1996–1997 CATALOG

Albuquerque Technical Vocational Institute

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Albuquerque, New Mexico 87105

TVI
COMMUNITY
COLLEGE

TVI is an equal opportunity institution.

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About This Catalog

The Catalog is the student's official guide to programs, courses and policies of Albuquerque Technical Vocational Institute. Beginning with an introduction that includes the TVI mission statement, the Catalog covers:

- general information about TVI: a summary of academic offerings; information about admission, registration, expenses and financial aid; academic regulations and student services; and
- instructional programs: details about TVI's six departments, including course descriptions and requirements for earning degrees and certificates.

This Catalog also includes lists of TVI Governing Board members, administrators, student services/learning resources personnel and faculty, as well as a campus telephone directory.

The TVI Catalog is a summary of information of interest to students; it is not a complete statement of policies and rules. Information in the Catalog is subject to change. Other important information is published in:

- the class schedule;
- the Student Handbook;
- the Student Financial Aid Guide; and
- handbooks published by instructional departments and other offices.

Not all programs and classes listed in the Catalog are offered at all campuses or every term. If fewer than 12 persons have applied to begin a program, it may be canceled that term. After a program begins, no required class will be canceled, regardless of enrollment, although support classes may be canceled due to insufficient enrollment.

This Catalog is available in alternative formats from the Special Services office at Main Campus.

Introducing TVI

Now in its third decade, the Albuquerque Technical Vocational Institute is an accredited community college offering courses in a variety of occupational, college transfer and adult/developmental education subjects. In 1996–97 TVI's programs include:

- certificates: in 34 business, health, technologies and trades occupations;
- associate degrees: in 27 occupational fields and liberal arts;
- college transfer: courses in 28 liberal arts disciplines transferable for freshman and sophomore credit at four-year institutions; and
- adult/developmental education: basic skills (including English as a second language and GED exam preparation) and remedial, preparatory and developmental classes for students preparing to meet admission requirements at TVI or other institutions.

Other TVI programs include: concurrent enrollment for high school students, special services for students with disabilities, tutoring and self-paced learning centers. TVI also offers workshops, support for small business and custom training for local employers.

TVI
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Equal Opportunity Policy

The Albuquerque Technical Vocational Institute affirms that it will not discriminate on the basis of sex, race, color, national origin, religion, age or disability in any of its practices or procedures in accordance with applicable federal, state and local laws, nor will it condone any act of illegal discrimination or harassment on the part of its employees. This provision includes, but is not limited to, employment, admissions, testing, financial aid and educational services.

It is the policy of the Institute not to discriminate on the basis of sexual orientation, marital status or ancestry.

Any person who wants to file a complaint based on these laws should contact the equal opportunity officer, Delma Molina, in the Human Resources Office, 224-4600.

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, Albuquerque TVI provides notice that no qualified individual with a disability shall, on the basis of the disability, be excluded from participation in, be denied the benefit of, or otherwise be subjected to discrimination related to any of the institution's educational programs or activities.

If a student has concerns about TVI's compliance, he or she should contact A. Paul Smarrella in Special Services, 224-3259.

History

Authorized by the New Mexico Legislature in 1963, the Albuquerque Technical Vocational Institute was approved by district voters in 1964 to provide adults with skills necessary for success in the world of work. The first nine classes, for 155 students, were held in the summer of 1965 in surplus barracks and a vacated elementary school.

From the first, TVI's priority has been job training, broadly defined to include preparatory work, skill improvement for adults, vocational courses for high school students and, in recent years, liberal arts and college transfer. Today's job training programs are offered in business, health, technologies and trades subjects, with emphasis on up-to-date, hands-on skills needed by local employers. Internships, co-op programs and apprenticeships are available.

TVI was accredited by the North Central Association of Colleges and Schools in 1978. The first college-prep course, MATH 100, was offered in 1985. Degree-granting power was approved for TVI by the Legislature in 1986, beginning the transition to a community college. By the late 1980s, liberal arts was not only TVI's fastest growing component but also an increasingly important part of occupational instruction, and the University of New Mexico had arranged to offer all its remedial courses through TVI.

Until 1979, TVI was part of the Albuquerque Public Schools, with the APS Board of Education serving as the TVI Governing Board. The first election for an independent TVI board was held in September 1979, following approval by the Legislature. In 1994, the Legislature approved districting the Governing Board.

TVI Today

With enrollment approaching 20,000, TVI is the second largest postsecondary institution in New Mexico. The Main Campus occupies 60 acres near downtown Albuquerque—with the old elementary school housing administrators—and the 42-acre Joseph M. Montoya Campus is in the Northeast Heights. Classes also are offered at the Rio Rancho Campus, the South Valley Campus and at the University of New Mexico, as well as various off-campus sites. Plans are being made for a permanent West Side presence.

TVI's classrooms, libraries and laboratories are modern and comfortable. Each student has access to state-of-the-art equipment, especially computers. TVI programs, facilities and services are accessible to the disabled.

Advisory committees from local businesses help assure that TVI students acquire the skills needed for success on the job, and TVI helps graduates find jobs. The Institute also cooperates with other two- and four-year schools on course articulation and student transfer.

TVI's Governing Board members are elected by voters in seven geographical districts within the Institute district, which includes all of Bernalillo County and part of Sandoval County.

Funding for TVI programs and most construction and equipment comes from a property tax levy in the Institute district and annual appropriations by the New Mexico Legislature. Tuition and fees are moderate, and financial aid is available to many students. Private contributions through the TVI Foundation are increasing every year.

TVI's academic year is divided into three terms: fall (begins in September), spring (begins in January) and summer (begins in May). Short sessions also are held in some programs. Most programs admit beginning students each term.

Community Offerings

In addition to the adult/developmental and credit courses described in this Catalog, TVI offers a number of non-credit educational opportunities to the community, including:

- walk-in learning centers (see Business Occupations Learning Centers, page 101);
- libraries (page 53) and
- the Emeritus College, offering seminars and workshops for those over 50.

The Institute for Business and Industry Development is developing customized short-term training for local employers; it also coordinates offerings of:

- the Small Business Development Center;
- Continuing Education Studies, offering evening and weekend workshops on business, computer and hobby topics, and
- Contract Training, which arranges custom courses, in the classroom or at the work place, for employees and managers.

Philosophy

The Albuquerque Technical Vocational Institute, a community college, believes that each individual, regardless of economic status, should be provided the educational opportunity to develop to the maximum extent possible. The Institute believes that occupational education is necessary for an ever-increasing number of New Mexicans. The Institute believes in providing occupational, basic, general and related education to enable students to develop competence, self-awareness and social responsibility to compete successfully in a chosen field.

Mission Statement

The Albuquerque Technical Vocational Institute recognizes its unique role as a provider of education leading to employment. Therefore, the primary emphasis is placed on instruction that enhances employment opportunities and lifelong learning. The Institute provides coursework leading to occupational certificates and the degrees Associate of Applied Science, Associate of Arts and Associate of Science; and opportunities for transfer credit to other degree-granting institutions.

The three-fold mission of the Institute is:

- to provide occupational education that enables students to acquire job skills consistent with local, state and national work force needs;
- to provide basic education and general education that will expand students' opportunities to succeed in society and the world of work; and
- to participate in partnerships which promote economic development, including training opportunities for the work force.

Goals

1. The Institute, consistent with work force needs, will offer occupational education to develop its students to the desired level of competence.
2. The Institute will use its degree-granting powers to enhance occupational education and to participate with other colleges and universities in the delivery of education statewide.
3. The Institute will collaborate with other degree-granting institutions to ensure that its liberal arts courses and, where applicable, its occupational courses meet the standards required for transfer credit.
4. The Institute will offer continuing education consistent with identified needs.
5. The Institute, in responding to unmet needs, will provide educational programs to support the social, cultural and personal development of the individual.
6. The Institute will strive for accessibility, equity and diversity to enable New Mexicans to develop educationally and economically regardless of their financial resources or previous education.
7. The Institute will work with businesses, government and other institutions to support the economic development of the community and state.

Accreditation

TVI is accredited to grant certificates and associate of applied science, associate of arts and associate of science degrees by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools.

In addition, specific programs have accreditation or approval by appropriate agencies.

- The Accounting, Administrative Assistant, Business Administration, Microcomputer Management Specialist and Pre-Management associate degree programs are accredited by the Association of Collegiate Business Schools and Programs.
- The Court Reporting program is approved by the Board on Approved Student Education of the National Court Reporters Association.
- The Legal Assistant Studies program is approved by the American Bar Association.
- The Practical Nurse and Associate Degree in Nursing programs are accredited by the National League for Nursing.
- The Medical Laboratory Technician program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences.
- The Respiratory Therapy program isaccredited by the Commission on Accreditation of Allied Health Education Programs and the Joint Review Committee for Respiratory Therapy Education.
- The Design Drafting Engineering Technology and Electronics Engineering Technology programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET).
- The Automotive Technology program is certified by the National Automotive Technicians Education Foundation, Inc.
- The Culinary Arts associate degree program is accredited by the American Culinary Federation Educational Institute.
- The Truck Driving program is certified by the Professional Truck Driver Institute of America, Inc.
- The Tutorial/Learning Centers are accredited by the College Reading and Learning Association.

General Education Statement

The Albuquerque Technical Vocational Institute, a community college, provides basic, occupational and general education for a population which includes a broad spectrum of ages, cultural backgrounds and intellectual abilities. The Institute is committed to general education and related courses as an integral part of certificate and associate degree programs. The general education courses include mathematics, communication skills, social and natural sciences, humanities, foreign languages and fine arts. It is believed that general education enhances students' personal and professional attitudes, habits and skills as they pursue lifelong continuum of learning.

In certificate programs, related education courses cover competencies in communication, math and human relations to better prepare students for the world of work.

In associate degree programs, students are required to complete a minimum of 15 semester credit hours of general education in addition to courses in their major field of study. The required general education courses have been selected to enhance students' personal and professional habits, attitudes and skills. These courses are chosen to increase students' abilities to understand and participate more effectively as members of the community and to give breadth to their chosen careers.

The general education courses in the transfer liberal arts degree reflect the common requirements of the state's six universities and approximate the universities' core curriculum in the freshman and sophomore sequence.

Assessment

Albuquerque TVI, in compliance with the North Central Association's Commission on Institutions of Higher Education, regularly conducts assessment of its instruction. Assessment of student academic achievement is an effort throughout each of the instructional departments wherein the departments evaluate their success in fulfilling both course and program objectives. Towards this end, during a semester students may be requested to participate in forums, portfolios, testing or surveys that help the departments measure student success or satisfaction.

Specifically, in attempting to measure student academic achievement, instructional departments are trying to better understand those circumstances that lead to student success and mastery of course objectives and program goals. In applying measurement tools, departments gain knowledge and experience that help them to continue to do things well or to improve instruction where weaknesses are found.

1996–97 Academic Calendar

Fall Term 1996

First day of instruction ..... September 3
Last day to enroll
- Full term classes ..... September 9
- Short session classes ..... third day of the session

Last day to change from audit to CR/NC or a traditional grade
- Full term classes ..... September 9
- Short session classes ..... third day of the session

Applications for graduation due ..... September 16
Midterm ..... October 22
Staff Development Day (no classes; offices closed) ..... October 25
Last day to change to audit
- Full term classes ..... November 22
- Short session classes ..... Friday after mid-point of the class

Last day to change from CR/NC to a traditional grade
- Full term classes ..... November 22
- Short session classes ..... Friday after mid-point of the class

Last day to withdraw
- Full term classes ..... November 22
- Short session classes ..... Friday after mid-point of the class

Thanksgiving holiday ..... November 28–29
Last day of the term ..... December 19

Spring Term 1997

First day of instruction ..... January 13
Martin Luther King Day (no classes; offices closed) ..... January 20
Last day to enroll
- Full term classes ..... January 21
- Short session classes ..... third day of the session

Last day to change from audit to CR/NC or a traditional grade
- Full term classes ..... January 21
- Short session classes ..... third day of the session

Applications for graduation due ..... January 27
Presidents' Day (no classes; offices open) ..... February 17
Midterm ..... March 5

Last day to change to audit

Full term classes ..... April 4

Short session classes ..... Friday after mid-point of the class

Last day to change from CR/NC to a traditional grade

Full term classes ..... April 4

Short session classes ..... Friday after mid-point of the class

Last day to withdraw

Full term classes ..... April 4

Short session classes ..... Friday after mid-point of the class

Graduation ..... April 25

Last day of the term ..... May 1

Summer Term 1997

First day of instruction ..... May 19

Last day to enroll

Full term classes ..... May 27

Short session classes ..... third day of the session

Last day to change from audit to CR/NC or a traditional grade

Full term classes ..... May 27

Short session classes ..... third day of the session

Memorial Day holiday ..... May 26

Applications for graduation due ..... June 2

Midterm ..... June 27

Independence Day holiday ..... July 4

Last day to change to audit

Full term classes ..... July 25

Short session classes ..... Friday after mid-point of the class

Last day to change from CR/NC to a traditional grade

Full term classes ..... July 25

Short session classes ..... Friday after mid-point of the class

Last day to withdraw

Full term classes ..... July 25

Short session classes ..... Friday after mid-point of the class

Last day of the term ..... August 8

TVI COMMUNITY COLLEGE

Graduate Job Placement, 1995

	TOTAL GRADUATES	Could Not Locate	Not Seeking Employment (serving in military)	Continuing School [1]	Available for Work	Employed in Training-related Job (non-related)	Unemployed But Seeking	PERCENT EMPLOYED (training-related job; graduates available)	Working in New Mexico	Average hourly rate in training-related job*	Average annual salary in training-related job*
Business Occupations											
Accounting	5	1	1	1	3	2	1	67%	2	$6.35	$13,200
Accounting, AAS	33	3	5	3	25	21 (4)	4	84%	25	$8.60	$17,889
Administrative Assistant	12	–	3	2	9	8 (1)	1	89%	9	$6.54	$13,606
Administrative Asst, AAS	33	1	8	2	24	20 (1)	4	83%	21	$8.83	$18,369
Business Administration	12	2	2	2	8	8	–	100%	8	$8.56	$17,800
Business Admin, AAS	30	3	6	4	21	20 (2)	1	95%	20	$9.65	$20,074
Court Reporting, AAS	4	1	–	–	3	3	–	100%	3	$9.93	$20,664
Legal Asst Studies, AAS	57	–	18	5	39	34 (4)	5	87%	38	$8.68	$18,044
Microcomputer Mgt Specialist, AAS	1	–	1	1	–	–	–	–	–	–	–
Pre-Management, AA	12	1	11	9	–	–	–	–	–	–	–
Sales and Cashiering	15	1	1	2	13	12	1	92%	12	$5.32	$11,061
Secretarial Studies	2	–	–	–	2	2	–	100%	2	$5.75	$11,960
Health Occupations											
Child Development, AA	6	–	1	1	5	4 (1)	1	80%	5	$5.75	$11,952
Health Unit Clerk	30	3	10	5	17	16 (2)	1	94%	19	$6.76	$14,056
Licensed Practical Nurse	28	7	8	4	13	11 (3)	2	85%	14	$11.44	$23,799
Medical Lab Technician, AS	13	–	2	3	11	9 (1)	2	82%	10	$9.59	$19,955
Nursing, AS	83	7	5	1	71	69 (2)	2	97%	70	$14.39	$29,926
Nursing Assistant	60	11	8	7	41	39 (3)	2	95%	42	$6.99	$14,539
Pharmacy Technician	19	3	2	1	14	12	2	86%	12	$7.05	$14,667
Phlebotomist	26	5	5	2	16	16 (2)	–	100%	18	$6.81	$14,155
Respiratory Therapist, AS	16	1	–	–	15	15	–	100%	15	$10.28	$21,387
Respiratory Therapy Technician	6	–	2	–	4	4	–	100%	3	$8.90	$18,512

*Based on 40-hour work week

Technologies										
Arch/Engineering Drafting Tech 6	1	1	2	4	3 (1)	1	75%	4	$7.10	$14,768
Arch/Eng Draft Tech, AAS 14	2	–	–	12	12	–	100%	12	$9.06	$18,850
Business Computer Prog Tech 16	2	6	9	8	6 (1)	2	75%	7	$7.39	$15,380
Bus Computer Prog Tech, AAS 17	5	3	2	9	6 (1)	3	67%	7	$9.52	$19,797
Design Drafting Eng Tech, AAS 5	–	1	–	4	4 (1)	–	100%	5	$9.70	$20,176
Electronics Eng Technology, AAS 8	1	–	–	7	7	–	100%	7	$9.83	$20,456
Electronics Technology 19	1	1	2	17	13	4	76%	13	$10.72	$22,289
Electronics Tech, AAS 26	4	1	1	21	21 (1)	–	100%	18	$11.47	$23,856
Instrumentation/Control Tech, AAS 5	1	–	–	4	4	–	100%	4	$9.54	$19,848
Laser Elec-Optic Tech, AAS 2	–	2	2	–	–	–	–	–	–	–
Manufacturing Skills 12	2	–	–	10	9	1	90%	9	$8.50	$17,680
Manufacturing Technology 2	1	–	–	1	1	–	100%	1	–	–
Manufacturing Tech, AAS 1	–	–	–	1	1	–	100%	1	–	–
Trades & Service Occupations										
A/C, Heating, Refrigeration 22	–	3	3	19	17 (1)	2	89%	18	$7.92	$16,477
Automotive Body Repair 8	1	–	–	7	7	–	100%	7	$6.23	$12,948
Automotive Technology 14	2	3	2	9	9	–	100%	9	$7.36	$15,301
Baking 18	1	14	11	3	3 (2)	–	100%	4	$9.35	$19,448
Carpentry 17	2	10	6	5	5 (3)	–	100%	8	$6.55	$13,624
Construction Technology, AAS 7	1	1	–	5	4 (1)	1	80%	5	$7.92	$16,470
Criminal Justice, AAS 26	6	7 (1)	7	12	6 (5)	6	50%	11	$7.96	$16,548
Culinary Arts, AAS 6	–	–	–	6	5 (1)	1	83%	6	$9.83	$20,453
Diesel Equipment Technology 6	2	–	–	4	4	–	100%	4	$11.28	$23,453
Electrical Trades 26	4	3	2	19	19	–	100%	19	$7.44	$15,477
Environ Protection Tech, AAS 21	3	4	3	14	13 (1)	1	93%	14	$9.23	$19,192
Fire Science, AAS 5	1	–	–	4	4	–	100%	4	$11.04	$22,963
Food Service Management 21	2	3	6	16	16	–	100%	16	$6.79	$14,127
Machine Tool Technology 13	–	3 (1)	–	9	9 (1)	–	100%	10	$7.50	$15,600
Mechanical Technology, AAS 6	–	–	–	6	6	–	100%	6	$7.72	$16,052
Metals Technology, AAS 6	1	–	1	5	4 (1)	1	80%	5	$9.10	$18,886
Plumbing 24	2	6	4	16	15 (2)	1	94%	17	$8.68	$18,054
Quantity Food Preparation 20	2	13	12	5	5	–	100%	5	$7.07	$14,712
Truck Driving [2] 44	1	3	–	40	39 (1)	1	98%	30	[2]	[2]
Welding 13	3	4 (1)	2	5	5 (1)	–	100%	6	$8.64	$17,966
TOTAL 959	**104**	**191 (3)**		**661**	**607**		**92%**			

[1] *Counted in* Not Seeking Employment *or* Available for Work

[2] *Local $9.21/hr, $19,163/yr; over the road $13.50/hr, $28,089/yr*

Admission and Registration

Admission is the process of applying and being accepted to TVI. Registration (see page 20) is the process of selecting courses, receiving a schedule of classes and completing enrollment at TVI.*

Admission

The Albuquerque Technical Vocational Institute has an open admission policy which provides all interested individuals the opportunity to enroll in the Institute's certificate or degree programs as well as individual courses. Students are considered for admission to TVI without regard to sex, race, color, national origin, religion, age or disability. It is the policy of the Institute not to discriminate on the basis of sexual orientation, marital status or ancestry.

TVI's academic year is divided into three terms which begin in September, January and May. Students are urged to apply for admission at least two months before registration begins and may apply for any term up to one year in advance.

Most full-time students attend school year-round until they finish their programs. In most programs, it is possible to take a term off, if necessary. However, students who interrupt their programs may not be able to resume their studies at the time they want, because classes they need may not be offered every term. An interruption in enrollment may also mean a change in program requirements upon the student's return.

General Admission Requirements

Any person wishing to apply for admission to TVI must meet one of the following criteria:

- be at least 18 years of age; or
- qualify under Concurrent Enrollment; or

*Note: These requirements and procedures do not apply to students taking Adult Education classes (see page 55).

- have completed high school#; or
- have the General Education Development (GED) diploma.

Note: Many Trades & Service Occupations and Health Occupations programs have additional admission requirements.

In order to meet this criterion, the school must be a regular high school or a home school. The regular high school must be approved by the state department of education in the institution's home state or by a regional accrediting agency approved by the New Mexico State Board of Education; the home school must be accredited by the Distance Education and Training Council Accrediting Commission (formerly known as the National Home Study Council).

Admission Status

A student's admission status is determined by the student's primary goal for taking courses at TVI.

Certificate/Degree Status: Certificate/degree students are those who have chosen a program of study and intend to earn a certificate or degree from TVI. Note: Students must demonstrate basic computer literacy in order to earn a certificate or degree (see page 41).

Non-Degree Status: Those who do not wish to earn a degree or certificate or have not yet chosen a major (degree or certificate program) are non-degree students. Students who enter TVI in non-degree status may request to change to certificate/degree status, declare a major and transfer credits earned in non-degree status by completing a Declare a Major form.

