerative cycle; Otto, Brayton, and diesel cycles; refrigeration and air conditioning.

## PSYCHOLOGY

### **PSYC 105 Introduction To Psychology (3)**

*Prerequisites: ENGL 100*

Introduces psychology as a science and the study of behavior and mental processes. Topics surveyed include personality, abnormal behavior, learning, memory, motivation, perception, development and social psychology.

## READING

### **READ 098 Developmental Reading (4)**

*Prerequisites: None*

Reading 098 introduces reading skills required for success in comprehending ideas and critical thinking skills for the workplace and the academic setting. It includes the use of the computer for word processing and research. This course stresses logic, maturity of thought and responsibility for one's actions.

### **READ 099 Reading Improvement (4)**

*Prerequisites: None*

Introduces reading skills required for success in comprehending ideas and applying critical thinking skills to materials in the workplace and the academic setting. Includes use of computers for word processing and research skills. (TABE Grade Equivalent 6.7-11.8; ACT Compass Score 58-84)

### **READ 100 Reading and Critical Thinking with Lab (4)**

*Prerequisites: None*

Focuses on reading required for success in college and additional workplace responsibilities. Includes comprehension, problem solving, note-taking, summarizing and computer assisted research skills. TABE Grade Equivalent 12.2-12.9; ACT Compass Score 85-99)

## RENEWABLE ENERGY

### **RENG 220 Introduction to Renewable Energy (3)**

*Prerequisites: MATH 120*

This course is designed to provide the student with an understanding of the fundamental principles of electricity and renewable energy technologies. In this course, the theoretical concepts of basic energy conversion will be explored with special emphasis on specific renewable energy applications and integrated renewable energy systems. Solar energy applications, biomass, nuclear energy, fuel cells and wind turbines will be discussed.

### **RENG 220L Introduction to Renewable Energy Lab (2)**

*Prerequisites: MATH 120; Co-requisites: RENG 220*

This course provides practical application of learned renewable energy theory in a hands-on, interactive lab setting. Emphasis is placed on system schematic interpretation and development, modification of both schematic and hardware, load assessment, and preliminary photovoltaics (PV) system design.

### **RENG 230 Advanced Renewable Energy Systems (3)**

*Prerequisites: RENG 220, RENG 220L, MATH 120*

This course is designed to provide the student with a firm understanding of the design, installation, maintenance, and applications of renewable energy systems. Special emphasis will be placed on photovoltaics (PV) and wind turbines.

### **RENG 230L Advanced Renewable Energy Systems Lab (2)**

*Prerequisites: RENG 220, RENG 220L, MATH 120; Co-requisites: RENG 230*

Students will experience the process of system design and installation applied to a small portable building utilizing both passive and active renewable energy systems. Exercises in developing a maintenance plan and schedule will be included. Students will gain in-depth experience logging data from a weather station and using this data to analyze the effectiveness of their design. Additionally, students will explore the use of the menu settings of on-site power conditioning equipment.

## SCIENCE

### **SCIE 093 GED Science (3)**

*Prerequisites: None*

Prepares students to pass the science section of the GED exam. This course focuses on integrated concepts and principles in biology, earth science, physics, and chemistry.

## SOCIAL SCIENCES

### **SOSC 093 GED Social Science (3)**

*Prerequisites: None*

Prepares students to pass the social science section of the GED exam. This course covers important concepts and issues in history, geography, economics, political science, and behavioral science.

### **SOSC 101 Introduction to Sociology (3)**

*Prerequisites: ENGL 100*

A general survey of the fundamental concepts and theories of contemporary sociology: culture, the economy, family structure, deviance, and the elements and processes of social interactions, and the application of sociological principles to social institutions, groups and problems.

### **SOSC 210 Contemporary Indian Issues (3)**

*Prerequisites: ENGL 100*

Critical analysis of modern Native American issues with an emphasis on personal involvement in constructive problem-solving. The course surveys contemporary social, legal, political, and economic issues as they affect Native American people individually and in communities, both urban and rural.

## SPEECH

### **SPCH 130 Public Speaking (3)**

*Prerequisites: ENGL 101*

A performance course. Designed to develop students' public speaking skills to become more confident and more effective speakers. Students will research, prepare and present persuasive and informative speeches.

## VISION CARE TECHNOLOGY

### **OPTI 101 Introduction to Optics w/Lab (5)**

*Prerequisites: Acceptance into the program*

This lecture and laboratory course introduces the student to human eye anatomy, optical terms, optical concepts and related math, instruments, equipment, lens and frame materials/types used in the surfacing and finishing of ophthalmic prescription eyewear. This course establishes the foundation for all other advanced ophthalmic courses.

### **OPTI 105A Ophthalmic Finishing & Surfacing I w/Lab (5)**

*Prerequisites: Acceptance into the program.*

This course will introduce the student to terms, instruments, lens and frame materials to be used in the surfacing and finishing of ophthalmic prescription eyewear. This lecture and laboratory course provides students with the basics of lens grinding and finishing of single vision lenses and how to use fabricating equipment safely.

### **OPTI 110A Ophthalmic Dispensing I w/Lab (4)**

*Prerequisites: OPTI 101*

This course introduces historical and modern dispensing practices and the laws governing opticianry. Topics include basic eyeglass choices, dispensing, measurements, adjustments, and record keeping.

### **OPTI 112 Opticianry Environmental & Safety Issues (2)**

*Prerequisites: Acceptance into the program*

The origin and purpose of the Occupational Safety Health Act (OSHA) will be presented, along with its coverage and standards. The focus is on the OSHA Hazard Communication Standard developed to address the education and training requirements outlined in the Standard. The specifics of managing an optical/ophthalmic laboratory in terms of personal safety and environmental management will be covered. The development of OSHA compliance will be detailed.

### **OPTI 115 Ophthalmic Sales (2)**

*Prerequisites: OPTI 101*

This course is designed to assist the student to function as a professional salesperson. It is a structured, programmed approach to providing effective customer service. Students will perform sales demonstrations utilizing various dispensing scenarios.

**OPTI 205A Ophthalmic Finishing & Surfacing II w/Lab (5)**

*Prerequisites: OPTI 105A*

This course is a continuation of Ophthalmic Surfacing and Finishing I with the primary focus on fabricating prescriptions using various multifocals, lens treatments and enhancements, frame and lens designs, production, quality control and other related advanced techniques.

**OPTI 215 Anatomy & Physiology of the Eye (3)**

*Prerequisites: OPTI 101*

This course gives the student an insight into the anatomical structure of the eye and its adnexa and the function of its parts as they relate to vision and the fitting of contact lenses. Common pathologies and ocular pharmacology are presented.

**OPTI 220A Ophthalmic Dispensing II w/Lab (4)**

*Prerequisites: OPTI 110A*

This course presents ophthalmic instruments and devices; analysis of absorptive lenses; computing and compensation of vertical imbalance; discussion of ethics and legal issues; record keeping and communication.

**OPTI 225 Management for Opticians (3)**

*Prerequisites: OPTI 101*

This basic optical management course presenting basic management and leadership skills necessary for a successful eye care office. The course will teach analysis, creative thinking, and judgment, planning strategy and implementation skills necessary for today's optical business challenges.

**OPTI 235 Contact Lenses w/Lab (4)**

*Prerequisites: OPTI 215*

This lecture and laboratory course begins with a historical review of contact lenses. It progresses into the theory; design and optical principles of contact lenses; indications and contra-indications for contact lens wear; patient evaluation; lens types and availability; fundamental techniques and fitting procedures including the use of the biomicroscope, keratometer, rigid contact lens modifiers, and radiuscope; ANSI standards; patient education on care, cleaning, insertion and removal of lenses.

**OPTI 236 Introduction to Refraction w/Lab (4)**

*Prerequisites: OPTI 215*

This course focuses on the refractive status of the human eye; anatomy and physiology and the visual system; binocular vision; the ophthalmic prescription; instrumentation and equipment used in clinical refraction; and basic pre-testing procedures.