Note: Non-degree status will not satisfy eligibility requirements for financial aid, veterans' educational benefits or other assistance.

Concurrent Enrollment: Qualified high school juniors and seniors may be allowed to enroll in a maximum of two vocational and/or academic courses per term. Students may attend courses on the TVI campus or at their high school. Admission for concurrent enrollment is in non-degree status. Satisfactory course completion may meet both high school graduation requirements and TVI certificate and/or degree requirements.

Concurrent enrollment includes the Associate Degree Prep program, which allows juniors and seniors at some Albuquerque high schools to take TVI business, technology and trades courses and earn credits toward high school graduation and a TVI degree. The courses meet outside regular school hours.

Information regarding the Concurrent Enrollment program and specific admission requirements is available in the Admissions Office at any TVI campus and from the student's high school counselor or vocational coordinator.

Applying for Admission

Returning Students

A returning student (any student who has previously attended TVI in certificate/degree or non-degree status and has been out for at least one term, summer term excluded)

must visit the Admissions Office to update his/her status. Students who have been absent for more than one year will be required to complete a new admissions application.

New Students

New students—those who have never attended TVI in certificate/degree status—should take the following steps:

1. Complete a TVI Application for Admission form, available from the Admissions Office.
2. Return the application to the Admissions Office. The application may be mailed 30 days before the term begins; after that, it must be hand delivered to the Admissions Office.

Advisement and Counseling

Counselors, advisors and student technicians are available to assist students with identifying and/or meeting their educational goals.

Program and Course Placement

High School/GED Requirement: Students who have not earned a high school diploma (see General Admission Requirements) and are interested in entering a certificate or degree program may be required to take the Accuplacer or other qualifying exam. The results of the exam may affect the student's eligibility to enter his or her chosen program.

Health Requirement: An applicant will be discouraged from entering a program where chances of success are poor because of a health or physical condition. An applicant can be denied admission to a program where health or physical condition can be dangerous to the applicant or others.

Program and/or Course Requirements: Effective July 1995, all entering students are required to take the Accuplacer placement advisement test unless they meet one of these conditions:

- have minimum ACT, SAT or ASSET scores;
- have completed ENG 101 and MATH 120 or equivalent with a minimum grade of C at an accredited institution;
- obtain permission from the department to enroll in a class (Permission to Enroll forms are available in the department office);
- enroll in an exempt course;
- enroll in a certificate program in the Trades & Service Occupations Department and plan to take all courses in that department; or
- enroll only in Adult Education classes.

Information on placement test requirements and exemptions is available in the Admissions, Testing and Advisement offices. (Also see Prerequisites, page 20.)

Transfer of Credit

Traditional Credit: Credits earned at other institutions by certificate or degree-seeking students at TVI may be transferred and applied toward program requirements in accordance with the following guidelines:

1. An official transcript from each institution must be sent directly to the TVI Records Office for transfer credit evaluation. (Transcripts should be requested from the records office at the institution(s) previously attended.)
   a. Credit for arts and sciences courses earned at regionally accredited postsecondary institutions will be evaluated automatically upon receipt of the official transcript. Courses with D or better grades earned at public New Mexico institutions will be considered for transfer credit; courses from institutions outside New Mexico and private institutions in New Mexico must have C or better grades to be considered for transfer credit.
   b. To receive transfer credit for occupational courses, the student must request that TVI's Records Office refer the transcript(s) to the department for review. An interview, demonstration of competence or both may be required before the decision regarding credit is made; demonstration of competence is required for all transfer credit which is at least ten years old. Courses will be evaluated according to the occupational program to be followed at TVI and may be substituted for TVI requirements as approved by the department dean.
2. Remedial courses and upper-division courses are not generally accepted.
3. Students may appeal the decision on acceptability of liberal arts transfer credit. The student should contact the Advisement Office to begin the appeal process.

Non-Traditional Credit: Students may be allowed to establish credit based on prior training. Specific criteria for acceptance of occupational credit have been established by each instructional department. Students interested in this option should contact their department office.

Continuing Education Credit: Current students who completed credit courses in TVI's Continuing Education Division prior to the winter 1991 term may apply to have that credit transferred to their TVI transcript. Interested students must request, through the Records Office, that an official copy of their Continuing Education record be sent to the department in which the course was offered.

Examination Credit

Students may establish credit upon the successful completion of approved TVI occupational challenge examinations and the College Level Examination Program (CLEP) and Advanced Placement (AP) exams.

Occupational Challenge Exams

Challenge examinations have been developed for several courses in Business Occupations, Health Occupations and Technologies, and for all courses in Trades & Service Occupations. The following restriction apply:

- A student may attempt a challenge only once per course.
- A student may not take a challenge exam if, within the last ten years, he/she was enrolled in the course at any other postsecondary institution or was enrolled at TVI after the 15th day of the term (including Saturdays).
- A student's transcript will reflect a grade of TR (credit) for those courses successfully challenged. TR grades are not computed in the student's GPA.
- Courses successfully challenged may count toward graduation but not the residency requirement.
- Challenge exam credit might not be accepted by other postsecondary institutions.

Information about occupational challenge exams and exam procedures is available in department offices. There is a $15 fee per exam. (Health Occupations exam fees may vary.)

Arts & Sciences Exams

Students may earn up to 30 credit hours toward Arts & Sciences requirements through Advanced Placement (AP) and College Level Examination Program (CLEP) tests.

Advanced Placement Exams

TVI Course		*AP Exam*	*Minimum Score*	*Credit Hours*
ART	101	Art History	3	3
BIO	121/121L	Biology	3	8
CHEM	121/121L, 122/122L	Chemistry	3	8
CSCI	155L	Computer Science AB	4	3
ECON	200	Macroeconomics	4	3
ECON	201	Microeconomics	4	3
ENG	101, 102	English Language & Composition	3	6
ENG	101, 102	English Literature & Composition	3	6
FREN	101, 102, 201, 202	French Language	3	12
FREN	101, 102, 201, 202	French Literature	3	12
HIST	101	European History	4	6
HIST	102	European History	5	6
HIST	161	American History	4	6
HIST	162	American History	5	6
MATH	162	Calculus AB	3	4
MATH	162, 163	Calculus BC	3	8

TVI Course		*AP Exam*	*Minimum Score*	*Credit Hours*
PHYS	151/153L, 152/154L	Physics B	4	8
PHYS	160/163L	Physics C	4	5
PSCI	200	American Government	4	3
PSCI	220	Comparative Government	4	3
PSY	105	Psychology	3	3
SPAN	101, 102	Spanish Language	3	8
SPAN	101, 102, 201, 202	Spanish Language	4	14

AP scores must be forwarded to the TVI Records Office. Scores will only be accepted if they are:

- sent directly from the AP Testing Center, or
- original scores forwarded to the student, or
- AP scores included on high school or college transcripts as part of the student's permanent record.

College Level Examination Program

TVI Course		*CLEP Exam*	*Minimum Score*	*Credit Hours*
CHEM	121/121L 122/122L	General Chemistry	52	3
ECON	200	Introduction to Macroeconomics	55	3
ECON	201	Introduction to Microeconomics	55	3
FREN	101	College French	40	3
FREN	101, 102	College French	45	6
HIST	101, 102	Western Civilization I, II	50	3
MATH	121	College Algebra	56	3
MATH	123	Trigonometry	61	2
MATH	162	Calculus w/Elementary Functions (objective and problem portions)	60	4
PSCI	200	American Government	55	3
PSY	105	General Psychology	55	3
PSY	220	Human Growth and Development	52	3
SOC	101	Introduction to Sociology	52	3
SPAN	101	College Spanish	40	4
SPAN	102	College Spanish	45	4
SPAN	101, 102, 201, 202	College Spanish	54	14

CLEP scores must be forwarded to the TVI Records Office. Scores will only be accepted if they are:

- sent directly from the CLEP Testing Center, or
- original scores forwarded to the student.

Registration

Students are required to register for each term they plan to attend. Registration and payment of fees must be made in accordance with the instructions published in the Schedule of Classes.

Registration for new and returning students begins approximately two months before the start of a term. Continuing students are mailed information about pre-registration. Registration is held through the fifth day of the term for full-term classes and through the third day for short-session courses.

Schedule of Classes: A class schedule is published prior to each term. Starting and ending dates, meeting times and locations, registration instructions and payment information are listed in the schedule, which is available in the admissions, registration and counseling offices.

Course Load: The normal course load each term is 12 to 18 credit hours, 12 constituting a full load. Students wishing to take more than 18 credit hours must meet the following conditions:

- have a cumulative TVI grade point average of 2.5; and
- have no grade lower than C in the previous term; and
- secure permission from the Advisement Office.

No student may take more than 22 credit hours per term.

Permission to Enroll: Students may enroll in some courses only by permission of the instructor or program advisor. Forms are available in the admissions, advisement, department deans' and counseling offices. Permission of an instructor to enroll does not constitute a waiver of a course, grant credit for another course or allow a course to be overfilled.

Corequisites and Prerequisites

Pre- and corequisites must be met for each course at the time of enrollment, regardless of which catalog a student plans to graduate under.

Corequisites: A corequisite is a course which is either recommended or required to be taken in combination with another course. If a course with a corequisite is taken for audit, the corequisite also must be taken for audit. When a course which has a required corequisite is dropped, the corequisite course(s) must also be dropped.

Prerequisites: A prerequisite is a requirement which must be completed befofre a student may enroll in a course. Course prerequisites are listed with each course description in the Catalog. A student who receives a W, AU, I, NC, PR, D or F as a final grade may not enroll in any class for which the former is a prerequisite. A student may be disenrolled if the prerequisite has not been met.

A recommended prerequisite is one which is strongly suggested, but not required, that students take prior to enrollment for successful completion of that course.

Most entry-level courses have prerequisites for math, English or reading. Students who have completed course prerequisites may be required to provide proof through transcripts or test scores. Students who do not meet course prerequisites may enroll in preparatory courses in the Department of Adult & Developmental Education.

The following are alternatives or equivalents to meet entry-level course prerequisites.

Courses listing ENG 099 as a prerequisite:
- ENG 099 or above with passing grade
- Approved score on Accuplacer
- Enhanced ACT English score of 14 or above
- SAT verbal score of 260 or above
- ASSET writing skills score of 35 or above

Courses listing ENG 100 as a prerequisite:
- ENG 100 or above with passing grade
- Approved score on Accuplacer
- Enhanced ACT English score of 19 or above
- SAT verbal score of 350 or above
- ASSET writing skills score of 45 or above

Courses listing MATH 099 as a prerequisite:
- MATH 099 or above with passing grade
- Approved score on Accuplacer
- Enhanced ACT math score of 13 or above
- SAT quantitative score of 300 or above
- ASSET numerical skills score of 34 or above

Courses listing MATH 100A as a prerequisite:
- MATH 100A or above with passing grade
- Approved score on Accuplacer
- Approved ACT, SAT or ASSET score

Courses listing MATH 100 or 100B as a prerequisite:
- MATH 100, 100B or above with passing grade
- Approved score on Accuplacer
- Enhanced ACT math score of 16 or above
- SAT quantitative score of 350 or above
- ASSET numerical skills score of 34 or above and
- ASSET elementary algebra score of 43 or above

Courses listing RDG 099 as a prerequisite:
- RDG 099 or 100 with passing grade
- Approved score on Accuplacer
- Enhanced ACT reading score of 15 or above
- SAT verbal score of 300 or above
- ASSET reading skills score of 35 or above
- Other college lecture-type courses 101 or higher with C or better (social sciences, humanities, biological and physical sciences, English, etc.)

Courses listing RDG 100 as a prerequisite:

RDG 100 with passing grade
Approved score on Accuplacer
Enhanced ACT reading score of 18 or above
SAT verbal score of 350 or above
ASSET reading skills score of 45 or above

Other college lecture-type courses 101 or higher with C or better (social sciences, humanities, biological and physical sciences, English, etc.)

Although TVI does not administer the American College Test (ACT), the following cutoff scores have been established for placement purposes: English, 19; Math, 16; Reading, 18; Scientific Reasoning, 19; Composite; 18.

ACT, SAT and ASSET scores may not be more than five years old. Accuplacer scores may not be more than one year old.

Enrollment and Grade Option Changes

Cancellation of Enrollment Before the Term Begins: If a student is not able to attend TVI when planned but has registered for classes, the student must cancel his or her registration at the Records Office on the Main Campus before the beginning of the term. All fees are returned if registration is canceled before classes begin.

Adding Courses: Most courses may be added or sections changed through the fifth day of full-term and 12-week summer term classes and the third day of short-session classes. Students may enter most open-entry courses through the tenth week of a full term and the eighth week of the 12-week summer term. Registration deadlines for special and/or self-paced courses are printed in the Schedule of Classes.

Adding, Changing, Declaring Majors: Students may add, change and/or declare a major (program) at any time during the term. In order to graduate with a specific major, students must either declare a major at the time of admission or complete a Declare a Major form in their counseling or advisement office.

"Stepbacks": Students may, with department approval, "step back" into most developmental courses through the third week of the term and into some lower level occupational courses (in the same discipline) through the fifth week of the term. Students may, however, step back into a self-paced, developmental math course through the tenth week of a full term and the eighth week of the 12-week summer term. Students who are having difficulty in a class and are considering this option should contact the instructor or an advisor.

Course Repetition Limit: Beginning in the fall 1995 term, a course may be repeated up to three times, regardless of grade option. A student wishing to repeat a course more than three times must obtain approval from the department dean's office. Topics, problems, internship and cooperative education courses, as well as physical fitness courses and full-term courses dropped prior to the 15th day of the term are exempt from the course repetition limit.

Dropping Courses or Withdrawing: To drop a course or withdraw from TVI a student must complete an official form. Schedule Change and Withdrawal forms are available in the admissions, registration and counseling offices. *Students should not assume that they will be dropped from their courses for non-attendance.* Students who have not officially dropped a course will receive a final grade in the course.

Full-term courses may be dropped through the 12th week of the term, 12-week summer term courses through the tenth week, and short-session courses through the Friday following the midpoint of the course. Full-term courses dropped on or before the 15th day of the term (including Saturdays) do not appear on the student's TVI transcript. A "W" grade will appear on the student's record for full-term and 12-week summer term courses dropped after the 15th day and for all other courses dropped as of the first day of the session.

Changing Grading Options: Grade options are listed on page 39. Some restrictions on changing grading options may exist for courses with corequisites. Information is available in registration and advisement offices.

Changes from the audit grading option to any other grading option may be made through the fifth day of the term for full and 12-week summer term courses and the third day of a short-session course. Other grading option changes may be made through the 12th week for full-term courses, the tenth week for 12-week summer term courses, and the Friday after the mid-point of a short-session course.

New Mexico Residency

Residence requirements for tuition purposes are established by the New Mexico Commission on Higher Education. A brochure detailing residency requirements and restrictions is available in the Admissions and Records offices.

A student is classified as a resident or non-resident for tuition purposes based on information supplied at the time of admission or readmission. A new or returning student with questions about his or her residency status should contact the Admissions Office.

A continuing non-resident student who has satisfied requirements for New Mexico residency may file a Petition for New Mexico Residency in the Records Office. Residency petitions will be accepted through the 15th day of each term (including Saturdays). All requirements for residency must be met before the first day of the term.

In general, to become a legal resident of New Mexico, four basic requirements must be satisfied:

1. The 12-Month Consecutive Residence Requirement: A student must physically reside in New Mexico for the 12 consecutive months immediately preceding the term for which the petition is submitted. Note: Students whose parents or guardians reside out of state cannot begin to complete the 12-month requirement until their 19th birthday.
2. The Financial Independence Requirement: Students cannot be approved for residency if they are financially dependent on their parents or legal guardians who are non-residents of New Mexico. At the time the student applies for residency (if under

23 years of age), a copy of his or her parents' or guardians' 1040 or 1040A U.S. income tax form for the previous year may be required.

3. The Written Declaration of Intent Requirement: The student must sign a written declaration of intent to relinquish residency in another state and establish it in New Mexico.
4. The Overt Act Requirement: Residency regulations require the completion of several overt acts which support the student's declaration of intent to become a permanent resident. Information on the number and type of required overt acts is available in the Admissions and Records Offices.

Note: Any act considered inconsistent with being a New Mexico resident—such as voting, securing and/or maintaining a driver's license and automobile registration in another state—will cause in-state residency status to be denied or revoked.

Other Residence Regulations

The spouses and dependents of persons who move to New Mexico to work full-time, practice a profession or conduct a business full-time (and who provide appropriate evidence) are not required to complete the 12-month residence requirement before applying for resident status. They must, however, satisfy the other requirements of residency.

Members of the armed forces stationed on active duty in New Mexico, their spouses and dependents are eligible for resident student rates. A certification form is required for all new and returning students.

Active participating members of the New Mexico National Guard are eligible for resident student rates. A certification form is required for all new and returning students.

Non-citizens who are lawfully in the United States and have obtained permanent status from the Immigration and Naturalization Service or non-citizens who serve on active duty in the armed forces of the United States may establish residency by meeting the durational and intent requirements. Any non-citizens on other visas (student, diplomatic, visitor or visiting scholar visa, including spouses and dependents) are non-residents for tuition purposes.

Persons, their spouses and dependents who move to New Mexico for retirement and who provide evidence of formal retirement shall not be required to complete the 12-month durational requirement. They must, however, satisfy the other requirements of residency.

An individual married to a legal resident of New Mexico who provides evidence of marriage shall not be required to complete the 12-month durational requirement but must satisfy all other requirements.

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

Tuition and Fees

Upon registering for courses, students receive a registration invoice. In order to complete registration, all charges must be paid. Payment deadlines are printed in the Schedule of Classes each term. Failure to pay all charges in full may result in the deletion of the student's schedule. Authorized agencies that have agreed to pay a student's training expenses are billed by the Institute.

Tuition

Tuition is charged according to a student's residency status and the number of credit hours carried. Special tuition rates do not exist for non-resident part-time students or non-resident students enrolling in the summer term.

Tuition rates for 1996-97 (subject to change without notice) are:

	Resident	Non-Resident
Arts & Sciences courses		
1 to 11 credit hours and more than 18 credit hours	$27.30 per credit hour	$75.96 per credit hour
12 to 18 credit hours	$327.60	$911.52
Occupational courses		
1 to 11 credit hours	none	$75.96 per credit hour
12 to 18 credit hours	none	$911.52

Senior Citizen Discount: Senior citizens qualify for a reduced tuition rate of $5 per credit hour, up to six credit hours per term. The tuition discount applies only to Arts & Sciences courses. To qualify, the student must be age 65 or older prior to the beginning of the term and must be classified as a New Mexico resident for tuition purposes.

To receive the senior citizen discount, eligible students must go to the Records Office at Main Campus or the Admission Office at the Montoya Campus and complete a Senior Citizens Tuition Discount form. The discount form must be approved by the tenth day of the term.

Note: The discount does not apply to Adult Education classes, Continuing Education Studies workshops and other non-credit courses, or to occupational or developmental courses.

Fees

Some courses have required fees (see following lists). Audit students pay the same fees as students enrolled for credit. Other fees include:

Registration Fee: There is a $21 registration processing fee required each term (of that, 75 cents is allocated to student activities and organizations).

Administrative Service Fee: This $10 fee is not paid by students; rather, it is charged to third-party agency agencies that sponsor students.

Educational Service Fee: This fee of $75 is charged on third-party agency contracts requiring additional services; it is not paid by students.

Transcript Fee: Students may request up to five TVI transcripts, free of charge, per academic year. Additional copies will be issued for a fee of $1 per copy.

Late Graduation Fee: A $20 late graduation fee will be charged to students who do not submit an Application for Graduation by the established deadline.