**OPTI 240 Optical Laboratory Technology Internship (3)**

*Prerequisites: OPTI 205A*

This internship course covers routine procedures used in optical laboratory lens fabrication labs, which provides the student with direct hands-on experience in the fabrication labs. Under supervision, students will coordinate all activities and functions required to fabricate optical eyewear.

**OPTI 245 Ophthalmic Dispensing Internship (3)**

*Prerequisites: OPTI 220A*

This internship course covers routine procedures used in a retail-dispensing store, which provides the student with direct hands-on experience in the dispensing clinic. Under supervision, students will coordinate all activities and functions required to dispense and fabricate optical eyewear.

## Personnel Directory

Karen Abe, College Residence Assistant  
Certificate, Psychology/Social Work, Stratford Career Institute

Joseph S. Abeita, College Residence Assistant  
B.A., Studio Art/American Indian Studies, University of Arizona

William Adams, Instructor (Chemistry)  
M.S., Applied Mathematics Statistics, Case Western Reserve University  
Education Specialist, University of New Mexico  
M.S., Bio-Chemistry, University of New Mexico  
B.S., Mathematics, Kent State University

Ruth Allery, Early Childhood Education, Coordinator Instructor  
M.A., Elementary Education, University of South Dakota  
B.S., Elementary Education, Black Hills State University

Dr. Sherry Allison, President SIPI  
Ed.D. Doctorate of Education, Northern Arizona University  
M.A., Master of Arts in Education, Northern Arizona University  
B.S.W., Bachelor of Social Work, New Mexico State University

William Armijo, Education Project Specialist  
M.B.A., Business Administration, College of Santa Fe  
B.A., Business Administration, College of Santa Fe

Albert Artiaga, Guidance Counselor  
M.A., Counseling, University of California, Sonoma  
B.A., Mexican-American Studies, University of California, Sonoma

Evangeline Bahe, Secretary (OA)  
A.A.S., Administrative Assistant, Albuquerque Technical Vocational  
Institute

Leslie Baumgardner, Administrative Support Assistant (OA)  
Certificate, Computer Secretary, Albuquerque Business College

Thelma Begay-Alonzo, College Residence Assistant  
A.A.S., Office Information Applications, Southwestern Indian Polytechnic  
Institute

David Benalli, Mail Clerk  
A.A., Liberal Arts, Southwestern Indian Polytechnic Institute

Audrey Benallie, Information Technology Specialist  
A.A.S., Computer Information Systems, Devry Institute of Technology

Elizabeth Bizardi, Educational Technician  
B.S., Mathematics, New Mexico Institute of Mining & Technology

Joseph Carpio, Supervisory Admissions & Financial Aid Specialist  
M.A., Organizational Management, University of Phoenix  
B.A., Sociology, University of New Mexico

Kevin Chee, Security Guard

Barbara Chino, Educational Technician  
Certificate, Business Administration, Haskell Indian Nations University

Cecelia Cometsevah, Vocational Rehabilitation Specialist  
M.A., Counseling, University of New Mexico  
B.A., Sociology, University of Albuquerque

Cecelia Crespín, Office Automation Clerk  
A.A.S., Accounting, Southwestern Indian Polytechnic Institute

Bertha Curley, Lead College Residence Assistant  
B.S., Physical Education, University of New Mexico

Michael Daney, Instructor (Health/PE)  
M.S., Health, Physical Education, University of Kansas  
B.S., Health, P.E. & Safety, University of Kansas

William Dyea, Maintenance Mechanic

Bernadine Fisherman, Human Resources Specialist

William Fragua, Supply Technician (OA)  
A.A., Liberal Arts, Community College of Denver-North

Paul Frank, Instructor (Communications)  
Ed.D., Education, University of Southern California  
B.A., M.A., English, University of California at Los Angeles

Allen Gachupin, Supervisory Residential Life Specialist  
M.A., Education Administration, New Mexico State University  
B.A., Physical Ed/History/Social Science Group, Western New Mexico  
University

Elliott Gachupin, Gardener

John Gachupin, Maintenance Worker

Joan Goodman, Coordinator, Family Extension & Education Program  
M.A., French, University of New Mexico  
B.S., Education, University of New Mexico