Course Fees

Fees are charged in some courses to pay for consumable supplies and, in Health Occupations, for uniforms. Note: Students may also purchase textbooks, tools and other required materials from the TVI Bookstores. Course fees for 1996–97 are:

Adult & Developmental Education

SSKL	092	$5	BIO	100	$10

Arts & Sciences

ASTR	111L	$20	BIO	239L	$20	CSCI	163	$10
BIO	111L	$20	BIO	247L	$20	MATH	150	$5
BIO	121L	$20	BIO	260L	$20	MATH	162	$5
BIO	122L	$20	BIO	278L	$20	MATH	163	$5
BIO	124L	$20	CHEM	112L	$20	MATH	264	$5
BIO	139L	$20	CHEM	121L	$20	PHYS	153L	$20
BIO	200L	$20	CHEM	122L	$20	PHYS	154L	$20
BIO	223L	$20	CHEM	130L	$20	PHYS	163L	$20
BIO	224L	$20	CSCI	101	$10			
BIO	231L	$20	CSCI	155L	$10			

Business Occupations

AA	101	$10	CR	105	$10	MMS	159	$5
AA	102	$15	CR	133	$10	MMS	161	$5
AA	105	$10	CR	205L	$10	MMS	171	$5
AA	107	$10	CR	260	$10	MMS	201	$5
AA	111	$5	LAS	231	$15	MMS	255	$15
AA	143	$15	MMS	134	$15	MMS	256	$15
AA	200	$15	MMS	135	$15	MMS	257	$15
AA	202	$15	MMS	150	$5	MMS	258	$5
AA	205	$10	MMS	151	$5	MMS	260	$5
AA	207	$15	MMS	152	$5	MMS	261	$5
AA	250	$15	MMS	153	$5	MMS	262	$10
ACCT	254	$15	MMS	154	$5	MMS	263	$10
ACCT	255	$15	MMS	156	$5	MMS	270	$15
BA	150	$15	MMS	157	$5	MMS	271	$15
BA	157	$5	MMS	158	$5	BOLC (all)		$40

Health Occupations

		Course	*Uniform*			*Course*	*Uniform*
NURS	126C	—	$90	MLT	203L	$20	—
NURS	127C	$15	—	MLT	204L	$20	—
NURS	226C	$20	—	MLT	206C	$20	—
NURS	227C	$10	—	NA	110L	—	$35
NURS	231	$10	—	PRNS	255L	$15	—
NURS	247C	$20	—	PT	110	—	$35
CLA	101L	—	$50	PHLB	121C	—	$40
EMS	160L	$15	$18	PN	126C	—	$90
HCT	101L	—	$40	PN	127C	$15	—
HCT	102L	$10	—	PN	128C	$20	—
HUC	131C	—	$30	PN	131	$10	—
LPNR	155L	$20	—	RNR	255L	$20	—
MLT	110L	—	$65	RT	110	—	$90
MLT	114C	$20	—	RT	210	$20	—
MLT	201L	$20	—	RT	223C	$75	—

Technologies

ARDR	107L	$15	CP	174L	$10	EET	113L	$15
ARDR	119L	$15	CP	175L	$10	ELEC	103A	$15
ARDR	180	$15	CP	176L	$10	ELEC	103L	$15
ARDR	181	$15	CP	177L	$5	ELEC	217	$15
ARDR	182	$15	CP	213	$10	ELEC	276L	$15
ARDR	183	$15	CP	216L	$10	MSP	101L	$25
ARDR	184	$15	CP	217L	$10	PC	203	$25
ARDR	203L	$15	CP	278	$10	PC	204	$25
ARDR	209L	$15	CP	279L	$10	PC	205	$25
ARDR	212L	$15	CP	280L	$10	PC	206	$25
ARDR	214L	$15	CP	281L	$10	PC	207	$25
CP	101A	$10	DDET	106L	$15	PC	208	$25
CP	101L	$10	DDET	114L	$15	SMT	201L	$25
CP	105	$10	DDET	115L	$15	SMT	211L	$25
CP	111A	$10	DIG	211	$30			
CP	111L	$10	EET	107L	$15			

Trades and Service Occupations

TRDR	101	$210	TRDR	102L	$105	TRDR	103L	$105

Refunds: Tuition, course fees and the registration fee are refundable only if TVI cancels a class or if the student withdraws by the tenth day of the term/session. The Health Occupations uniform fee is refundable if the student does not receive the uniform. Refund requests may be made at the Cashier's Office.

Estimated Expenses

The budgets below are estimated expenses for students at TVI for 1996–97. The Financial Aid Office uses these figures to calculate the amount of financial aid a student will receive.

For Students Without Rent/Mortgage Expenses

	1 Term	2 Terms	3 Terms
Tuition and Fees	$ 210	$ 419	$ 629
Room and Board	595	1,190	1,785
Books and Supplies	191	382	573
Personal Expenses	493	987	1,480
Transportation	543	1,086	1,629
Total	$ 2,032	$ 4,064	$ 6,096
Non-resident Total	2,755	5,511	8,266

For Students With Rent/Mortgage Expenses

Tuition and Fees	$ 210	$ 419	$ 629
Room and Board	3,025	6,050	9,075
Books and Supplies	191	382	573
Personal Expenses	609	1,217	1,826
Transportation	543	1,086	1,629
Total	$4,578	$ 9,154	$13,732
Non-resident Total	5,301	10,559	15,902

Less than Half-Time Students

Tuition and Fees	$ 210	$ 419	$ 629
Books and Supplies	191	382	573
Transportation	543	1,086	1,629
Total	$ 944	$ 1887	$ 2831
Non-resident Total	1667	3334	5001

Dependent Care Allowance

One Dependent	$ 500	$ 1,000	$ 1,500
Each Add'l Dependent	167	333	500

Note: These figures are only estimates and are subject to change without notice. See pages 25–27 for specific information on tuition and fees.

Financial Aid

TVI is committed to helping students meet the rising costs of education by providing financial assistance. Although primary responsibility for educational costs rests with the student and his or her family, TVI, the U.S. government and the state of New Mexico all contribute money to help students pursue a higher education.

Students applying for financial aid should complete a Free Application for Federal Student Aid (FAFSA) available at the Financial Aid offices on all four TVI campuses: Main, Montoya, South Valley and Rio Rancho.

A student does not have to be accepted for admission to TVI before applying for financial aid; therefore, students are encouraged to apply as early as possible because processing may take six to eight weeks and funds are limited. Transfer students applying for financial aid must provide financial aid transcripts from every postsecondary school they have previously attended, even if they have not received any financial aid. Financial aid transcript request forms are available at the Financial Aid offices at the Main and Montoya campuses.

General Eligibility Requirements

To receive financial aid students must meet the following requirements:

- Be a U.S. citizen or an eligible non-citizen.
- Enroll at least half time (as defined by federal regulation); this applies to most Title IV programs. Students should check each financial aid program for enrollment requirements.
- Enroll in an eligible major.
- Enroll in eligible courses. Some ineligible courses include GED, Health Unit Clerk and apprenticeship classes as well as those courses that apply to ineligible majors only. In addition, students may not receive financial aid for more than 30 credit hours of attempted preparatory (Adult & Developmental Education) coursework. Financial aid does not pay for audited classes.
- Have the ability to benefit from the course of study.

- Maintain satisfactory academic progress.
- Not be in default on any federal educational loans.
- Not owe a refund on a grant.
- Sign a statement of educational purpose, stating that the money will go toward educational purposes only.
- Sign, if you are male, a statement of registration with the Selective Service.

Students should refer to the *TVI Student Financial Aid Guide* for detailed information.

Types of Aid

Students at TVI can receive aid through grants, scholarships, loans, work study and other programs, most of which are based on financial need. The Financial Aid Office determines how much and what kind of aid students are eligible to receive and assembles a financial aid package to fit their needs.

Federal Pell Grant: This program provides federal grants to students who have not received a bachelor's degree. Pell Grant awards can range from $400 to $2,440 per year, depending on a student's enrollment status, cost of attendance and family contribution. Students are notified by mail of their particular disbursement date in their award letter. Subsequent distributions are generally scheduled each month for students whose financial aid file was not complete by the first distribution date.

Federal Supplemental Educational Opportunity Grant (FSEOG): FSEOG provides federal grants to students to help pay for their postsecondary education. Federal money for the program is limited and available only to students with exceptional financial need. Students with exceptional need are those who receive a Pell Grant, have the lowest family contribution and have unmet need. FSEOG awards at TVI range between $500 and $1,000 a year, and checks are generally distributed on the same schedule Pell Grant awards are disbursed.

New Mexico Student Incentive Grant (NMSIG or SSIG): New Mexico residents who are eligible to receive a Pell Grant and are enrolled at least half-time are considered for SSIG awards. Awards at TVI range between $500 and $1,000 per year, and checks are generally distributed on the same schedule Pell Grant awards are disbursed.

State Child Care Grant: This grant is available on a first come, first served basis to New Mexico residents with child care expenses and exceptional unmet financial need. Students must be enrolled at least half time. Awards range between $500 and $1,000 per year, and checks are generally distributed on the same schedule Pell Grants are disbursed.

Federal Stafford Loan (formerly GSL): Students must apply for a Pell Grant before applying for a Stafford Loan. The maximum subsidized loan amount per year is $2,625 for first-year students and $3,500 for second-year students. Borrowers must apply for a subsidized Stafford Loan before applying for an unsubsidized loan. An unsubsidized Stafford

Loan does not qualify for federal interest subsidies. Cost of attendance minus estimated financial aid equals the amount a student may borrow in an unsubsidized loan. Students may borrow only up to maximum loan limits. First-time borrowers at TVI may not pick up their checks until 30 days after the term begins. Previous borrowers receive subsequent disbursements on or after the 18th day of class. Interest rates on Stafford loans are variable and are currently capped at 8.25%. Students must begin repaying the principal on their loans six months after they leave school or drop below half-time status. The minimum monthly payment is $50 per month. Students should check with the Financial Aid Office for more information on interest rates and to acquire a list of participating lenders.

Federal Parent Loans for Undergraduate Students (FPLUS): Students must apply for a Pell Grant and a Stafford Loan before their parents can apply for FPLUS. FPLUS is designed to help the parents of dependent students who need additional funding after a student has exhausted all other resources.

Nursing Student Loan for Service: New Mexico residents preparing for a licensed practical nurse certificate or an associate degree in nursing may apply for a Nursing Student Loan for Service. The most a student can borrow is $5,000 per year. Loan recipients must agree to repay the loan with service in an underserved area in New Mexico. These loans are generally disbursed on or after the 18th day of class.

Perkins Loan: TVI does not participate in the Perkins Loan Program.

Work Study: TVI offers three work study programs: Federal Work Study, New Mexico Work Study and TVI Student Employment. Work Study is part-time employment on campus that provides students a chance to earn money to help pay educational expenses. Most of TVI's work study programs are based on financial need and are subsidized by the state and federal government. Students may work up to 40 hours per two-week pay period and earn $5 to $6 per hour, depending on the job. Work-study students are paid every two weeks.

Child Care Services: The City of Albuquerque, Albuquerque Technical Vocational Institute and surrounding neighborhood associations cooperate to provide low-cost child care to eligible TVI students and neighborhood residents with children between the ages of 3 and 5.

Tres Manos Child Development Center is located south of TVI's Main Campus at the Heights Community Center. To apply, a student must submit a completed child care application to the Financial Aid Office by established deadlines. Applications are considered on a first-come, first-served basis with income-eligible single parents receiving priority. Participants must recertify at the beginning of each term.

More information on Tres Manos is available from the Financial Aid Office at Main Campus.

Scholarships: TVI offers many scholarships funded by various sources, including the TVI Foundation. Scholarships include:

- The state Legislative Scholarship, which pays for tuition and the registration fee. Applicants must be New Mexico residents and meet scholastic requirements along with other criteria.
- The TVI Opportunity Scholarship, available to students enrolled in certificate programs that are ineligible for Title IV student aid. Applicants must be New Mexico residents and be enrolled for at least six credit hours.
- The Legislative Endowment Scholarship, available to TVI students enrolled at least half time in a certificate or degree program. Applicants must be New Mexico residents, maintain a 2.5 grade point average or higher and not have earned a baccalaureate degree. Awards of up to $1,000 are made per academic year and may be transferrable to an eligible four-year institution for a maximum of four annual awards.
- The New Mexico Scholars Program, which covers tuition, fees and books. Applicants must be New Mexico high school graduates as well as residents and must meet scholastic requirements along with other criteria.
- The Vietnam Veterans Scholarship, which covers tuition, fees and books. Applicants must be New Mexico residents and Vietnam veterans.
- Departmental scholarships: Students should contact specific academic departments for scholarship amounts and requirements.
- Scholarships offered by outside agencies. The Main and Montoya campuses post available scholarships on the Financial Aid bulletin board. Applications for these posted scholarships are available through the Financial Aid offices on TVI's four campuses. Other scholarships offered by outside agencies are available through reference materials at TVI and other public libraries. For more information on scholarships offered by outside organizations, students should contact the Financial Aid Office.

Other Types of Aid

Students interested in receiving financial aid from the following programs must apply directly with the agency.

Veterans Administration: Students planning to apply for VA benefits must have their enrollment certified by a TVI VA certifying official. Students who fail to complete a course during a term in which they have received VA benefits may be required to repay those benefits unless they can prove to the VA that mitigating circumstances were involved. Veterans transferring from other institutions of higher learning must provide official academic transcripts from every postsecondary school they have previously attended. Information on eligibility is available at any Veterans Administration office. The Albuquerque office is located at 500 Gold SW, 248-6721 or 1-800-827-1000.

New Mexico Division of Vocational Rehabilitation (DVR): Disabled persons may be eligible for education and training benefits from DVR. The Albuquerque offices include: 11811 Menaul NE, 87112, 841-4560; 3311 Candelaria NE, 87107, 841-8800; 2929 Coors NW, Suite 102, 87120, 841-8752.

Job Training Partnership Act: This program helps students with education and training if they are unemployed, underemployed or economically disadvantaged. Students should

contact the New Mexico Department of Labor at 841-9361 or the Albuquerque Job Corps Center at 842-6500 or Job Training Services at 768-6032 for information on eligibility. Native Americans should contact the National Indian Youth Council (NIYC) Employment and Training Project at 247-2251 or their tribal offices for the same information.

Financial Aid Check Disbursements

At both Main and Montoya campuses financial aid checks are distributed through the Cashier's Office between 9:30 a.m. and 4:30 p.m. Monday through Friday. Loan recipients who are repeat borrowers and students receiving a second or third loan disbursement are paid on or after the 18th day of class. First-time borrowers at TVI receiving their first disbursement are paid 30 days after classes begin; otherwise, loan checks arrive four to eight weeks after a student has submitted an application.

Standards of Satisfactory Academic Progress

Federal regulations require that financial aid recipients meet certain academic standards to be eligible for federal financial aid. To ensure financial aid recipients are making satisfactory academic progress, academic transcripts are reviewed at the end of each term to determine eligibility for the next term. All terms of attendance are reviewed; this includes periods when financial aid was not received as well as all coursework that was attempted and may have been used to determine financial aid eligibility.

Financial aid recipients can be placed on financial aid probation or financial aid suspension. Recipients are placed on financial aid probation the first term they fail to meet the qualitative or incremental components of satisfactory academic progress. Students may receive federal student aid during their probationary term. Recipients are suspended from receiving financial aid if they fail to meet any one of the standards below for two consecutive terms. Students who exceed the maximum time allowable to complete their program (see below) at the time they are reviewed are automatically placed on financial aid suspension. Transfer credits are not taken into account when satisfactory progress is reviewed.

1. Qualitative Progress: Students must maintain a cumulative grade point average of at least 2.0 (a C average). Grade point values are: A = 4.0, B = 3.0, C = 2.0, D = 1.0, F = 0.

   Grades of I, CR, PR, NC, W, AU and TR are not calculated in the GPA. In the case of a repeat course, only the higher grade is calculated into the grade point average. The average is computed by multiplying each final grade point value by the number of credit hours, totaling all grade points and dividing the total points by the total number of credit hours for which there are final grades.

2. Incremental Progress: Students must complete a minimum of 70% of all coursework (registered credit hours) they have attempted at TVI. Any course with a grade of withdraw (W), incomplete (I), progress (PR) or audit (AU) is not considered completed coursework. Transfer credits are not included in the calculation. Repeat courses are included in the calculation.

3. Maximum Time Frame: Students must complete a program within a maximum number of credit hours. The maximum time frame within which a student must complete his or her program must not exceed 150% of the credit hours required in the program. Financial aid will not be paid to students who have exceeded the maximum allowable time when satisfactory academic progress is reviewed each term. Students who have at least one credit hour of maximum time-frame eligibility at the time of review may receive aid for an additional term. All terms of attendance are reviewed, including periods when students did not receive financial aid and all coursework that was attempted and may have been used to determine financial aid eligibility. Preparatory hours are excluded. Repeat courses are included in the calculation.

Financial Aid Probation

Students on financial aid probation are not eligible for deferments beyond the probationary term until final grades are posted and satisfactory academic progress has been reestablished.

Students who do not maintain a 2.0 grade point average or who are not completing at least 70% of their coursework are placed on financial aid probation for one term. If a student is not making satisfactory academic progress at the time he/she applies for financial aid, the student is placed on probation for the first term of his/her financial aid. While on probation, a student continues to receive financial aid. Students expecting a student loan should check with a student loan advisor to see if they are eligible to receive a loan on probation.

If a student on financial aid probation does not meet the above standards by the end of the probationary term, the student is suspended from receiving further financial aid. Terms spent on financial aid probation are counted toward the maximum allowable time a student has to complete a degree or certificate.

Financial Aid Suspension

Students on financial aid suspension are not eligible for a financial aid deferment. Students who have been placed on financial aid suspension do not receive any financial aid. Students on financial aid who do not meet satisfactory academic progress standards by the end of their probationary term are suspended from receiving further financial aid.

Financial aid is reinstated when a student meets all of the satisfactory academic progress requirements. Terms spent on financial aid suspension are counted toward the maximum allowable time a student has to complete a degree or certificate.

The Appeal Process

Students suspended from financial aid may appeal. The director of financial aid or her/his designee bases reinstatement on mitigating circumstances that directly contributed to deficient academic performance. In the case of a student loan, however, if the aid is reinstated the loan term will not be backdated to cover the term in which the deficiency took place. Unless otherwise noted, approved appeals are good for the entire period covered by the satisfactory academic progress review.

Students must complete and submit an Appeal Form to the Financial Aid Office, attaching all required documentation. An advisor will review the appeal and forward it to the director of financial aid or his/her designee, who will either approve or disapprove reinstatement of financial aid. Students will be notified of the director's decision within ten working days from the day they submitted the appeal.

Deferments

Students on financial aid probation are not eligible for deferments beyond the probationary term until final grades are posted and satisfactory academic progress has been reestablished. Students who have been suspended are not eligible for deferments unless they have appealed and their appeal has been approved.

All other students awarded enough financial aid to cover their tuition and other costs may defer those costs until their financial aid check arrives. If the student's financial aid cannot meet all the costs, the balance is the student's responsibility. When a student defers costs, TVI deducts what he or she owes from the check when it arrives, and the student receives the difference.

It is the student's responsibility to pay for tuition, fees, textbooks and/or any other TVI charges if his or her financial aid award does not arrive or is canceled for any reason, if the award does not cover all charges or if the student's charges are not deducted from the financial aid award. If the balance is not paid on or before mid-term, a hold may be placed on the student's registration and academic records, and his or her account may be turned over for collection.

To apply for a Financial Aid deferment, students should contact the Financial Aid Office. Details are in the *TVI Student Financial Aid Guide.*

Refunds, Repayments and Distributions

Refunds: TVI has a fair and equitable refund policy for federal Title IV programs under which students or their parents can be refunded for an FPLUS loan, unearned tuition, fees, room and board and other charges for those periods of time the student did not register, withdrew or otherwise failed to complete a term.

Pro-Rata Refunds: Pro-rata refunds apply to students who received federal student aid, attended TVI for the first time and withdrew before they attended 60% of the enrollment period or term.

The pro-rata refund is not less than that part of a student's tuition, fees, room and board and other charges equal to that portion of the student's enrollment period for which the student has been charged that remains on the student's last recorded day of attendance less any unpaid charges and a 5% administrative fee.

Other Refunds: All remaining refunds apply to federal aid recipients who do not meet the pro-rata refund definition.

The Federal Refund Policy applies to all students who withdraw, not just to students who provide written notice of withdrawal. The policy mandates that the percentage of institutional charges* that must be refunded be as follows:

- Withdrawal up to one week before or on the first day of class: 100% refund of institutional charges (less an administrative fee of the lesser of $100 or 5% of institutional charges).*
- Withdrawal from after the first day of class through the first 10% of the enrollment period: 90% refund of institutional charges.
- Withdrawal from after the first 10% of the enrollment period through the first 25% of the enrollment period: 50% refund of institutional charges.
- Withdrawal from after the first 25% of the enrollment period through the first 50% of the enrollment period: 25% refund of institutional charges.

Repayment of Cash Disbursements

If a student receives a federal cash disbursement for living expenses and withdraws from school, he or she must repay a portion of the amount received if the cash received is greater than the cost of living expenses at the time of withdrawal.

Refunds and repayments are allocated in the following order:

1. Federal Supplementary Loans for Students
2. Unsubsidized Federal Stafford Loan
3. Subsidized Federal Stafford Loan
4. Federal PLUS Loan
5. Unsubsidized Federal Direct Stafford Loan
6. Subsidized Federal Direct Stafford Loan
7. Federal Direct PLUS Loan
8. Federal Perkins Loan
9. Federal Pell Grant
10. Federal SEOG
11. Other student federal aid programs
12. Other federal, state, private, or institutional sources of aid.
13. The student#

* When used in the Federal Refund Policy, the term "tuition charges" refers to all institutional charges.

Remember that a portion of the refund can be paid to the student only if funds remain after the refund has been returned to the student federal aid programs and other sources in order.

Academic Regulations

Definition of Terms *

Academic Year: The academic year is divided into three terms—two 16-week terms in the fall and spring and a 12-week summer term.

Credit Hour: Credit in courses offered by TVI is awarded in terms of hours of credit. Each hour of credit in a lecture class requires a minimum of 750 minutes of instruction per term; each hour of credit in a laboratory class requires a minimum of 1,875 minutes of instruction per term. For transfer purposes, one TVI credit hour generally equals one semester credit hour at other institutions.

Course Numbering: Courses numbered 1 through 100 are developmental or preparatory; 101 through 299 are intended for freshman and sophomore-level students.

Classification of Students: The following are standards for the academic classification of students:

- freshman: A student who has completed fewer than 30 credits at TVI
- sophomore: A student who has completed 30 or more credits at TVI
- part-time: A student carrying fewer than 12 credit hours per term
- full-time: A student carrying 12 or more credit hours per term

Identification Cards: Each student enrolled at TVI is issued a student identification card. ID cards entitle students to a variety of services and privileges including checking out library books and using the Health Center, as well as student discounts within the community.

Attendance: Students enrolled for credit or audit are expected to attend all class sessions. Instructors will take attendance.

Absences do not relieve students of the responsibility for missed assignments and exams. Students must take the initiative in arranging with their instructors to make up missed work.

* Note: These regulations do not apply to students taking Adult Education classes (see page 55).

Any student who misses the first three days of a scheduled occupational or Adult & Developmental Education class may be dropped by the instructor. A student with excessive absences may be dropped from a course. If a student is dropped from a course for non-attendance he or she is also dropped from corequisite courses.

A student who stops attending a course should not assume that he or she will be dropped by the instructor. (See page 23 for information on dropping courses and withdrawing from TVI.)

(Health Occupations students should consult their program handbook for specific rules.)

Grades

Final grades are recorded on the student's TVI transcript and calculated in both a term grade point average (GPA) and a cumulative GPA. (See page 23 for information on the recording of course drops and withdrawals on the student's TVI transcript.)

The grades awarded in all courses represent the quality of work done. Their meaning in most courses is as follows:

A Excellent; four points per credit hour.
B Above average; three points per credit hour.
C Average; two points per credit hour.
D Below average; one point per credit hour.
F Failure; zero points per credit hour.
CR Credit; grade is equivalent of at least a grade of C but is not computed in the grade point average.
NC No Credit; grade is not computed in the grade point average.
PR In Progress; course work not completed; grade is not computed in the grade point average.
AU Audit; recorded for completion of enrollment in an audited course; no credit is earned.
I Incomplete; grade is not computed in the grade point average (see Incomplete Grade Assignment and Removal).
W Withdrew; used for student, instructor and administrative withdrawals.
TR Credit for transfer, non-traditional or examination; grade is not computed in the grade point average.

Grade Point Average

The grade point average (GPA) is computed by multiplying the number of credit hours of a course by the quality point value assigned to the letter grade: A=4, B=3, C=2, D=1, F=0. For example, a four-credit-hour course with a grade of A carries 16 quality points. Then the total number of quality points earned is divided by the total number of eligible credit hours attempted (GPA hours).

Grades of I, CR, PR, NC, W, AU and TR are not calculated in the GPA. Effective fall 1991, courses on the student's transcript or grade card which have an E in the repetition column are excluded from GPA calculation.

Grade Options

Traditional Grade: Students may choose to enroll in Arts & Sciences and occupational courses for a traditional (letter) grade (A, B, C, D, F). Traditional grades are used in calculating GPAs. Students interested in transferring their TVI course work to another institution are encouraged to enroll in courses for a traditional grade.

Audit: Students may register in occupational or Arts & Sciences courses for audit if they have met the prerequisite(s) for the course. Students may not enroll in Adult & Developmental Education courses for audit.

Students who enroll for audit are expected to attend all class sessions but have no responsibilities for completing assignments.

Courses taken for audit will appear on the student's transcript as AU with no credits recorded and no grades assigned. Courses taken for audit are not included in the student's total course load for enrollment verification and cannot be used to meet prerequisite or corequisite requirements.

Credit/No Credit: Students may elect to take Arts & Sciences courses for credit/no credit (CR/NC) rather than for a traditional grade. CR/NC is not an option for General Honors or most occupational courses. All Developmental Studies courses are graded on a CR/NC basis. A maximum of nine credit hours graded CR/NC will be allowed toward the Arts & Sciences requirements in certificates or associate degrees.

CR (Credit): Students must meet all minimum requirements for the course. CR is the equivalent of at least the grade of C. Although the student will receive credit for completing the course, a grade of CR will not be computed in the GPA.

NC (No Credit): Students who do not satisfactorily complete minimum course requirements will receive NC. A grade of NC will not be computed in the GPA and the student will not receive credit for the course.

Note: Certain consequences may result from choosing the CR/NC option. Courses with grades of CR will not be allowed in some business occupations majors (programs). Some schools, scholarship committees and honorary societies do not accept this grading system and/or convert grades of CR to C and NC to F. Students planning to transfer to another institution should talk to an advisor at that institution about possible consequences of CR/NC grades.

Open-Entry, Open-Exit: Students may register for courses which have flexible entry and/or exit points with the open-entry, open-exit grading option. Depending on the course, the student may receive a traditional (A,B,C,D,F), credit/no credit (CR/NC), or an in progress (PR) grade.

Incomplete Grade Assignment and Removal: A grade of I (incomplete) is given when circumstances beyond the student's control have prevented completion of the work for a course within the official dates of a term. In no case is an I to be used to avoid a failing grade or to allow extra time to complete work normally expected.

Removal of an I grade can only be accomplished by completing the work in a manner acceptable to the instructor no later than the 10th day of the following term.

An I not made up by the 10th day of the following term will automatically revert to an F or NC on the student's record and cannot be changed by work completion or course repeat.

Repeating Courses: A student may choose to repeat a course for a better grade. (Also see page 22.) Each course enrollment and all grades will appear on the student's transcript. Only the higher grade will be used to calculate the GPA when letter grades (A,B,C,D,F) are recorded for both the original course and each course repetition. This policy applies to courses with identical course abbreviations and numbers, except topics, honors, internships and cooperative education courses. It does not affect any courses taken prior to fall 1991.

Note: Certain forms of financial aid will not provide assistance to students who repeat courses previously completed successfully. Compliance with such regulations is the student's responsibility.

Grade Appeals: Students may formally appeal only final grades of NC or F. Students who do not officially drop a course may not appeal the final grade they receive in the course.

Appeal forms are available in department offices. The following steps must be followed:

1. Appeal must be made to the instructor in writing specifying the student's reasons or substantiation for the requested grade change. The appeal must be made by the end of the fourth week of classes in the following term. The student and the instructor will hold an appeal conference to discuss the grade. If the matter is not satisfactorily resolved at this level, the student may appeal to the department dean.
2. Appeal to the department dean must be made in writing by the student within five days of the instructor appeal conference. The dean will appoint a board (two faculty members and one student) to hear the appeal within one week. The written decision of the board is final.

Academic Standards

Honor Roll: The Vice President's Honor Roll is compiled each term, listing students who completed 12 or more credit hours with traditional grades during the term and who achieved a term GPA of 3.5 or higher.

Warning: A student whose cumulative GPA is between 1.75 and 1.99 in a given term will receive a warning. Notification of academic warning appears on the student's grade report at the end of each term.

Probation: A student whose cumulative GPA (based on at least 16 GPA credit hours attempted at TVI) falls below 1.75 in a given term will be placed on probation effective with the following term of enrollment. Students are continued on probation if they withdraw from TVI while on probation. Notification of academic probation appears on the student's grade report at the end of each term.

Note: Health Occupations programs may have specific requirements which affect a student's eligibility to continue in the program. Students should refer to the program handbook.

Suspension

After two consecutive terms of probation a student will be suspended from TVI when both the term and cumulative GPA are below 1.75. The duration of the initial suspension is one term; for subsequent suspensions, one year. Notification of academic suspension appears on the student's grade report at the end of each term and in a notification letter sent to the student.

If a suspended student has preregistered for the next term, his/her schedule will be deleted and a refund of all fees and tuition will be authorized. A suspended student may be eligible to enroll in Developmental Studies courses during the student's initial suspension period.

Suspension Appeals: A student who has been suspended may submit a written appeal, explaining the unusual circumstances justifying why he or she should be readmitted, to the director of Admissions and Records, who will approve or deny the appeal. If the director denies the appeal, the student may appeal in writing to the Student Academic Appeals Committee by filing the appeal with the director of Admissions and Records for transmittal to the committee. The student may present the case to the committee in person or ask that the written appeal be considered. If the committee decides to readmit a suspended student, his or her academic status will be probationary.

Graduation

TVI conducts one graduation ceremony each year at the end of the spring term. A student graduates in the term in which all graduation requirements are completed even if there is no graduation ceremony scheduled that term.

General Requirements: To be eligible to receive a degree or certificate, students must meet the following requirements as well as those listed under the specific major (program) they wish to pursue:

- an overall cumulative GPA of 2.0 or better;
- completion of the last term of course work in residence at TVI;
- enrollment in the major in which they plan to graduate (see page 22 for information on adding, changing and declaring majors);
- completion *at TVI* of at least one-quarter of the required program coursework and credit hours for a certificate and at least 15 credit hours of the required program coursework for a degree after the degree becomes available;
- completion of all program and course requirements (occupational coursework which is at least ten years old must be validated by the instructional department in which the course was offered);
- demonstration of basic computer literacy skills (including practical computer operation, familiarity with keyboard functions and common word processing tasks), by passing either an approved course (see individual programs) or a proficiency test available in department computer laboratories; and
- completion and submission of an Application for Graduation within two terms of the last enrollment.

Note: A maximum of nine credit hours of CR may be counted toward certificates or degrees in majors which allow the CR/NC option. Courses graded AU do not apply toward the graduation residence requirement.

All debts to TVI must be paid in full before graduation.

Application for Graduation: Students in degree or certificate programs must complete an Application for Graduation form by the 10th day of the term in which all graduation requirements will be completed. On the Main Campus, applications are available in department counseling offices. Liberal arts majors may pick up their applications at the Advisement Center. At the Montoya, Rio Rancho and South Valley campuses, applications are available in the Admissions/Advisement Offices. Students requesting a certificate or degree in more than one major must submit an application for each major to the appropriate counseling office.

Students who do not submit an application by the tenth day deadline must pay a $20 late graduation processing fee *before* submitting the application. No application will be processed after the tenth week of the term.

Graduation with Honors: Students earning cumulative GPAs of 4.0 graduate with highest honors. Students with cumulative GPAs of 3.6 to 3.9 graduate with honors. Degrees and certificates note these awards.

Choice of Catalog: The application form for a degree or certificate requires a student to specify the catalog year listing degree or certificate requirements. A student may choose to graduate under the catalog that was in effect when he or she officially entered the specific major or any subsequent catalog, provided that:

- the selected catalog is not more than five years old when the degree or certificate requirements are completed and the student has been in continuous enrollment; and
- the certificate/degree program does not have a specific requirement about choice of catalog.

Regardless of the catalog under which a student will graduate, co- and prerequisites must be met for each course at the time of registration. Those whose enrollment is discontinuous graduate under the catalog that is current upon their return.

Continuous Enrollment: In order to maintain continuous enrollment for graduation purposes, a student's transcript must show enrollment in each successive term. Full-term courses dropped on or before the 15th day of the term or session (including Saturdays) do not appear on the student's TVI transcript. If an interruption in enrollment of one or more terms (excluding summers) occurs, graduation requirements applicable at the time of re-enrollment will apply.

Updating Occupational Certificates: A student who has received an occupational certificate may update his/her skills and earn a subsequent certificate in that program when:

- the previously earned certificate is ten years old or older, and
- 100% of the certificate coursework was completed within the past ten years; and
- the student has met all other graduation requirements as detailed in this section.

Student Academic Records

Official academic records are maintained by the Records Office. These records include, but are not limited to, the admissions application, high school and/or college transcripts, grades and academic standing.

TVI's policy for maintaining confidentiality of student academic records is in accordance with the Family Educational Rights and Privacy Act of 1974 (P.L. 93-380, 512). Copies of the Rights and Privacy Act are available for examination in the Records Office at the Main Campus and the Admissions Offices at the Montoya, Rio Rancho and South Valley campuses.

Access to Student Academic Records: All currently enrolled and former students may have access to their academic records. Other individuals and agencies who may have access to students' records include:

- TVI officials who have a legitimate educational interest in the records;
- officials of another school in which a student seeks to enroll, intends to enroll or is enrolled
- officials of the U.S. Department of Education, the Comptroller General, and state and local educational authorities;
- persons or organizations providing the student's financial aid or determining financial aid decisions concerning eligibility, amount, condition and enforcement of terms of said aid;
- state and local officials or authorities if required by a state law
- organizations conducting certain studies for or on behalf of the Institute
- accrediting institutions
- parents or legal guardians of a dependent student under the age of 18, as defined in the Section 152 of the Internal Revenue Code
- individuals serving a judicial order or a lawfully issued subpoena, provided that a reasonable effort is made to notify the student prior to compliance
- honor societies and other chartered student organizations for determining membership
- any person with the written consent of the student or the parent or legal guardian of students under 18
- appropriate parties in a health or safety emergency

Public Directory Information: TVI has defined public directory information as:

- student's name
- major field of study
- classification
- dates of attendance
- awards and honors
- degrees/certificates awarded

This information is available to the public and will be released unless an annual written request to withhold the information is on file in the Records Office. Request forms may be obtained in the Records Office.

TVI does not publish a student directory.

Challenge of Contents: Students have the right to challenge the content of their record if they feel the information is misleading or inaccurate. However, the fairness of a grade may not be challenged under this provision. Any dispute over the contents of the record will be handled through informal discussions between the student and the Records Office manager or registrar. If such informal meetings are not satisfactory, the student has the right to a formal hearing before an appeals committee.

Release of Transcripts: To request TVI transcripts, students must contact the Records Office on the Main Campus or the Admissions Offices at the Montoya, Rio Rancho or South Valley campuses. Students may request up to five TVI transcripts, free of charge, per academic year. Additional transcripts will be issued for a fee of $1 each. No transcript is issued until all institutional obligations are paid.

Transcripts from other institutions that are sent to TVI are not copied or returned to students.

Change of Name: Name changes will be processed only for currently enrolled students. Students must bring appropriate documentation (at least two types of identification showing the new name) to the Records Office on the Main Campus or the Admissions Offices at the Montoya, Rio Rancho or South Valley campuses. Examples of such documentation are: marriage certificate, birth certificate, driver's license, original social security card or court order for legal name change.

Change of Address: The student is expected to keep TVI informed of his or her current address. Address changes are processed only for currently enrolled students. Changes must be reported in writing to the Records Office on the Main Campus or the Admissions offices at the Montoya, Rio Rancho or South Valley campuses.

Student Right to Know and Campus Security Act: Student retention and completion data are available from TVI's Institutional Planning and Research Office. Campus security statistics are published annually in the Student Handbook.

Student Services

Students are provided with a wide range of services at TVI. This section deals with services which students may employ on first enrolling in the institution, throughout their careers as students at TVI and upon completion of their programs. The following services are available to all students in the new Main Campus Student Services Center at 900 University Blvd. SE: academic advisement; career and personal counseling; support services for students with special needs; financial aid advising; testing, career planning and course placement information; job placement services and health and fitness care.

At the Joseph M. Montoya Campus, services (except for health/fitness) are available in Tom Wiley Hall and in H Building. The Rio Rancho and South Valley campuses provide many of the same services which are available to students at Main and Montoya campuses.

Some services are available by appointment. Students may call the TVI admissions information line, 224-3160, for directions to speak to someone at Main and Montoya campuses. Student Services at Rio Rancho may be reached by calling 892-7113; the number at South Valley Campus is 873-8347.

Admissions and Advisement

Applications for admission to the Institute are accepted at all campuses. This section describes additional services available in the Student Services Center on the Main Campus for new and continuing students.

Professional advisors and staff are available in the Advisement Center to help students meet their educational goals by providing information about programs and individual courses and assistance in enrolling. Advisement staff work closely with other departments to ensure student success. Students are urged to take advantage of these services, which include:

- information about institutional policies and procedures;
- specific and individualized information about TVI programs;
- information about transferring credits to TVI;
- directions to appropriate services on campus and in the community; and

- a resource room with information on postsecondary schools in New Mexico.

Adjacent to the Advisement Center in the Student Services Center are the Records Office and the Registration Center. Transcripts may be obtained at the Records Office.

Personal and Career Development Counseling

TVI's Counseling Center, located on the second floor of the Student Services Center on Main Campus, is staffed by professional counselors and support staff who provide information and counseling for career choices, orientation to college life and TVI, skill training to make wise choices, support for achievement of each student's full potential and help for all students to resolve academic and personal problems. Students may visit the Counseling Center by appointment or informally at their discretion. Often, students are referred by a faculty or staff member.

Services available in the Counseling Center include:

- career counseling, including career and personality inventories that can help students to clarify their interests, values and skills;
- educational counseling which may include helping students establish educational goals and strategies for success;
- personal counseling to deal with problems of stress, conflict, self realization and self esteem, family/marital issues and substance abuse; and
- support groups and workshops on topics involving, among others, career change, transitional issues, test anxiety and alcohol and drug abuse.

Services for Students with Special Needs

Two departments within Student Services on the Main Campus, staffed by licensed professional counselors and support personnel, are Special Services and Special Populations.

Special Services assists students with physical, mental, learning, visual, speech or hearing disabilities. Career counseling, program planning, classroom accommodations, adaptive equipment, coordination with community support agencies and specialized learning plans are available. For students enrolled in developmental, certificate and associate degree courses, limited curriculum adjustments can be made to accommodate disabling conditions. Follow-up services such as counseling and job-seeking help are also provided.

Special Populations works with a wide range of students including educationally disadvantaged, economically disadvantaged, single parents, displaced homemakers, limited English proficiency, corrections and other groups as identified. Services offered include, but are not limited to, orientation to the processes of admissions, financial aid and course selection; career counseling; diagnostic screening; short-term personal counseling; referral to community agencies and assistance to stay in school.

Referrals to Special Services and Special Populations can be made through any TVI department, counselor, faculty, staff, community agency or directly by the student. These offices are located in Room 208 in the Student Services Center.

Testing Services

TVI's Testing Centers, in the Student Services Center at Main Campus and Wiley Hall at Montoya Campus, offer a variety of tests, most of them free of charge. Study guides for most exams are available in the Admissions offices. Testing accommodations for individuals with disabilities are available upon request; documentation and prior notice are required.

Among the examinations administered at TVI are:

- Career advisement tests: Aptitude, personality and interest tests are available to assist applicants and students in choosing a program of study.
- Accuplacer tests: Math, English and reading tests are administered on a computer. The exams are not timed and no prior computer knowledge is required. The tests help determine the appropriate course placement for students. The examinations are free.
- Nursing Basic Math Test: This exam is required of all applicants to petition for selection to the associate degree in nursing, medical laboratory technician and practical nurse programs. Referrals to take the exam must be obtained from the Health Occupations counseling office. The exam is not timed and no fee is required.
- Spanish Placement Exam: This exam is intended for students wishing to enroll in SPAN 101 or above. No fee is required.
- ACT, SAT, AP and CLEP: The American College Test assessment tests for placement are not offered at TVI. Students wishing to take the tests must register for a national test date; information and registration packets are available in the Testing Centers. TVI accepts ACT scores from all students for placement in certain courses. TVI also honors SAT, AP and CLEP scores but does not administer these exams; for further information students may contact the Testing Centers. (Also see pages 18–19).

GED Exam

Anyone at least 17 years old who is not enrolled in high school may take the General Educational Development (GED) exam at TVI to earn a high school diploma. The exam contains sections on writing, reading, science, social studies and math. No fees are required for the GED, GED pre-test or GED counseling.

A 17-year-old may take the exam only if released from the state compulsory school attendance law and granted a GED Underage Permission Form. No currently enrolled high school student and no one 16 years old or younger may take the exam. A Spanish-language GED is offered, and special testing is available for disabled students.

Interested persons may pre-test to determine readiness for the five-part exam. Those who want or need more study before taking the test may enroll in free GED preparatory classes, offered by TVI's Adult & Developmental Education Department (page 55). GED counseling is provided by a licensed professional counselor to assist examinees with issues regarding the GED.

Re-Testing and Time Limits

Placement exams may only be taken twice within one year. The GED may be taken only three times in one year. Career tests have no limit. Re-testing is not available for the NURS 110 challenge exam or the nursing mobility profile.

Students wishing to repeat an exam may do so after a waiting period has elapsed. A 24-hour waiting period applies to Accuplacer exams; the GED waiting period is six months. There is no waiting period for career advisement or aptitude exams. Students are advised to brush up at the Tutorial/Learning Centers prior to re-testing on placement exams.

Most test scores are good for two years from test date, although ACT and SAT scores used for course placement have a five-year limit.

Appeal Process: Questions and other matters related to testing and placement procedures should be addressed to the Director of Assessment Programs at Main Campus.

Financial Aid

The Financial Aid Offices provide information about grants, loans, part-time employment and scholarships available to students attending any of the campuses. Financial Aid advisors and support staff at Main Campus are located on the first floor, Student Services Center, and in Wiley Hall, Montoya Campus.

Students at the Rio Rancho and South Valley campuses may obtain federal financial aid applications and information concerning scholarships at their campus. Questions about financial aid may be directed to the Main or Montoya campus offices.

(Also see page 29–36.)

Student Job Placement

The Student Job Placement Services offices provides a variety of job search services to TVI students and graduates, including:

- job listings;
- a job hotline (224-3061);
- resumé editing and typing;
- training for interviews by engaging in mock interviews;
- on-campus interviews with employers;
- job market information;
- mini job fairs;
- job search related workshops; and
- personalized assistance for students with special needs.

All SJPS services are available at Main Campus Student Services Center, Room 207. Some services are also available at the Montoya campus, Room H128, and at the administrative offices at the Rio Rancho and South Valley campuses.

For information concerning student internships and cooperative education courses, students may contact the Business Occupations, Technologies and Trades & Service Occupations departments.

Health Care

The Health Center, located in the Student Services Center on Main Campus, is open weekdays from 8 a.m. to 5 p.m. Basic primary care services are offered, including physical examinations, care for acute conditions, various laboratory tests and wellness information. Services are free except for complete physical exams and some immunizations. On a limited basis, counseling is provided for mental health concerns.

First aid is provided through the Health Center. If it is necessary to transport an ill or injured student to a medical facility, the student is responsible for transportation costs. Students are encouraged to purchase health and property insurance. Details about private-provider health insurance are available at the entrance of the Student Services Center on Main Campus and in Wiley Hall on the Montoya Campus.