Matt Harriman, Supervisory Security Guard  
Certificate, Law Enforcement Academy, University of Alaska-Fairbanks

Christopher Harrington, Supervisory Instructional Systems Specialist,  
Liberal Arts/Business  
J.D., Federal Indian Law, University of Utah  
B.S., Philosophy/English, University of New Mexico

Sam Henderson, Instructor (Vision Care)  
B.S., Mellon University  
Certifications: Optician, AMOO,  
National Contact Lens Examiners Certified

Vina Hiya, Instructor (Business Education)  
B.S., Education, Western New Mexico University

Jerome Henry, Security Guard

Edward Hummingbird, Institutional Effectiveness Specialist  
M.B.A., University of Oklahoma  
B.S., Management, Northeastern State University

Roxy Hunt, College Residence Assistant  
M.S., Sport Administration, University of New Mexico  
B.S., Athletic Training, University of New Mexico

Barbara James, Program Support Assistant (OA)  
A.A., General Studies, Highline Community College

Verbie James, Gardener  
A.A.S., Natural Resources Management, Southwestern Indian Polytechnic  
Institute

Antoinette Jim, Office Automation Clerk  
A.A., Liberal Arts, Southwestern Indian Polytechnic Institute

Joseph Jiron, Gardener

James Jojola, Maintenance Mechanic

Marcella R. Johnson, Secretary, Academic Support

Randy Lalio, Laborer

Tanya Lee, Secretary, Liberal Arts/Business

Leo Livingston, College Residence Assistant

Neva Lucero, Education Project Specialist  
B.A., Biology/Sociology, New Mexico Highlands University

Perfilia Madalena, Program Support Assistant

Jolene Manus, Librarian  
M.A., Information Resources & Library Science, University of Arizona  
B.S., Elementary Education, Northern Arizona University

Luanne Manwell, Information Technology Specialist  
M.B.A., Information Technology, University of Phoenix  
B.B.A., Management Information Systems, University of New Mexico

Gloria Mariano, Education Project Specialist  
B.S., Sociology/Psychology, Eastern New Mexico University

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B.A., Business Education, New Mexico Highlands University  
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M.A., Educational & Public Administration, University of New Mexico  
B.A., Communications/Reading, University of New Mexico  
Reading Specialist, University of New Mexico

David Mike, College Residence Assistant  
A.A.S., Business Administration, Haskell Indian Nations University

Joseph Mitchell, Instructor (English)  
M.A., Education Administration, University of New Mexico  
B.A., University Studies, University of New Mexico

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B.A., Art Studio, University of New Mexico

Monte Monteith, Education Specialist  
M.A., Economics, New Mexico State University  
B.A., Economics, Government, New Mexico State University

Valerie Montoya, Vice President, Academic Programs  
M.A., Sociology, Stanford University  
B.S., Sociology, Brigham Young University

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Yvonne Paquin, College Residence Assistant

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M.S., B.S., Electrical Engineering, Oklahoma State University

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B.A., History, University of New Mexico  
A.A., Social Science, Dine' College

Lorena Pino, College Residence Assistant

Marie Pino, College Residence Assistant

Alice Platero, Office Automation Assistant  
Certificate, Bryant & Stratton Business College, Chicago, IL  
A.A., Early Childhood Education

Juana Ray, Secretary (OA)

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B.A., Communication, University of New Mexico  
A.A.S. Ophthalmic Technician Community College of the Air Force  
A.A.S. Optical Technology, Southwestern Indian Polytechnic Institute

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B.S., Agriculture, New Mexico State University  
A.A.S., Natural Resources Technology, Southwestern Indian Polytechnic Institute

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M.A., Biosocial Anthropology/Math, University of New Mexico  
B.A., Anthropology/Philosophy, The Evergreen State College

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C.P.A., State of Ohio  
M.B.A., University of New Mexico  
B.A., English, University of Washington

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B.S., Business Administration, University of Phoenix

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B.S., Criminal Justice, ITT Technical Institute  
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Ph.D., Electrical Engineering, University of New Mexico  
M.S., Electrical & Electronics Engineering, University of Shiraz  
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