Joseph M. Montoya Campus

Services are provided in Tom Wiley Hall at the Joseph M. Montoya Campus to students who attend classes at any campus. Staff provide information about TVI programs and policies and assist students to identify and meet their educational goals. Services include:

- Admissions, advisement, registration and orientation: Students may apply to be admitted to TVI at the Montoya Campus and may register there for classes offered at all campuses. Requests for official transcripts are accepted at Montoya Campus and sent to the Records Office at Main Campus.

  Advisement helps students to understand policies and procedures, specific program requirements and how to take advantage of the resources available to TVI students.

  Orientation for new students is held prior to the beginning of each term. A schedule of dates and times is provided to students admitted at Montoya.
- Personal and career development counseling: Career, educational and personal counseling is provided by licensed professional counselors. Career assessments, goal setting and assisting students to deal with personal problems are some of the services provided. Materials and computerized guidance systems are used with students to help clarify career interests, make educational plans and address personal issues which effect student success.
- Testing: Admitted students are referred to the Testing Center in Wiley Hall for computerized placement tests, the computer literacy exam, the Spanish placement exam and career assessments.

  The General Educational Development (GED) exam is provided only to pre-registered persons who meet the state requirements for eligibility to take the exam. Walk-ins for the GED exam are not permitted at the Montoya Campus Testing Center.
- Financial Aid: Applications to obtain grants, loans, part-time employment and scholarships are accepted at the Montoya Campus. Financial Aid advisors and support staff are available on a walk-in basis to assist students.

- Job placement and services for students with special needs: These services, located in the H Building at Montoya, provide many of the services available at the Main Campus.

A bookstore, cashier, library and other instructional support services, and snack bar are at Montoya Campus. Cashier service closes at 4:30 p.m. daily and the bookstore closes at 5 p.m.

Rio Rancho Campus

The Student Services Office at the Rio Rancho Campus is open from 8 a.m. to 9 p.m. Monday through Thursday and 8 a.m. to 5 p.m. on Friday. Students may attend the Rio Rancho Campus whether or not they are employees of the Intel Corporation. These services are available:

- Admissions, registration and orientation: Students may apply to be admitted to TVI and register at the Rio Rancho Campus for classes at any campus. Orientation for new students is held prior to the beginning of each term; students may call the campus at 892-7113 for dates and times.
- Advisement and counseling: TVI staff are available for academic advisement during daytime and evening office hours. Free counseling regarding career choice, academic concerns or personal issues is available by appointment.
- Testing: Placement tests and GED tests are administered at the Rio Rancho Campus. Information regarding tests may be obtained by calling 892-7113.
- Tutoring: A tutor is available at the Rio Rancho Campus on a weekly basis.
- Scholarship and financial aid information: Lists of scholarship opportunities are available at the Rio Rancho Campus; financial aid information is available at the Main and Montoya campuses.
- Books: Books are available for purchase at the Rio Rancho Campus prior to the beginning of each term. Students may inquire about dates and times of book sales by calling 892-7113.
- Faculty offices: Faculty maintain office hours on campus to provide advisement to students.

South Valley Campus

The South Valley Campus, at 5816 Isleta SW, is open from 8 a.m. to 8 p.m. A range of services is available, including:

- Admissions and counseling: An admissions advisor and a counselor are on site; individual appointments may be made.
- Registration: Students may register for any TVI class on site. Payments for tuition and fee can be made at the campus with check, money order or credit card.
- Testing: Placement tests and GED tests are administered at the South Valley Campus. Information regarding testing may be obtained by calling 873-8347.

- Financial Aid: Financial aid applications are available and staff can provide information.
- Books: Prior to the beginning of each term, books and other supplies may be purchased at the South Valley Campus. Students may call 873-8347 for the schedule.
- Job placement: Staff provide job placement assistance to TVI students. Job listings from employers who wish to hire TVI students and graduates are posted.
- Student government: The South Valley Campus has a student government representative who provides information about student organizations, sports, clubs and other activities.
- Faculty offices: Faculty maintain office hours on campus to provide advisement to students.
- Transcripts: Requests for transcripts are accepted at the campus and sent to the Records Office on Main Campus.
- Parking, transportation, and security: Parking is available at the South Valley Campus. The gates are opened at 7:30 a.m. and closed at 10 p.m. There is a stop for the SunTran city buses, which run from 6 a.m. to 7:30 p.m. Security personnel are available from 7:30 a.m. to 10 p.m.
- Adult Education: Registration and information for GED, English as a second language, literacy and basic skills courses are available, as are bilingual (Spanish/English) advisors and counselors.

  Los estudiantes que deseen inscribirse en cursos de educacion elemental, GED, Ingles como segundo idioma, y alfabetizacion podran hacerlo incribiendose en persona. La inscripcion es en la oficina SV-101. Tambien se ofrece asistencia bilingue (Ingles/Espanol) en seleccion de cursos y asesoria.
- Instructional support services: Two computer labs are on site. Tutoring is available by appointment; students may call the Main Campus Tutorial/Learning Center.

Campus Life

Albuquerque TVI offers its students a number of activities which are meant to enrich life on campus and to provide for a well rounded education. Activities include:

- student government;
- some 25 co-curricular and extra-curricular organizations;
- sports clubs;
- campus chapters of professional societies;
- Phi Theta Kappa, the national academic honor society for community college students;
- the student newspaper, the *TVI Times*; and
- a student leadership development program.

Child care: TVI maintains affiliation with Tres Manos Child Development Center, 823 Buena Vista SE on the south side of Main Campus to provide daytime care for children of low-income students. Neighborhood residents may also use Tres Manos. Cost of services is on a sliding scale and preference is given to single parents. (Also see page 31.)

The Family Education Project at Tres Manos also offers home visits, support groups, parent training, referrals, hot lunches, a lending library and classes in basic skills.

Shuttles: A free shuttle bus runs between Main and Montoya campuses, with a stop at the University of New Mexico, when classes are in session. The schedule is printed in the Schedule of Classes. A second shuttle runs between the Dukes Stadium parking lot (University and Stadium SE) and Salazar Hall.

Parking: Parking stickers, required for parking in all TVI lots, are available at the information counter in the Admissions Office at Main and Montoya and in the administrative offices at Rio Rancho and South Valley campuses. Parking violations may result in disciplinary action against car owners. Cars parked in fire lanes and in spaces reserved for the handicapped are subject to towing.

Campus Conduct

TVI maintains a salutary ambient for students and other members of its community. In order to accomplish this, TVI insists upon a code of conduct which includes but is not limited to prohibition of any of the following behaviors:

- Disruptive or unsafe behavior on campus is grounds for suspension or dismissal from TVI. This policy applies to students on field trips undertaken in the supervision of an employee of TVI.
- Plagiarism or cheating: A student guilty of plagiarism or cheating on school work will receive a grade of F or U in the course involved. Repeat offenses will result in suspension from TVI.
- Computer Crime: A person who intentionally and without authorization accesses, alters, damages, copies or destroys any computer system or data stored within is subject to prosecution, under the state Computer Crimes Act, on charges ranging from misdemeanor to third-degree felony. Such conduct will also lead to suspension or dismissal from TVI.
- Smoking is prohibited in all TVI buildings by the TVI Governing Board's policy in accordance with ordinances of the City of Albuquerque.
- Sexual harassment constitutes an unacceptable and punishable offense at TVI. The campus policy is stated in the Student Handbook.
- Graffiti and vandalism are subject to penalty if an individual is found defacing any TVI property or committing any act of vandalism.
- Dangerous substances: Carrying, possessing or storing dangerous substances or materials on campus is prohibited.
- Weapons and firearms are not allowed on campus except in possession of law enforcement officers authorized by state law to carry firearms and students participating in law enforcement instruction requiring the use of firearms who are under supervision of a certified law enforcement instructor.

Other acts which are discouraged or prohibited on campus include:

- Drinking of beverages and eating food are prohibited in all classrooms, laboratories, and libraries.
- Animals are not allowed in TVI's buildings except those assisting sensory-impaired persons.
- Students are not permitted to bring children to classes, laboratories or any instructional activities. Children left unattended on campus will be brought to the attention of the appropriate law enforcement agency.
- Any student who misrepresents or fails to disclose pertinent information in filling out an application or other educational record will be liable for disciplinary action, including possible dismissal from TVI.

Additional information containing students' rights and responsibilities is contained in the Student Handbook.

Academic Support Services

These services are available free to students and, in some cases, to the public. Libraries and other facilities are generally open weekdays and, when classes are in session, evenings and Saturdays.

Learning Resources Centers (libraries): The Learning Resources Centers at the Main and Montoya campuses offer books, maps, pamphlets, newspapers, magazines, encyclopedias and dictionaries, as well as computerized information retrieval systems. Special collections are maintained in all TVI occupational subjects. Services include help in locating materials, instruction in using a library, study facilities, interlibrary loans, magazine back issues and coin-operated copying machines.

The Main Campus Library is on the fourth floor of Jeannette Stromberg Hall; the Montoya Campus Library is in J Building.

When TVI classes are in session the libraries are open from 7 a.m. to 9:30 p.m. weekdays except Friday, when they close at 5 p.m., and Saturdays from 8 a.m. to 5 p.m. When school is not in session, hours are 8 a.m. to 5 p.m. Monday through Friday.

Tutorial/Learning Centers: The T/LCs provide all TVI students with free individual tutoring services on a walk-in basis. Subjects covered are math, English, chemistry, physics and biology. Vocational tutors are available for Trades, Technologies, Health Occupations, computer programming and accounting courses. The centers also offer audio and video tapes which support TVI's instructional programs as well as handouts for self-study. Self-paced programs are available in computer use, academic skills improvement and test preparation. Each center has computers for student and public use. The Main Campus T/LC is in Stromberg Hall. At Montoya, the T/LC is in H136. Hours are 7 a.m. to 9:30 p.m. Monday through Thursday, 7 a.m. to 5 p.m. Friday and 8 a.m. to 5 p.m. Saturday.

Adult Education Learning Centers: The centers provide individualized instruction and independent study in reading, math, writing and English as a second language. A variety of instructional resources is available, such as audio cassette tapes, video tapes, film strips, textbooks and software. Computer-assisted instruction is available. Instruction is provided on an open-entry basis by instructors, instructional assistants and volunteer tutors. The Main Campus center is in BV20A, at 901 Buena Vista SE. (It will move to Stromberg Hall during the 1996–97 year.) Hours are 8:30 a.m. to 9 p.m. Monday through Thursday and until 4 p.m. Friday. The Montoya center is in the H Building and is open from 9 a.m. to 8:30 p.m. Monday through Thursday and until noon Friday.

Math Applications Learning Lab: The Adult & Developmental Education Department offers extra assistance in the Math Applications Learning Lab. For the many students who learn by doing, this lab provides the hands-on practice needed to understand principles and formulas commonly used in basic math and algebra classes. At Main Campus the lab is in Rooms P-7 and P-9 of the Prep Building. At Montoya the lab is in J-123.

Writing and Reading Assistance Center: Adult & Developmental Education students have access to one-on-one and small-group help with writing and reading projects in the WRAC. This help includes instruction in pre-writing techniques, outlining strategies, essay organization, summary writing, grammar, vocabulary building, reading comprehension, test preparation, study skills and other concepts covered in reading and writing courses. Resource materials and computers with writing and reading software are also available. This lab is located in Room P-22 of the Prep Building on the Main Campus. At Montoya, the WRAC is in J-117.

Instructional Media Resources: This office maintains TVI's film and videotape collections and all audiovisual equipment. Materials are available for classroom and individual viewing. Instruction in the operation of AV equipment is available to students and staff. Other services include educational film location, preview arrangements and assistance in the design, preparation and application of audiovisual materials. The Main Campus office is on the third floor of Jeannette Stromberg Hall; a satellite office is in Max Salazar Hall. At Montoya, it is in K Building.

(Also see Business Occupations Learning Centers, page 101.)

Adult & Developmental Education

Main, Montoya, Rio Rancho and South Valley campuses,
plus community-based sites

The Department of Adult & Developmental Education offers three kinds of instruction: non-credit courses in adult education, credit courses in developmental studies and learning assistance services. Descriptions for each of these are listed below. Students who wish additional information may call 224-3939.

Adult Education

Our goal in the Adult Education program at TVI is to help students identify and achieve their basic educational goals. To do that, we offer non-credit courses in English as a second language (ESL), basic academic skills (including GED preparation) and job/life skills classes, all of which can lead to higher education, job advancement and/or personal fulfillment.

Se Habla Español: El propósito del programa de Educación Para El Adulto en TVI es de ayudar a los estudiantes a identificar y realizar sus metas académicas. Para cumplir con este objetivo, les ofrecemos cursos en Inglés Como Segunda Lengua (ESL), cursos básicos como así también otras clases que pueden resultar en estudios universitarios, promoción en el trabajo o la realización de las metas personales. Si le gustaría recibir más información, favor de llamar a la oficina de Educación para El Adulto, 224-4269.

Chúng tôi có nhân viên nói tiếng Việt.

Mục đích của chúng tôi trong chương trình "Giáo Dục Dành Cho Người Lớn" ở trường T-VI là giúp học viên xác định mục tiêu và đạt kết quả tốt trong việc học vấn. Để thực hiện được điều này, chúng tôi có mở các lớp học Tiếng Anh Như Ngôn Ngữ Thứ Nhì (còn gọi là ESL hay English as a Second Language). Ngoài ra, chúng tôi còn có các lớp học căn bản và các lớp rèn luyện kỹ năng khác. Những lớp này có thể giúp quý vị có nhiều cơ hội để phát triển học vấn, thăng tiến nghề nghiệp, và đạt được nhiều thành quả khác. Nếu quý vị muốn biết thêm chi tiết, xin gọi cho văn phòng chúng tôi: Điện thoại số 224-4269 hay xem trang ..... trong quyển sách này.

Locations

Adult Education classes are offered during the day and in the evening at each of the TVI campuses as well as at many sites throughout Bernalillo County:

TVI Campuses
TVI Main Campus: 525 Buena Vista SE
TVI Montoya Campus: 4700 Morris NE
TVI Rio Rancho Campus: State Road 528 and Sara Road
TVI South Valley Campus: 5816 Isleta SW

Southeast Sites
East Central Multi-Service Center: 7525 Zuni SE
Eugene Field Elementary School: 700 Edith Blvd. SE
Families in Partnership: 2200 University SE
Heights Community Center: 823 Buena Vista SE
John Marshall Multi-Service Center: 1500 Walter SE
Kirtland Elementary School: 3530 Gibson SE
Loma Linda Community Center: 1700 Yale SE
Mesa Verde Community Center: 7900 Marquette NE
Van Buren Middle School: 700 Louisiana Blvd. SE

Southwest Sites
Adobe Acres Elementary School: 1724 Camino del Valle SW
Alamosa Elementary School: 6500 Sunset Gardens Road SW
Armijo Elementary School: 1440 Gatewood Ave. SW
Barcelona Elementary School: 2311 Barcelona Road SW
Polk Middle School: 2220 Raymac SW
Valle Vista Elementary School: 1700 Mac Avenue SW

North Sites
Alameda Community Center: 9800 Fourth NW
Los Vecinos Community Center: Old Highway 66, Tijeras Canyon
Los Griegos Family and Community Services Center: 1231 Candelaria NW

West Sites
Cibola High School: 1510 Ellison Road NW
West Mesa Community Center: 5500 Glenrio Road NW
West Mesa High School: 6701 Fortuna Road NW

Placebound/Downtown Sites
Bernalillo County Detention Center
Dolores Gonzales Elementary School: 900 Atlantic SW
El Buen Samaritano: 700 Granite NW
Friends Meeting House: 1600 5th NW
Juvenile Detention Center

La Pasada Halfway House
St. Martin's Hospitality Center: 1201 3rd NW
Wells Park Community Center: 500 Rosemont Ave NW

Registration. Anyone wanting to take an Adult Education course may register in person at any of the TVI campuses where we offer courses and at any of our off-campus sites.

Costs. Classes and textbooks are provided free to students.

Attendance. Teachers take attendance at each class session. If a student is absent four classes in a row, the teacher tries to contact the student. A student may be dropped from the class after four consecutive absences. Students who have missed or dropped classes are encouraged to go to the Adult Education Learning Centers at the Main and Montoya campuses to continue their studies.

Standards of Progress. Each student receives a certificate that indicates the total number of hours he or she attended in each course. No letter grades are given.

Classes. Course offerings reflect the needs of the community and may change from term to term. Generally, the Adult Education Program offers courses in three areas of study: Basic Skills, English as a Second Language and Job/Life Skills. Some courses are offered in full-term format, and others are offered in a shorter format. In the fall and spring, a full term is 14 weeks; half-term is seven weeks; a third of a term is five weeks. In the summer, a full term is 12 weeks; a half term is six weeks; a third of a term is four weeks. Courses are full term unless otherwise noted.

Basic Skills

BSK 040 Basic Language Skills I
In this course, students explore basic reading/writing strategies that help them function in their daily lives. Class activities include working with phonics, developing a sight vocabulary, looking for whole ideas and writing basic sentences. Emphasis is placed on collaborative use of materials, situations and themes relevant to students' circumstances and needs.

BSK 041 Basic Language Skills II
Students practice strategies that will help them improve basic reading and writing skills. Class activities include developmental phonics, dictionary skills, some grammar fundamentals, reading and response and self expression. Emphasis is placed on collaborative use of materials, situations and themes relevant to students' circumstances and needs.

BSK 042 Basic Language Skills III
At this level, students perfect and expand their basic reading and writing skills. Class activities include reading comprehension and critical thinking, some useful grammar and spelling rules and experimentation with formal writing. Small group work on collabora-

tive projects may be involved. Successful course completion prepares the student for the next level of Basic Skills language classes.

BSK 050 Basic Skills Reading
Students focus on reading comprehension and analytical skills in this full-term course. Through relevant nonfiction and fiction, students practice identifying aspects of reading such as the main idea, point of view and organizational patterns. They also work on summarizing, drawing conclusions and responding to what they read. Students work in small groups as well as individually. This class provides students with opportunities to improve general reading skills and also prepares students to take GED classes.

BSK 051 Reading in Literature and the Arts (half term)
The focus of this half term course is on aspects of literature and the arts, such as short stories, poetry, drama and commentary. Emphasis is on relevant, multi-cultural readings. Students work on reading comprehension and analyze fiction and nonfiction prepare for the GED exam.

BSK 052 Reading in Social Studies (half term)
In this half term course, students study components of social studies, such as history, behavioral sciences, political science, geography and economics. Current events worldwide are emphasized. Critical thinking concepts are applied to these topics in preparation for the GED exam.

BSK 053 Reading in Science (half term)
In this half term course students are introduced to a broad spectrum of science disciplines, including plant and animal biology, human biology, earth science, chemistry and physics at the basic level. Students practice reading comprehension and critical thinking skills as well as analyze graphs, tables and charts to prepare for the GED.

BSK 060 Math Fundamentals
In this open-entry/open-exit course, students review the basic meaning and use of mathematics through application to life situations. The language and basic concepts of math, as well as basic addition, subtraction, multiplication and division are covered. This course prepares the student for BSK 061, 062 or 063.

BSK 061 Whole Numbers, Decimals and Fractions (half term)
The focus of this half term course is the decimal counting system (whole and fractional parts) and fractions. Students work on problem solving skills and prepare for parts of the GED test and/or other TVI courses, as well as work on developing personal and job-related math abilities.

BSK 062 Ratios and Proportions, Percents and Understanding/Interpreting Data (half term)
Ratios and proportions, percents and interpretation of data (including graphs, averages and probability) are covered in this half term course. Emphasis is on problem solving skills

and helping students prepare for parts of the GED test and/or other TVI programs, as well as develop personal and job-related math abilities.

BSK 063 Basic Geometry, Measurement and Algebra Topics (half term)
This course covers basic geometry, measurement and algebra topics. Students focus on problem solving skills and prepare for parts of the GED test and/or other TVI programs, as well as develop personal and job-related math abilities.

BSK 070 General Composition
This full-term version of BSK 072 and 073 is for those students needing to develop essay, paragraph and sentence writing skills. Topics include pre-writing strategies, paragraphing and essay development and organization, and sentence structure. The class helps students prepare for the GED exam and/or the next level English class.

BSK 071 Spelling and Grammar
This is a course for students who need a comprehensive refresher in language mechanics and spelling improvement techniques. It is recommended as a prerequisite or corequisite for Basic Skills Sentence and Paragraph Writing. Students study the parts of speech and how to identify and correct common errors in sentence structure, subject-verb agreement, pronoun-antecedent agreement, vague pronoun reference, plurals and possessives, punctuation, capitalization and spelling.

BSK 072 Sentence and Paragraph Writing (half term)
A course for students needing instruction in basic sentence structure, grammar, punctuation, syntax and paragraph development, BSK 072 helps students learn to analyze a simple writing assignment to ascertain its purpose and write narrative, descriptive, informative and persuasive paragraphs in response to assigned topics. Students also work on composing effective sentences and practice composing routine correspondence, such as letters to the editor and letters of application for employment.

BSK 073 Essay Writing (half term)
In this half term course for students preparing to take the GED writing skills test, students analyze a writing assignment to determine purpose and organization and generate material for essays using pre-writing strategies like brainstorming and free-writing. Students practice organizational techniques like outlining and idea clustering and use them to perfect different methods of development for essays. Students compose and revise persuasive and illustrative essays on topics representative of those on the actual GED writing skills test.

BSK 080 Basic Skills Learning Center
Students can study any of the basic skills areas by enrolling in the Adult Education Learning Center at either Main or Montoya campus. Study is self-paced with an instructor or an instructional assistant helping students. Study times can be arranged to meet student instructional needs and/or to accommodate work or family schedules.

BSK 081 Basic Skills Integrated
This is a regularly scheduled class. All basic skills areas are available and study is self-paced.

BSK 082 Basic Skills Special Topics (full and half term)
Various topics in the basic skills areas are presented. Topics may change from term to term. Offerings are listed in the Schedule of Classes.

English as a Second Language

Note: The ESL curriculum is in the process of changing. We offer several ESL courses at the beginning, intermediate and advanced ESL levels. Listed below are general descriptions of the ESL levels. Information on specific courses is available at department offices at the Main and Montoya campuses.

ESL 040 ESL Literacy
Students are introduced to the sound system of the English alphabet. They learn vocabulary appropriate for use in real life situations. Once sufficient vocabulary has been acquired, students practice scenarios such as a visit to the doctor, food shopping and dealing with emergencies.

ESL 050 Beginning ESL
Adult Education offers several levels of Beginning ESL. In these courses, students become familiar with basic English sound patterns and begin to acquire tools for communication. The most common verb tenses and simple usage are covered. Class members are introduced to terminology that is essential to their daily lives. Emphasis is placed on practice via paired and small group dialogues involving real life situations.

ESL 060 Intermediate ESL
Adult Education offers several levels of Intermediate ESL. In these courses, students work to improve both their spoken and written communication skills. The range of verb tenses is expanded. Additional points of grammar and usage are introduced. Development of a functional vocabulary continues, with attention to the use of idioms. Some focus is placed on reading, critical thinking skills and problem solving.

ESL 070 Advanced ESL
Adult Education offers several levels of Advanced ESL. These courses are for ESL students who can function comfortably in an English language environment and who have a working knowledge of English grammar. In addition to conversation, reading and writing are emphasized. Students are exposed to a variety of literary and other materials, which they are asked to summarize and evaluate. Formal interaction, both verbal and written, is included, as well as an introduction to higher education and available options.

ESL 080 ESL Learning Center
Students can study any of the ESL levels by enrolling in the Adult Education Learning Center at the Main or Montoya campus. Study is self-paced with an instructor or an instructional assistant in the center to help students. Study times can be arranged to meet student instructional needs and/or to accommodate work or family schedules.

ESL 081 ESL Integrated
Students can study any of the ESL skill areas by enrolling in an ESL Integrated section. This is a regularly scheduled class. All ESL levels are available and study is self-paced so the student can work on the skills which meet his/her instructional needs.

ESL 082 ESL Special Topics
Various topics in ESL are presented. Topics may change from term to term. Offerings are listed in the Schedule of Classes.

Job/Life Skills

JLS 040 Job/Life Skills
This full-term course introduces students to critical life skills, such as study skills, self-esteem and parenting skills, and job skills, which focus on occupational and job-related services at TVI. For example, students learn to use the Institute's job placement office. This class is useful for students who wish to continue their studies and/or pursue career objectives as they finish their GEDs.

JLS 041 Computer Literacy for Adult Education
Computer Literacy provides an open entry/open exit classroom format for students wanting to become computer literate. Satisfactory completion of the course is indicated by the ability to send electronic messages, compose, edit and print within WordPerfect, manage files using DOS, and operate within the Windows environment. This course is recommended for students taking the Adult Education GED Writing and Spelling/Grammar classes and for students wanting to become computer literate.

JLS 080 Job/Life Skills Learning Center
Students can study any of the job and life skills areas by enrolling in the Adult Education Learning Center at Main or Montoya campus. Study is self-paced with an instructor or an instructional assistant in the Center to help students. Study times can be arranged to meet student instructional needs and/or to accommodate work or family schedules.

JLS 081 Job/Life Skills Integrated (full and half term)
Students can study any of the job and life skills areas by enrolling in a Job and Life Skills Integrated section. This is a regularly scheduled class with an instructor present at all times. All job and life skills areas are available, and study is self-paced so the student can work on the skills which meet his/her instructional needs.

JLS 082 Job/Life Skills Special Topics (full and half term)
Various topics in the job and life skills areas are presented. Topics may change from term to term. Offerings are listed in the Schedule of Classes.

Developmental Studies

There are many reasons why students are not ready for college-level studies. Some did not enroll in the right courses in high school. Others once had the skills but have been out of school for years and now need to "brush up." Still others' lives were full of responsibilities, circumstances or priorities that made it difficult for them to be successful students. And some have solid academic skills but lack confidence. But, for whatever reason people find themselves unprepared for college, college is not an impossibility.

Faculty and staff in TVI Developmental Studies work with students to develop the basic academic, study and life skills necessary for college success, whether those students choose to follow a liberal arts or a vocational path. Credit courses in reading, writing, math and science are offered as are introductory courses to some vocational programs. The department also offers credit courses to help students develop useful strategies and skills such as time management, stress management, calculator use and test preparation. Students are placed in the appropriate courses based on their needs, interests and abilities.

Locations. Classes are offered at all four TVI campuses. (University of New Mexico students also take TVI Developmental Studies classes; information about UNM's Introductory Studies Program can be found in the current UNM catalog.)

Costs. Students are charged a small enrollment fee for classes. Textbooks and supplies are available for purchase at the bookstores at Main and Montoya campuses. Eligible students may receive financial aid for up to 30 credit hours in Developmental Studies courses. Students using veterans' benefits should check with VA advisors as some of the Developmental Studies courses are not eligible for benefits.

Grades. Developmental Studies courses do not use the traditional letter grading system (A, B, C, D, F). To help students build up their skills without the added pressure of traditional grades, courses are graded CR (credit) and NC (no credit). While credit from Developmental Studies courses is not transferable to other degree-granting institutions, grades are recorded on students' permanent records, and these courses typically help students meet admissions requirements and program prerequisites.

Classes. Developmental Studies offers courses in six areas of study: English, math, reading, science, introductions to some vocational programs and study skills. Some courses are offered in full-term format, and others are a shorter format. In the fall and spring, a full term is 15 weeks; a half-term is seven and a half weeks; a third of a term is five weeks. In the summer, a full term is 12 weeks; a half term is six weeks; a third of a term is four weeks. Courses are full term unless otherwise noted.

English

ENG 096 Special Topics 1–3 credit hours
Various topics in developmental English are presented. (Descriptions of regularly offered topics courses can be found at the end of the Developmental Studies section.)

ENG 098 Basic Writing and Reading Skills 3 credit hours
This course focuses on making reading and writing a part of everyday life. Students read and respond to short articles and other selections, write paragraph-length compositions, pay special attention to the construction of powerful sentences and review English grammar, usage and punctuation. (3 theory hours + 2 lab hours a week)

ENG 099 Practical Writing 3 credit hours
(Prerequisite: ENG 098 or equivalent skills as demonstrated by exam) Practical Writing provides students the opportunity to focus on a variety of tasks related to daily life, academics and the workplace, including process writing, business letters, memos and reports. Student writers polish skills of effective paragraphing and review English grammar, usage and punctuation in the context of their writing and needs. (3 theory hours + 1 lab hour a week)

ENG 100 Writing the Academic Essay 3 credit hours
(Prerequisite: ENG 099 or equivalent skills as demonstrated by exam) This course presents a variety of strategies for invention, organization, logical support, revision and editing of effective academic essays. Students review English grammar, usage and punctuation in the context of their writing and needs. Satisfactory completion of ENG 100 meets the prerequisite of ENG 101. (3 theory hours + 1 lab hour a week)

English as a Second Language

ESL 096 Special Topics 1–3 credit hours
Various topics for students learning English as a second language are presented. (Descriptions of regularly offered topics courses can be found at the end of the Developmental Studies section.)

ESL 098 Basic Writing and Reading in ESL 3 credit hours
This course is for students for whom American English is a second language or who have had limited exposure to the standard dialect of American English. The course covers the same writing tasks as its equivalent, ENG 098, but it also encourages students to use idiomatic English and to recognize and edit the grammatical errors that are often made by non-native speakers. (3 theory hours + 2 lab hours a week)

ESL 099 Practical Writing in ESL 3 credit hours
(Prerequisite: ENG 098, ESL 098 or equivalent skills as demonstrated by exam; corequisite: RDG 099) A course for students for whom American English is a second language or who have had limited exposure to the standard dialect of American English, ESL 099 covers the

same reading and writing tasks as its equivalent, ENG 099, but it also provides students with opportunities to use idiomatic English and to recognize and edit the grammatical errors that are often made by non-native speakers. (3 theory hours + 1 lab hour a week)

ESL 100 Writing the Academic Essay in ESL 3 credit hours
(Prerequisite: ENG 099, ESL 099 or equivalent skills as demonstrated by exam; corequisite: RDG 100) This course is for students for whom American English is a second language or who have had limited exposure to the standard dialect of American English. The course covers the same reading and writing tasks as its equivalent, ENG 100, but it also encourages students to use idiomatic English and to recognize and edit the grammatical errors that are often made by non-native speakers. Satisfactory completion of ESL 100 meets the prerequisite for ESL 101. (3 theory + 1 lab hour a week)

Mathematics

MATH 096 Special Topics 1–3 credit hours
Various topics in developmental math are presented.

MATH 097 Introductory Mathematics 6 credit hours
MATH 097 provides small-group instruction in basic mathematics, geometry and algebra. This course satisfies the prerequisite for MATH 100A. (5 theory hours + 3 hours lab a week)

MATH 099 Basic College Mathematics 3 credit hours
This course will integrate topics from basic mathematics, geometry and algebra. It will prepare students to enter programs in Business Occupations, Technologies, Trades & Service Occupations and Health Occupations or MATH 100A. This course satisfies the prerequisite for MATH 100A. (3 theory hours + 1 hour lab a week)

MATH 099H Basic Math for Health Occupations 3 credit hours
MATH 099H prepares students for the Nursing/Medical Laboratory Technician basic math test. Topics include basic arithmetic, the metric system and other measuring systems. Health Occupations Department approval is required for enrollment in this course. (2 theory hours + 1 hour lab a week)

MATH 100A Algebraic Problem Solving I 3 credit hours
(Prerequisite: MATH 097 or MATH 099 or equivalent skills as demonstrated by exam) This is the first of a two-course series in elementary algebra. Topics include signed numbers, solving linear equations, formulas, graphing, solving systems of equations and applications. This course satisfies the prerequisite for MATH 100B, MATH 111 and MATH 119. (3 theory hours + 1 hour lab a week)

MATH 100B Algebraic Problem Solving II 3 credit hours
(Prerequisite: MATH 100A or equivalent skills as demonstrated by exam) This is the second of a two-course series in elementary algebra. Topics include exponents and polyno-

mials, rational expressions, factoring, roots and radicals, and quadratics. This course satisfies the prerequisite for MATH 120 and is recommended for MATH 111. (3 theory hours + 1 hour lab a week)

MATH 100 Algebraic Problem Solving 3 credit hours
(Prerequisite: Appropriate placement exam score) This course covers the same material as MATH 100A and MATH 100B at an accelerated pace. It is a one-term course designed for students who have demonstrated solid understanding of basic algebra. This course satisfies the prerequisite for MATH 111, MATH 119 and MATH 120. (3 theory hours + 1 lab hour a week)

Reading

RDG 096 Special Topics 1–3 credit hours
Various topics for reading instruction are presented.

ENG 098 Basic Writing and Reading Skills 3 credit hours
This course focuses on making reading and writing a part of everyday life. Students read and respond to short articles and other selections, write paragraph-length compositions, pay special attention to the construction of powerful sentences and review English grammar, usage and punctuation. (3 theory hours + 2 lab hours a week)

RDG 099 Reading for the Workplace 3 credit hours
(Corequisite for ESL 099) Students are introduced to the reading required for success in occupational majors and the workplace. The focus is on comprehending and responding to occupational and workplace literacy, and critical thinking. Students read workplace-related articles and material from their majors. (3 theory hours + 1 hour lab a week)

RDG 100 Reading and Critical Thinking 3 credit hours
(Corequisite for ESL 100) Students are introduced to the reading required for success in vocational, occupational and liberal arts courses. Topics include comprehension, critical thinking, notetaking, annotating, organizing and summarizing skills, and research skills, including the use of technology. The relationship between reading and writing is emphasized. (3 theory hours + 1 lab hour a week)

Science

SCIE 096 Special Topics 1–3 credit hours
Various topics in developmental science are presented.

BIO 100 Introduction to Biology 3 credit hours
(Prerequisite: MATH 099 and RDG 099 or equivalent skills) Students will explore basic biological concepts through studies of taxonomy, anatomy, cells and tissues, and genetics

while developing a sense of scale, skill in using the microscope and the ability to observe and to diagram. This course complements but does not replace CHEM 100, which is a recommended prerequisite for BIO 123 and BIO 136. (3 theory hours + 1 lab hour a week)

CHEM 100 Basics of Chemistry 3 credit hours
(Recommended pre- or corequisite: MATH 100A or equivalent) For students who did not take high-school chemistry, this course provides the essential background for success at the next level, in particular BIO 123, BIO 136 and CHEM 111, while developing applied math skills, reading and science study habits. A credit grade satisfies UNM's ACT science reasoning requirement. (3 theory hours + 1 lab hour a week)

Occupational Support Courses

OCC 096 Special Topics 1–3 credit hours
Various topics in occupational support courses are presented. (Descriptions of regularly offered topics courses can be found at the end of the Developmental Studies section.)

ACCT 100 Introduction to Accounting 3 credit hours
This course is designed to provide students with knowledge of the basic accounting cycle. Additional topics such as payroll and taxes are covered as time permits. This class helps students prepare for entry-level accounting-related courses. (3 theory hours + 1 lab hour a week)

BA 100 Business Careers/Technology Awareness 3 credit hours
Students explore various business careers and business technologies. Students also work to develop listening, speaking and employability skills. This course is recommended for students who are interested in business studies. (3 theory hours + 1 lab hour a week)

CP 100 Introduction to Computer Programming 3 credit hours
(Prerequisite: MATH 099) This course provides preparation for first-term Business Computer Programming Technology and gives an overview of computer systems. Course content includes flowcharting, logic, data processing concepts and programming in QBASIC. Satisfactory completion of the course indicates that the student is prepared for entry-level computer programming courses. (3 theory hours + 1 lab hour a week)

CSCI 100 Basic Keyboarding/Computer Skills 3 credit hours
Keyboarding is emphasized as well as computer hardware and software, function and directional keys and basic word processing. This course is recommended for beginning keyboarding students who will use computer and keyboarding skills in various majors and everyday life. (3 theory hours + 1 lab hour a week)

DRFT 100 Introduction to Drafting 3 credit hours
Introductory concepts of drafting, including line weights, orthographic projections, dimensioning, pictorials and applied drafting skills will be offered in this course. Free-hand

sketching, geometric constructions, lettering, drafting math and occupational information are also presented. The course helps students prepare for Architectural/Engineering Drafting Technology, Construction Technology, Design Drafting Engineering Technology and other related programs. (3 theory hours + 1 lab hour a week)

ELEC 100 Introduction to Electronics for Technologies/Trades **3 credit hours**

Instruction in electronics theory includes: Ohm's, Kirchoff's and Power laws; circuit analysis; magnetism and generators. Additional topics such as motors, inductance and capacitance are covered as time permits. Reasoning skills and applied mathematics are emphasized. This course is also recommended for Trades majors that require the principles of electricity. (3 theory hours + 1 lab hour a week)

HLTH 100 Introduction to Health Occupations **3 credit hours**

This course offers an exploration of various medical careers as well as an introduction to medical terminology and selected body systems. Terminology and career exploration are studied separately and then integrated with the study of anatomy, physiology and pathophysiology. (3 theory hours + 1 lab hour a week)

Skills Improvement Courses

SSKL 092 Introduction to the Scientific Calculator (half term) **1 credit hour**

Students are introduced to the use of the functions on the calculator keyboard. Topics include statistics, programming and graphing functions. The course is useful for math, science and Technologies courses. Calculators are provided. There is a $5 fee for supplies. (2 theory hours + 1 lab hour a week)

SSKL 094 Reducing Math Anxiety (half term) **1 credit hour**

Designed for math anxiety, not test anxiety, this course offers students a chance to gain an understanding of math anxiety and modify related behaviors through the use of group discussion, journal entries and math study skills. (2 theory hours a week)

SSKL 095 Study Skills (half term) **1 credit hour**

Students identify and apply a variety of study skills by completing an inventory and implementing time-management strategies. Methods are presented for taking effective notes, using memory techniques, approaching test preparation and test taking and setting realistic goals. (2 theory hours a week)

SSKL 096 Special Topics **1–3 credit hours**

Various topics in study skills are presented.

SSKL 100 Student Success **2 credit hours**

Expanding on the popular study skills mini-course, this course provides students with both theory and practice in learning how to learn. After determining their strengths and weak-

nesses, students develop and implement plans to improve skills. These include study reading, test taking, managing time on larger projects and using resources on and off campus. (2 theory hours a week)

Special Topics Courses

A variety of courses are offered under special topics. In Developmental Studies, some topics courses are offered regularly; others are offered only occasionally. Students should check the Schedule of Classes each term. Listed below are topics courses regularly offered.

ENG 096 **Spelling Strategies (half term)** **1 credit hour**

Designed to help students overcome spelling difficulties, the course focuses on essential spelling skills. Topics include faulty pronunciation, consonant and vowel spellings, dictionary use, proofreading and spelling rules. This course may be taken concurrently with any other English or ESL courses. (2 theory hours + 1 lab hour a week)

ENG 096A **Intensive English Grammar: Sentence Combining (half term)** **1 credit hour**

Sentence Combining is recommended for students who would like to add variety to their sentences and to invigorate their writing style. Students are given opportunities to apply grammar concepts to their own writing. Topics include sentence fragments, run-on sentences, coordination and subordination, and punctuation. This course may be taken concurrently with any other English or ESL courses. (2 theory hours + 1 lab hour a week)

ENG 096B **Intensive English Grammar: Sentence Effectiveness (half term)** **1 credit hour**

Sentence Effectiveness is particularly recommended for students who are struggling with English grammar and would like to focus on writing effective sentences. Special attention is paid to sentence revision. Students are given opportunities to apply grammatical principles to their own writing. Topics include sentence coordination and subordination, punctuation, subject-verb agreement, pronoun usage and modifier usage. This course may be taken concurrently with any other English or ESL courses. (2 theory hours + 1 lab hour a week)

ESL 096 **Conversations in English as a Second Language** **1 credit hour**

Recommended for students who would like practice in reading and expressing themselves verbally in English, this course will focus on identifying main and supporting ideas from reading selections and communicating those ideas to each other in a small-group setting. Class members as a group will choose topics to explore; topics will typically include American culture and customs, current events and social issues. In addition, this course encourages students to use idiomatic English. This course may be taken concurrently with any other ESL courses. (2 theory hours + 1 lab hour a week)

OCC 096 Basic Computer Literacy (third term) 1 credit hour
This course provides students with the opportunity to develop beginning computer literacy skills. Topics incorporate skills necessary for effective computer operation, such as keyboarding and mouse usage, common word processing tasks and the understanding of computer system components. The course also introduces students to computer concepts used in many Adult & Developmental Education courses. (3 theory hours + 1 lab hour a week)

Learning Assistance

Several learning assistance centers are available to students needing additional instructional support in pursuit of their educational goals. Each center has a different academic focus but all operate as open entry, open exit programs providing individual and group tutoring, self-paced and other instructional materials and computer aided instruction. These centers are described on pages 53–54 of this Catalog: Adult Education Learning Centers, Math Applications Learning Lab, Writing and Reading Assistance Center and Tutorial/Learning Centers.

Arts & Sciences

Arts & Sciences provides liberal arts courses to support degree and certificate programs and offers the associate of arts degree in liberal arts. All courses are transferable to other degree-granting institutions as freshman and sophomore electives or requirements.

All courses in Arts & Sciences have tuition charges. In addition, science, computer science and some math courses have course fees (see page 26).

General Honors Program

The General Honors Program, by offering intensive interdisciplinary study, is designed to increase opportunities for liberal arts education. Taught in a small-group seminar format, Honors courses emphasize discussion, student participation and self-expression.

Enrollment in these courses is by application only; however, any student interested in the challenge these courses offer is encouraged to apply. Academic potential (as reflected in ACT scores), record of previous academic work and intellectual motivation are the main criteria used to select students.

For more information and an application, interested students should see the Arts & Sciences counselor.

Liberal Arts

Associate of Arts Degree
Main, Montoya, Rio Rancho and South Valley Campuses

The associate of arts in liberal arts degree is designed to meet diverse educational interests. The degree provides the general curriculum of the first two years of baccalaureate study for transfer purposes or as an end in itself.

Fulfillment of the degree requirements listed below and institutional requirements listed on page 41 of this Catalog is required for graduation.

Some disciplines and courses not offered by the Arts &Sciences Department may be accepted in transfer toward the degree requirements. For information about transfer work, students should contact the Admissions/Advisement Office.

This degree includes a general education core curriculum of 33 to 35 credit hours adopted by member institutions of the New Mexico Council of Independent Community Colleges. This core is accepted in common among these institutions as meeting approximately half of an associate of arts degree. Each institution will specify additional graduation requirements beyond those included in the general education core for degree completion.

The colleges participating in this agreement are as follows: Albuquerque TVI, Clovis Community College, New Mexico Junior College, Northern New Mexico Community College, San Juan College and Santa Fe Community College. Students should check with the registrars of the other colleges—such as Luna Vocational Technical Institute, New Mexico Highlands University, New Mexico Military Institute, Southwestern Indian Polytechnic Institute and Mesa Technical College—for updated information about this agreement.

Students seeking TVI associate degrees in fields other than liberal arts should consult individual program requirements for liberal arts courses. Course prefixes are given for each discipline in the list on the next page. The following course descriptions are listed alphabetically by course prefix.

Note: Courses numbered in the 100s are considered college freshman-level work; courses numbered 200 and above are sophomore level and may require substantial reading, writing and research skills in addition to the prerequisites. Students should consult a counselor, academic advisor or faculty member for advice on course selection.

Liberal Arts Degree Program

Discipline	Course Prefix			Credit Hours
Communications	COMM, ENG (writing), JOUR			
English writing courses (must include ENG 102)				6
COMM 221				3
Computer Science	CSCI			
CSCI 101 or equivalent				3–4
Social and Behavioral Sciences				
Anthropology	ANTH	Political Science	PSCI	
Economics	ECON	Psychology	PSY	
Geography	GEOG	Sociology	SOC	
No more than 6 credits from any one discipline				9
Biological and Physical Sciences				
Astronomy	ASTR	Chemistry	CHEM	
Biology	BIO	Physics	PHYS	
2–3 courses (must include one lab course)				7–8

Humanities

Cultural Studies	CST	Literature	ENG (literature)
General Honors	GNHN	Philosophy	PHIL
History	HIST	Religious Studies	RLGN
Humanities	HUM	Theater	THEA

No more than 6 credits from any one discipline 9

Mathematics MATH

One course numbered above MATH 120 (except MATH 215) 2–3

Fine Arts and Foreign Languages ART, MUS, FREN, SPAN

(A *total* of 3 credit hours of applied or studio arts may be used toward the 64 credits for the degree.)

Any two courses 6

Electives Any Arts & Sciences courses

(1 credit hour of physical education allowed) 17–19

Total 64

No credits in Aerospace Studies are counted toward the associate of arts in liberal arts degree.

Course Descriptions

ANTH 110 Language, Culture and the Human Animal 3 credit hours

(Prerequisite: RDG 100) This is an introductory course for both the fields of linguistics and anthropology. Students learn about the systematic nature of language on the levels of phonology, morphology, syntax, semantics and pragmatics.

ANTH 120 Archaeology: Discovering Our Past 3 credit hours

(Prerequisite: RDG 100) This introductory course presents an overview of archaeological theory and methods including data from selected archaeological sites in various geographical areas and from different time periods.

ANTH 130 Cultures of the World 3 credit hours

(Prerequisite: RDG 100) This course introduces the basic concepts of cultural anthropology. Lectures include a survey of the characteristics of culture illustrated by a variety of existing cultures in their native environments. Societal examples are studied in cross-cultural comparisons.

ANTH 150 Evolutionary Anthropology 3 credit hours

(Prerequisite: RDG 100) An introduction to the world of biological anthropology and the concepts of organic evolution, this course emphasizes the fossil history of primates, the

prehistory of man and human genetics within a paleoecological context. Modern primate behavior is presented in terms of its relevance to human evolution.

ANTH 222 Ancient Mesoamerica 3 credit hours
(Prerequisite: RDG 100) Mesoamerican archaeology is traced from the earliest inhabitants through the Aztec period. Special emphasis is placed on cultural processes and the dynamics of cultural evolution.

ANTH 231 North American Indians 3 credit hours
(Prerequisite: RDG 100) This course presents a comparative ethnology of North American Indian tribes on geographic, ecologic and cultural bases. The student will explore what life as a North American Indian was like before European influence and will consider the vast diversity of cultures existing on the North American continent.

ANTH 238 Cultures of the Southwest 3 credit hours
(Prerequisite: RDG 100) This course introduces basic concepts related to cultural patterns of the American Southwest from AD 1600 to the present. Interactions of the ethnic groups that populate the Southwest are illustrated and analyzed.

ANTH 255 Southwestern Anthropology 3 credit hours
(Prerequisite: RDG 100) The interpretations and dynamics of southwestern archaeology from the time of the earliest inhabitants until European contact are presented

ANTH 296 Topics in Anthropology 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

ART 101 Introduction to Art 3 credit hours
Students are introduced to the fundamental concepts of visual arts as well as the language of form and media of artistic expression. Instruction centers around readings and slide presentations. Some museum exhibition attendance may be required.

ART 106 Drawing I 3 credit hours
(Recommended: ART 101) Direct experience in exploring basic drawing concepts, including the expressive use of contour, value, perspective and composition while using both dry and wet media is provided in the course. Assigned problems may include still life, landscape, portraiture or the figure.

ART 121 Two-Dimensional Drawing 3 credit hours
(Recommended: ART 101) This course promotes visual awareness through direct experience with visual form. Assigned problems introduce elements of line, shape, value, texture, color theory, space and volume, painting principles and visual vocabulary. Particular attention will be placed on a disciplined approach toward design and the development of perceptual skills.

ART 122 Three-Dimensional Drawing 3 credit hours
(Recommended: ART 101 and ART 106) The concepts, techniques, processes and vocabulary involved in working in the third dimension are introduced. Assigned problems introduce a variety of media and consider issues of space, form, mass and volume, line, texture, scale and proportion and the making of objects and spatial contexts. Particular emphasis is placed on traditional and contemporary approaches to sculpture and other areas of three-dimensional art.

ART 151 Art of the American Southwest 3 credit hours
The interrelationships of three southwestern cultures are explored in slides, lectures and field trips—all of which emphasize major forms of expression in pottery, textiles, jewelry, architecture, painting and photography.

ART 201 History of Art I 3 credit hours
This course surveys Near Eastern, Egyptian, Greek, Roman, early Christian, Byzantine, early Medieval, Romanesque and Gothic art and architecture. Lectures are supplemented by slides. *Fall, summer only.*

ART 202 History of Art II 3 credit hours
This survey covers Italian and Northern Renaissance, Baroque, Rococo and nineteenth century Western European painting, sculpture and architecture. Slides and readings supplement lectures. *Spring, summer only.*

ART 250 Modern Art 3 credit hours
Students are introduced to the major figures, movements and stylistic developments in western art from 1850 to the present. Slides and readings supplement lectures.

ART 260 Architectural History: Ancient through Modern 3 credit hours
Lectures survey the history of Western architecture from the pyramid to the post-Modernist house. The technological, stylistic and functional characteristics of monuments within their cultural context are analyzed. Material is supplemented by slides.

ASTR 101 Introduction to Astronomy I 3 credit hours
(Prerequisite: RDG 100. Recommended: MATH 100B) This descriptive and historical introduction to the science of astronomy focuses on the solar system including the sun, the planets, comets and meteors. Topics also include the space program.

ASTR 102 Introduction to Astronomy II 3 credit hours
(Prerequisite: RDG 100) The life cycles of the stars and stellar systems and the structure of the universe are explored in this descriptive course. Starting with our own star, the sun, students study the births, lives and deaths of stars. The course then moves on to the nature of the Milky Way galaxy and to current concepts on cosmology and the large-scale structure of the universe. Successful completion of MATH 100B is the presumed math background for this course.

ASTR 111L Astronomy Laboratory 1 credit hour
(Pre- or corequisite: ASTR 101 or 102) An optional laboratory for investigation of the principles discussed the astronomy sequence, this course includes laboratory experiments about the nature of light and laws of physics. The labs include an introduction to Internet and computer simulations of data taking and analysis that could occur at astronomical observatories. The labs may include use of data from NASA and other U.S. government data sets.

ASTR 296 Topics in Astronomy 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

BIO 111 Environmental Science 3 credit hours
(Prerequisite: RDG 100) This course introduces the study of the environment, including basic principles of ecology, a comparison of scientific approaches and world views with respect to ecology and the environment, relationships of humans to the environment, and solutions to local, regional and global environmental problems.

BIO 111L Environmental Science Laboratory 1 credit hour
(Prerequisite: RDG 100) An optional laboratory for investigation of the principles discussed in BIO 111, this course includes laboratory analyses of water, soil and air pollutants as well as field trips to sites of special interest. Field trips may be moderately strenuous and may occur outside the regularly scheduled laboratory periods.

BIO 121/121L Principles of Biology I 4 credit hours
(Prerequisite: RDG 100. Recommended: MATH 100B and CHEM 111) This course introduces the basic principles of biology to students wishing to pursue majors in the sciences. The course stresses cellular level processes which include biological chemistry, cellular metabolism, photosynthesis, control and transmission of hereditary materials and nucleic acid structure and function. The development of critical thinking skills and scientific methodology is emphasized. Students must enroll in both a three-hour lecture section and a three-hour lab.

BIO 122/122L Principles of Biology II 4 credit hours
(Prerequisite: BIO 121/121L) This is a continuation of the concepts developed in BIO 121/121L. The course stresses organism-level processes which include taxonomy, comparative anatomy and physiology of plants and animals with emphases on evolutionary trends, embryology, behavior and ecology. Importance is placed on the development of scientific reasoning with an evolutionary perspective. Students must enroll in both a three-hour lecture section and a three-hour lab.

BIO 123 Biology for Health Sciences 3 credit hours
(Prerequisite: RDG 100. Recommended: MATH 100B and either CHEM 111, BIO 100 or SCIE 100) Principles of cell biology, cell chemistry, genetics and organismic biology are studied with an emphasis on human systems.

BIO 124L Biology for Health Sciences Laboratory 1 credit hour
(Pre- or corequisite: BIO 123) Laboratory exercises and demonstrations related to cell biology, biochemical processes and genetics are conducted.

BIO 136 Human Anatomy and Physiology for Non-Majors 3 credit hours
(Prerequisite: RDG 100. Recommended: BIO 100 or SCIE 100) This one-semester course examines the structure (anatomy) and function (physiology) of the human body. Investigation involves the molecular, cellular, tissue and organ levels and a sequential study of organ systems.

BIO 139L Human Anatomy and Physiology for Non-Majors Laboratory 1 credit hour
(Pre- or corequisite: BIO 136) Laboratory exercises complement concepts presented in BIO 136. Exercise topics include histological study, biochemical processes, mammal organ dissections and use of models to illustrate anatomical arrangement.

BIO 200/200L General Ecology 4 credit hours
(Prerequisite: BIO 122/122L or 123/124L with permission of instructor) Students are introduced to the interrelationships of organisms to their environments through the study of populations, communities, ecosystems and the biosphere. Students must enroll in both a three-hour lecture section and a three-hour lab. *Summer, fall only.*

BIO 219 Principles of Cell Biology 3 credit hours
(Prerequisites: BIO 121/121L and 122/122L and either CHEM 111/112L or 121/121L) This course investigates cell structure and cellular processes, including both structure and function of membranes, the cytoskeleton, the nucleus, DNA replication, gene expression, energy usage and production, metabolism, cell receptors, intercellular communication and cancer biology. *Fall only.*

BIO 221 Introductory Genetics 3 credit hours
(Prerequisite: BIO 123/124L or 121/121L or permission of instructor) Emphasis is placed on the structure, function and transmission of hereditary factors. *Alternating terms.*

BIO 222 Introductory Genetics Problems 1 credit hour
(Corequisite: BIO 221) Recitation and problem-solving techniques in genetic analysis related to topics covered in BIO 221 are handled. *Credit/no-credit only.*

BIO 223L Introductory Genetics Laboratory 1 credit hour
(Pre or corequisite: BIO 221) Lab exercises using fruit flies and lower organisms illustrate the principles introduced in BIO 221. *Alternating terms.*

BIO 224/224L Southwestern Natural History 4 credit hours
(Prerequisite: RDG 100) Lecture and labs or field trips (one or more overnight) present the natural history and identification of southwestern flora and fauna. Students must enroll in both a three-hour lecture section and a three-hour lab. *Summer, fall only.*

BIO 231 Applied Environmental Microbiology 3 credit hours
(Prerequisite: Either BIO 121/121L or 123/124L and either CHEM 111/112L or 121/121L. Corequisite: BIO 241L) The concepts of observation, enumeration and growth of microbes are introduced and are applied to topics in public health, clean water, confined space, soil, medical and remediation microbiology. *Spring only.*

BIO 237 Human Anatomy and Physiology I 3 credit hours
(Prerequisites: Either BIO 123/124L or 121/121L and either CHEM 111/112L or 121/121L) This course is an integrated study of human structure and function that covers the integumentary, skeletal, muscular and nervous systems.

BIO 238 Human Anatomy and Physiology II 3 credit hours
(Prerequisite: BIO 237) This course, a continuation of BIO 237, covers the structure and function of the cardiovascular, respiratory, digestive, urinary, reproductive and endocrine systems.

BIO 239 Microbiology 3 credit hours
(Prerequisites: Either BIO 123/124L or BIO 121/121L and either CHEM 111/112L or 121/121L. Corequisite: BIO 239L) The concepts of microbiology, host- parasite relationships, infection and immunity are introduced.

BIO 239L Microbiology Laboratory 1 credit hour
(Prerequisites: BIO 115L taken prior to Summer 1997 or either BIO 123/124L or 121/121L and either CHEM 111/112L or 121/121L. Corequisite: BIO 239) Students investigate a variety of techniques designed to facilitate the growth, identification and control of microorganisms.

BIO 241L Applied Environmental Microbiology Laboratory 1 credit hour
(Prerequisite: Either BIO 121/121L or 123/124L and either CHEM 111/112L or 121/121L. Corequisite: BIO 231) Students are introduced to a variety of current and EPA approved techniques designed to identify, isolate and characterize microbes in terms of the role they play in food, water, soil and air quality, disease processes and biological remediation efforts. *Spring only.*

BIO 247L Human Anatomy and Physiology I Laboratory 1 credit hour
(Prerequisites: Either BIO 123/124L or 121/121L and either CHEM 111/112L or 121/121L. Pre- or corequisite: BIO 237) This course provides anatomical and physiological laboratory exercises which complement the topics covered in BIO 237. Specimen dissection and cadaver study are included.

BIO 248L Human Anatomy and Physiology II Laboratory 1 credit hour
(Prerequisites: Either BIO 123/124L or 121/121L and either CHEM 111/112L or 121/121L. Pre- or corequisite: BIO 238) This course provides anatomical and physiological laboratory exercises which complement the topics covered in BIO 238. Specimen dissection and cadaver study are included.

BIO 260/260L Botany **4 credit hours**
(Prerequisite: BIO 122/122L) This course introduces the diversity of the plant kingdom: Algae, Bryophyta, Pterophyta, Gymnosperms and Angiosperms. Plant morphology, anatomy, sexual and asexual reproduction are covered under each section. Students must enroll in both a three-hour lecture section and a three-hour lab.

BIO 282 Parasites of the Southwest **3 credit hours**
(Prerequisites: RDG 100 and one previous course in biology) Students explore basic animal parasitology and focus on those organisms likely to be encountered by health workers in the southwestern United States.

BIO 296 Topics in Biology **1–3 credit hours**
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

CHEM 101 Concepts of Chemistry **3 credit hours**
(Prerequisite: ENG 100 or RDG 100) This course is a non-mathematical introduction to chemistry as it applies to the world in which we live. In addition to a qualitative treatment of the chemical and physical properties of matter, topics of special interest are covered. This is not a preparatory class for other chemistry classes.

CHEM 111 Introduction to Chemistry **3 credit hours**
(Prerequisite: MATH 100A) In this one-semester introduction for students in the health sciences, both the qualitative and quantitative aspects of general chemistry are covered: atomic and molecular structure, the periodic table, acids and bases, mass relationships, solutions, equilibrium and a brief introduction to organic chemistry.

CHEM 112L Introduction to Chemistry Laboratory **1 credit hour**
(Pre- or corequisite: CHEM 111) While meeting for one three-hour period each week, students perform experiments and complete lab reports complementing the material covered in CHEM 111.

CHEM 121/121L General Chemistry I **4 credit hours**
(Prerequisites: RDG 100 and MATH 121 or 150) The first semester of a standard two-semester sequence in general chemistry for students majoring in the sciences, engineering or premed, this course stresses atomic and molecular structure, chemical periodicity, mass and energy relationships in chemical reactions and the chemical and physical behavior of matter. Problem solving is emphasized. Students must enroll in both a three-hour lecture section and a three-hour lab.

CHEM 122/122L General Chemistry II **4 credit hours**
(Prerequisite: CHEM 121/121L within three years of enrollment in CHEM 122/122L) Continuing from CHEM 121L, students are given thorough quantitative coverage of acids and bases, chemical equilibrium, chemical kinetics, thermodynamics, solubility, electrochemistry and nuclear chemistry. Introductions to coordination chemistry and organic chemistry as well as a brief survey of the elements are included. Students must enroll in both a three-hour lecture section and a three-hour lab.

CHEM 130L Environmental Chemistry **3 credit hours**
(Prerequisite: CHEM 111/112L) Introducing students to the fundamentals of environmental chemistry, this course focuses on chemical and instrumental analysis, sampling and preservation techniques in water, wastewater, soil, air and food testing. *Fall only.*

CHEM 212 Organic Chemistry and Biochemistry **4 credit hours**
(Prerequisite: CHEM 111/112L or 121/121L) A one-semester introduction to organic chemistry and biochemistry designed for students in health or environmental occupations, this course surveys organic functional groups in terms of structure and chemical/physical properties, followed by coverage of the chemistry of living organisms. A strong emphasis is placed on medical aspects of the material.

CHEM 296 Topics in Chemistry **1–3 credit hours**
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

COMM 110 Mass Media and Society **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course examines the role newspapers, TV, magazines and radio have in American society and their effects on other forms of communication. The course also introduces the economic and developmental history of mass media.

COMM 130 Public Speaking **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course blends theory and practical application. Students focus on organizing and delivering, listening and responding to various types of presentations.

COMM 221 Interpersonal Communication Studies **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) Through group activities, discussion and lecture, this course introduces concepts of perception, emotions, nonverbal communication, language, listening, defensiveness and relational conflict. Students develop awareness of communication styles and skills to enhance their interpersonal effectiveness in professional and personal relationships.

COMM 223 Introduction to Nonverbal Communication Studies **3 credit hours**
(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101) This course introduces nonverbal communication through lecture, discussion, small-group activities and observation. The course examines how the face and eyes, gestures, touch, voice, physical appearance, space, time and environment communicate in personal and professional interactions.

COMM 225 Small-Group Communication Studies **3 credit hours**
(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101) This course teaches theory and skills involved in small-group processes through participation. The course includes group types, characteristics, dynamics, conflicts, norms, roles, leadership, problem solving and decision making.

COMM 232 Business and Professional Communication Studies **3 credit hours**

(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101) This class introduces interpersonal and group principles and skills needed to communicate effectively in professional settings. Emphasis is on developing, organizing and supporting ideas in interpersonal business encounters, groups, teams, meetings, interviews and platform presentations.

COMM 240 Organizational Communication Studies **3 credit hours**

(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101) This course provides an introduction to communication and organizational theory. Communication networks, power and authority, manager/employee relationships, leadership and interviewing are examined.

COMM 270 Communication Studies for Teachers **3 credit hours**

(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101) This course emphasizes a systems approach to classroom communication at any level and provides teachers with a means to analyze, develop and facilitate effective communication in the classroom. The course includes application of theory in relational development, nonverbal communication, small groups, communication barriers and presentations.

COMM 289 Listening **3 credit hours**

(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101 and COMM 221) Through discussion and writing, students investigate and apply current research in listening theory. Students analyze the appropriateness and applicability of five major types of listening in academic, business, media and interpersonal contexts.

COMM 290 Gender Communication Studies **3 credit hours**

(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101 and COMM 221) The focuses of this course are understanding the communication differences that exist between men and women, examining the implications and consequences of these differences and discussing various strategies for change. The course examines verbal and nonverbal differences in business, media, educational and interpersonal contexts.

COMM 291 Intercultural Communication Studies **3 credit hours**

(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101 and COMM 221) This course focuses on culture and the differences in communication values and styles, both verbal and nonverbal, among persons from various cultures. Emphasis is on analysis of intercultural encounters and development of skills for more effective intercultural communication.

COMM 292 Family Communication Studies **3 credit hours**

(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101 and COMM 221) This course presents theories and skills applicable to communication in families. Family systems theory is employed to examine the mutual influence of communication patterns and rules, roles, themes, power, intimacy, ethnicity and conflict.

COMM 293 Topics in Communication Studies **1–3 credit hours**
(Prerequisite: RDG 100 or equivalent. Recommended: ENG 101 and COMM 221) Various topics are offered. See class schedule.

CSCI 101 Computer Literacy **4 credit hours**
Introductory computer hardware and software topics with a mixture of lecture and hands-on instruction are covered. Topics include common user applications (e.g., word processing, spreadsheets, data bases), operating systems (e.g., DOS, Windows) and the basics of using networked computers. Typing proficiency is useful but not required.

CSCI 155 Introduction to Computer Programming **4 credit hours**
(Prerequisite: MATH 121 with a minimum grade of B or MATH 139 or 150) Designed for those interested in programming as a career or as a useful problem-solving skill, this course is an introduction to the skill of computer programming. The main objective is understanding the relationship between programming and problem solving, using programs written in C and C++.

CSCI 163 Intermediate Computing Literacy **3 credit hours**
(Prerequisites: CSCI 101 and MATH 119 or 120 or permission of instructor) This is a course in current computer topics, such as graphics and uses of the Internet (e.g., the World Wide Web), plus computer literacy topics, such as understanding data formats or using graphical user interfaces. The class requires an independent study project on a topic related to work or education.

CSCI 296 Topics in Computer Science **1–3 credit hours**
Various topics are offered. See class schedule.

CST 150 Introduction to Cultural Studies **3 credit hours**
(Prerequisite: RDG 100) This course covers a broad range of contemporary topics in global perspective. Students explore non-dominant cultures and non-traditional social issues. Topics include gender, race, class and ethnicity.

CST 241 Introduction to Chicano Studies **3 credit hours**
(Prerequisite: RDG 100) This course is designed to familiarize students with the Chicano experience. It investigates the historical and social conditions which have shaped and affected the lives of a group of people, most of whom live in the Southwestern United States. Course topics include Aztec civilization and culture, European colonization of Mexico, the Treaty of Guadalupe Hidalgo and historical and contemporary Chicano migrations and political movements. The course emphasizes how Chicanos create a mosaic of philosophy, art and identity. It includes present-day perspectives about Chicano culture.

CST 250 Introduction to Native American Studies **3 credit hours**
(Prerequisite: RDG 100) This course is designed to familiarize students with the Native American experience. It investigates the historical and social conditions which have shaped and affected the lives of groups of people who are indigenous to the United States. Course topics include Native American civilization, European colonization of the Americas, trea-

ties, historical and contemporary Native American migrations and political movements. This course emphasizes how Native Americans create an indigenous mosaic of philosophy, art and identity. This course includes present-day perspectives about Native American culture.

CST 296 Topics in Cultural Studies 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

ECON 101 Introduction to Economics 3 credit hours
(Prerequisite: RDG 100) Students are introduced to basic economic concepts and developments. Elementary economic theory is used to supplement a materialistic view of recent western history. Topics include the origins of capitalism, transplantation and adaptation to the New World and new institutions of the 1800s and 1900s.

ECON 200 Macroeconomics 3 credit hours
(Prerequisite: RDG 100) This course serves as an introduction to the theories and problems of economic policy. Topics include the contrast of the Classical and Keynesian models, money and banking, inflation, unemployment and economic growth.

ECON 201 Microeconomics 3 credit hours
(Prerequisite: RDG 100) Students are introduced to the laws of demand and supply and the workings of the price system in a free market. Basic economic theory is applied to problems of production, monopoly, taxation, consumer welfare and the environment.

ECON 296 Topics in Economics 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

ENG 101 College Writing 3 credit hours
(Prerequisites: Appropriate placement test score, ENG 100 and first-day diagnostic exam) This is a course in text-based essay composition. Assignments include critical reading, summary writing and synthesis. *Students must earn a grade of C or higher to pass the course; passing the final does not guarantee that students will pass the course.*

ENG 102 Analytic and Argumentative Writing 3 credit hours
(Prerequisite: ENG 101 or equivalent) This is a course in analytic and argumentative essay writing with readings in exposition and literature. Students prepare and submit research papers on topics of their own choosing. *Students must earn a grade of C or higher to pass the course; passing the final does not guarantee that students will pass the course.*

ENG 119 Technical Communications 3 credit hours
(Prerequisite: ENG 101) This is an introductory study of the types of written and verbal communication needed in business and industry. Topics include descriptive and process analyses, informal reports and proposals, short logs/reports for lab and field work, basic production of graphics, letter writing and oral presentations.

ENG 150 Study of Literature **3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) An introduction to the study and appreciation of literature, this course shows how understanding writers' techniques increases reading enjoyment and relates these techniques to literary conventions. *Fall only.*

ENG 210 Film as Literature **3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) Screenings and critical discussion of major films supplement this course's study of film as literature. Students survey major trends in the history of film.

ENG 211 Topics in Literature **1–3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) Various topics are offered. See class schedule.

ENG 212 Topics in Language and Writing **1–3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) Various topics are offered. See class schedule.

ENG 213 Film Genres **3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) This course surveys various film genres or national cinemas. See class schedule.

ENG 219 Technical Writing **3 credit hours**
(Prerequisite: ENG 102) A study of the most common types of writing in industry, research laboratories, business and other professional settings. Instruction includes correspondence and memos, abstracts, proposals, bibliographies and reviews and various formal and informal reports presented orally and in writing.

ENG 220 Expository Writing **3 credit hours**
(Prerequisite: ENG 102) This course is a study of advanced composition. It concentrates on critical reading of literary prose, writing expository and argumentative essays. *Fall only.*

ENG 221 Creative Writing: Fiction **3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) Student work is supplemented by texts and discussion of writing as a creative process.

ENG 222 Creative Writing: Poetry **3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) Student poetry is supplemented by texts and discussion of writing as a creative process.

ENG 240 Traditional Grammar **3 credit hours**
In this survey of traditional grammar, students are introduced to linguistic terminology and methods for identifying and understanding parts of speech, parts of sentences and basic sentence patterns.

ENG 251 Introduction to Dramatic Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) This course introduces students to the structure and nature of drama as a literary form. Students read, analyze and discuss Greek, Renaissance, Enlightenment and modern plays. *Spring only.*

ENG 262 Survey of Earlier World Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) A survey of a variety of poetry, fiction and drama from such diverse cultures as Africa, China, Greece, India, Italy, Japan, the Middle East, Russia and Scandinavia, among others. By studying literary classics from primarily non-English cultures, students improve their understanding of literature in general, their knowledge of other cultures as well as the ways in which literature and culture intersect and define each other. *Fall only.*

ENG 263 Survey of Later World Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) This course explores a variety of poetry, fiction and drama from such diverse cultures as Africa, China, France, Greece, India, Italy, Japan, the Middle East, Russia and Scandinavia, among others. By studying important literary works from primarily non-English cultures, students improve their understanding of literature in general and the ways in which literature and culture intersect and define each other. *Spring only.*

ENG 270 Modern Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) American and European literature of the twentieth century is introduced through works by authors such as Ibsen, Chekhov, Joyce, Camus, Conrad, Woolf, Faulkner and Hemingway.

ENG 282 Modern Latin American Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) Chronicles, diaries, drama, poetry, essays and fiction of Latin America are surveyed with emphasis on cross-cultural relations between Latin American life and literature.

ENG 294 Survey of Earlier English Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) As a survey of British literature from Old English to 1798, this course presents a study of the principal literary and intellectual movements and selected writers and literary works. *Fall only.*

ENG 295 Survey of Later English Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) From the romantic poetry of Burns and Wordsworth to the modernist writings of Hardy, Woolf and Eliot, this course surveys the best of English literature from the late eighteenth century to the present. *Spring only.*

ENG 296 American Literature 3 credit hours
(Prerequisite: ENG 101 or permission of instructor) Students survey literature from colonial to present times. Short stories, poetry, drama and nonfiction are emphasized.

FREN 101 Beginning French I **4 credit hours**

Beginning French for students with no previous exposure to the language, this course develops all four language skills with emphasis on listening, comprehension and speaking.

FREN 102 Beginning French II **4 credit hours**

(Prerequisite: FREN 101 or permission of instructor) This course continues developing the skills introduced in FREN 101.

FREN 103 Beginning French I Conversation **3 credit hours**

(Pre- or corequisite: FREN 101, FREN 102 or permission of instructor) This course provides practice in speaking at the beginning level. It is designed to give students basic conversational skills.

FREN 201 Intermediate French I **3 credit hours**

(Prerequisite: FREN 102 or permission of instructor) This course which builds upon FREN 102 is designed to polish acquired skills while broadening the student's knowledge of the language and culture of France.

FREN 202 Intermediate French II **3 credit hours**

(Prerequisite: FREN 201 or permission of instructor) This course is a continuation of FREN 201.

FREN 203 Intermediate French II Conversation **3 credit hours**

(Pre- or corequisite: FREN 201, FREN 202 or permission of instructor) This course encourages the use, development and strengthening of conversation by using the most recent materials available.

GEOG 101 Physical Geography **3 credit hours**

(Prerequisite: RDG 100) This course introduces students to the geography of natural environment: weather systems, climatic regions, vegetation, soils, water resources, plate tectonics and volcanic, structural, erosional, fluvial, coastal, desert and glacial landforms.

GEOG 102 Human Geography **3 credit hours**

(Prerequisite: RDG 100) Students are introduced to the cultural landscape: population, migration, languages, religions, folk customs, political units, economic development, agriculture, industry, urbanization and systematic analysis of global environmental issues.

GEOG 201 World Regional Geography **3 credit hours**

(Prerequisite: RDG 100) This approach to global geography emphasizes regional characteristics, similarities and differences. All regions of the world are studied in terms of their landforms, climates, history, cultures and current economic and political problems.

GEOG 296 Topics in Geography **1–3 credit hours**

(Prerequisite: RDG 100) Various topics are offered. See class schedule.

GNHN 121A **General Honors: The Ancient Legacy** **3 credit hours**
(Prerequisites: RDG 100, B in ENG 101 and permission of instructor; see Arts & Sciences counselor for information) Through discussion and writing, students analyze classic texts of the Greek, Hebrew, Roman and Christian traditions. Students consider ideas about virtue, knowledge, politics, religious faith and education. *Fall only.*

GNHN 121M **General Honors: The Modern Legacy** **3 credit hours**
(Prerequisites: RDG 100, B in ENG 101 and permission of the instructor; see Arts & Sciences counselor for information) Students read classic texts of Western culture from the Renaissance through the nineteenth century and explore ideas about the individual, society, state, history, nature, progress and religion, which are characteristics of modernity. *Spring only.*

GNHN 221 **Topics in General Honors** **1–3 credit hours**
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

HIST 101 **Western Civilization I** **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) Events, personalities, issues, rises and falls are the focus of this course which covers ancient times through 1648.

HIST 102 **Western Civilization II** **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course explores such topics as colonialism, the age of revolutions, expansionism and the Great Wars from 1648 to the present.

HIST 161 **History of the United States I** **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course is a survey of the economic, political, intellectual and social development of the United States from 1492 to 1877.

HIST 162 **History of the United States II** **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) A continuation of HIST 161, this course covers the period from 1865 to the present.

HIST 230 **20th Century Russia: Revolution, Repression and Reform** **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course leads students through this turbulent century of Russian history—from czarist absolutism through communist totalitarianism to the tentative introduction of a pluralist society.

HIST 240 **Vietnam: War, Politics, and Culture** **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) Students examine the causes of the war, the military and political aspects, its conduct and the consequences of the years of conflict in Vietnam on the Vietnamese people, on the U.S. and on the other nations. Stu-

dents explore the issues surrounding U.S. involvement in Vietnam and assess the changes wrought in the culture, institutions and political thought of the U.S. during and after the war.

HIST 260 History of New Mexico **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course explores New Mexico's history from 1500 to the present. The contributions of and interactions among Native Americans, Hispanics, Anglos and others receive special attention.

HIST 270 The American West **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course explores American settlement west of the Mississippi River through such topics as exploration, the fur trade, the overland trails, ranching, mining, contacts with Native Americans, frontier violence and environmental issues.

HIST 282 Modern Latin American History **3 credit hours**
(Prerequisite: RDG 100. Recommended: ENG 101) This course examines Latin American history from the beginning of the revolutionary period in 1810 to the present.

HIST 296 Topics in History **1–3 credit hours**
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

HUM 111 Comparative Civilizations **3 credit hours**
(Prerequisite: RDG 100) This course introduces the history, art, literature, religion and ideas of early world civilizations, including Egypt, Mesopotamia, India, China, Greece, Rome, African and pre-Columbian America.

HUM 121 Western Culture from the Renaissance **3 credit hours**
(Prerequisite: RDG 100) This course examines the history, art, literature, music and ideas of western culture from the Renaissance to the present.

HUM 247 Topics in Humanities **1–3 credit hours**
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

JOUR 151 Writing for the Media I **3 credit hours**
(Prerequisite: ENG 101 or permission of instructor) This is a practical introduction to journalism which emphasizes journalistic conventions as well as gathering and writing news for the print and broadcast media.

JOUR 251 Writing for the Media II **3 credit hours**
(Prerequisite: JOUR 151 or permission of instructor) This course offers advanced study in journalistic conventions, gathering and writing of news for print and broadcast media to include multi-source stories, hard news and complex features, obituaries, legal and police news, science reporting, persuasive writing and arts coverage as well as related topics such as libel law, freedom of information, invasion of privacy and journalistic ethics.

JOUR 253 **Writing and Editing for the Media** **1 credit hour**

(Pre- or corequisite: JOUR 151) Although open to anyone, this course is targeted at students working for the mass media, including TVI and UNM student publications, public radio and public television. It is a discussion course that reviews and critiques journalistic efforts and provides techniques for improving and strengthening writing style.

MATH 111 **Mathematics for Elementary and Middle School Teachers I** **3 credit hours**

(Prerequisite: MATH 100A) Prospective and current teachers of mathematics are introduced to the intuitive and logical background of arithmetic, properties of sets, algorithms of arithmetic, other bases, properties of the integers, mathematical terminology, elements of number theory and problem solving.

MATH 112 **Mathematics for Elementary and Middle School Teachers II** **3 credit hours**

(Prerequisite: MATH 111) Continuing from MATH 111, this course introduces the properties of the rational number system, extension to irrationals, decimal and fractional representation of real numbers and intuitive geometry and measurement.

MATH 119 **Methods of Problem Solving** **4 credit hours**

(Prerequisite: MATH 100A) Strategies and techniques for solving mathematical problems, relying on pattern recognition, pattern description in writing and pattern experimentation on computers. Topics include sequences, set theory, combinatorics, probability and statistics, linear and quadratic modeling.

MATH 120 **Intermediate Algebra** **4 credit hours**

(Prerequisite: MATH 100B) This course covers linear equations and inequalities, polynomials, exponents and radicals, rational expressions and equations, and quadratic equations. It includes a brief introduction to functions, and graphing techniques are integrated into the course throughout.

MATH 121 **College Algebra** **3 credit hours**

(Prerequisite: MATH 120) This course focuses on functions and their graphs. Linear, quadratic, polynomial, exponential and logarithmic functions are investigated.

MATH 123 **Trigonometry** **2 credit hours**

(Prerequisite: MATH 121 or 150 or permission of instructor) Trigonometric functions, radian and degree measure, graphs, basic trigonometric identities and inverse trigonometric functions are covered.

MATH 129 **The Art of Mathematics** **3 credit hours**

(Prerequisite: MATH 120) Problems, readings and discussions illustrate the creative nature of mathematics and its influence on western thought. Students may research topics of individual interest.

MATH 139 Introduction to Finite Math **3 credit hours**
(Prerequisite: MATH 119 or 120) This course is an introduction to finite mathematics. Topics include elementary mathematical logic, set theory, probability theory, vector and matrix theory, statistics and linear programming.

MATH 145 Introduction to Probability and Statistics **3 credit hours**
(Prerequisite: MATH 119 or 120) This course provides an introduction to basic concepts in probability and statistics—analysis of numerical data and descriptive statistics, probability and basic probability models, sampling and statistical inference—with applications from a variety of fields.

MATH 150 Advanced Algebra **4 credit hours**
(Prerequisite: MATH 121) This course emphasizes polynomial, rational, exponential and logarithmic functions with the aid of graphing calculators and computers.

MATH 162 Calculus I **4 credit hours**
(Prerequisites: MATH 123 and MATH 150) This is a study of derivatives and integrals. Concepts include formal differentiation and theory of integration, limits, continuity, extrema and curve sketching.

MATH 163 Calculus II **4 credit hours**
(Prerequisite: MATH 162) This course covers differentiation and integration techniques with applications involving transcendental functions, numerical integration techniques, solving simple differential equations and improper integrals and includes the study of infinite series, including Taylor series.

MATH 180 Elements of Calculus I **3 credit hours**
(Prerequisite: MATH 121 or 150) Students briefly review functions and their graphs. Limits, derivatives as a rate of change, applications to graphing, maxima, minima, antiderivatives, definite integrals and exponential and logarithmic functions are introduced. Business and biological applications are emphasized.

MATH 181 Elements of Calculus II **3 credit hours**
(Prerequisite: MATH 180) A continuation of MATH 180, this course covers integration by parts, numerical integration, multivariate calculus and simple differential equations. Additional topics include sequences, series and probability.

MATH 215 Mathematics for Elementary and Middle School Teachers III **3 credit hours**
(Prerequisites: MATH 111 and 112) Continuing from MATH 112, this course introduces topics from the later elementary and middle school curriculum: probability and statistics, algebra, coordinate geometry, logic and LOGO software

MATH 245 Fundamentals of Probability and Statistics 3 credit hours
(Prerequisite: MATH 180) This course covers some of the basic ideas in probability and statistics: descriptive statistics, sample spaces, random variables, probability densities, variance, correlation, confidence intervals and hypothesis testing. Applications to business are emphasized.

MATH 245L Business Statistics Laboratory 1 credit hour
(Pre- or corequisite: MATH 245 or permission of instructor) This course applies probability and statistics topics developed in MATH 245 to management and administrative problems and processes.

MATH 264 Calculus III 4 credit hours
(Prerequisite: MATH 163) This continuation of MATH 163 covers vector representation of curves and surfaces, partial derivative, gradient, tangent planes, directional derivative, multiple integrals, cylindrical and spherical coordinates and applications.

MATH 296 Topics in Mathematics 1–3 credit hours
(Prerequisites vary) Various topics are offered. See class schedule.

MUS 103 Fundamentals of Music 4 credit hours
(Recommmended: Experience with voice or instrument) A beginning course in the fundamentals of music, this course includes notation, scales, key signatures and intervals. Aural comprehension is introduced through singing intervals, scales and triads and dictating simple rhythmic and melodic patterns.

MUS 139 Music Appreciation I 3 credit hours
Through the study of basic musical elements and their development from early Greece to the Classical period, students expand their abilities to listen actively. This course is nontechnical and requires attendance at live musical performances.

MUS 140 Music Appreciation II 3 credit hours
Students expand their abilities to listen actively through the study of symphonic music, chamber music and vocal literature from the Romantic period to the twentieth century. The course content is different from MUS 139. Students are required to attend live musical performances.

MUS 296 Topics in Music 1–3 credit hours
Various topics are offered. See class schedule.

NUTR 120 Personal and Practical Nutrition 3 credit hours
Nutrition from a personal and practical viewpoint is presented. The course introduces current and controversial topics in nutrition that are of concern to the consumer. Topics may vary but include individual's nutrient needs, fitness and nutrition, nutrition and disease prevention and weight control. Emphasis on changes of nutritional needs through the life cycle and projects of a dietary and activity analysis and topic report are included.

NUTR 244 Human Nutrition 3 credit hours
(Prerequisites: CHEM 111/112L, 121/121L, BIO 121/121L or 123/124L) This course emphasizes nutrition as it affects normal body function and total health. It is designed for health majors who will use this information in various professions. Basic science principles are applied. A computerized dietary analysis personalizes some of the information of the student.

NUTR 293 Topics in Nutrition 1–3 credit hours
Various topics are offered. See class schedule.

PHIL 110 Introduction to Philosophical Thought 3 credit hours
(Prerequisite: RDG 100. Recommended: ENG 101) This is a survey of the philosophical issues addressed by great thinkers of the western tradition. Through reading of primary and secondary materials and class discussion, students are introduced to questions about knowledge, reality, goodness, the idea of God, government and society and the self.

PHIL 156 Logic and Critical Thinking 3 credit hours
(Prerequisite: RDG 100) This course provides the tools of reason which are helpful in everyday decision-making and introduces skills for argument analyses and effective communication of ideas. Informal fallacies and formal deductive systems are surveyed.

PHIL 241 Topics in Philosophy 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See class schedule.

PHIL 245B Business Ethics 3 credit hours
(Prerequisite: RDG 100) Ethical problems in the field of business—such as corporate takeovers, insider trading, conflicts of interest, employer/employee relations and "whistleblowing"—are examined from widely different ethical perspectives.

PHIL 245M Biomedical Ethics 3 credit hours
(Prerequisite: RDG 100. Recommended: PHIL 156) Ethical problems in the fields of medicine and bio-research—such as euthanasia, genetic experimentation, informed consent and abortion—are examined from widely different ethical perspectives.

PHIL 245T Ethics of Technology 3 credit hours
(Prerequisite: RDG 100) Ethical problems of modern technology in the fields of architecture, business, computer science, engineering, law and medicine are examined from widely different perspectives.

PHIL 250 Philosophy of Education 3 credit hours
(Prerequisite: RDG 100) This course provides a critical examination of classical and contemporary educational theories espoused by such philosophers as Plato, Aristotle, Quintillian, Aquinas, Locke, Rousseau, Kant, Marx, Dewey, Krishnamurti and Friere. Philosophical movements in education—such as realism, idealism, Neo-Thomism, experimentalism and existentialism—are also investigated. Emphasis is placed on the relationship of philosophical theory and educational practice.

PHIL 257 Formal Logic 3 credit hours
(Prerequisite: RDG 100) This course introduces formal deductive logic. Topics include propositional logic, truth tables, argument forms and fallacies, predicate (symbolic) logic and method of proof. A student may take this course after completing PHIL 156, but 156 is not a prerequisite.

PHYS 102 Introduction to Physics 3 credit hours
(Prerequisite: RDG 100) This general-interest course for non-science or science majors introduces the basic concepts and phenomena of physics. In conjunction with practical demonstrations and applications, the course is descriptive. Students use a minimum of elementary mathematics at the level of MATH 100B.

PHYS 151 Physics I 4 credit hours
(Prerequisite: MATH 121, 150 or 180. Corequisite: PHYS 153L. Recommended: Working knowledge of trigonometry) Using lectures and demonstrations, this course is a non-calculus treatment of mechanics, sound and heat. This course satisfies premedical, predental, preoptometry and certain Technologies requirements.

PHYS 152 Physics II 4 credit hours
(Prerequisite: PHYS 151. Corequisite: PHYS 154L) Using lecture and demonstration, this non-calculus course presents the areas of electricity, magnetism and optics.

PHYS 153L Physics I Laboratory 1 credit hour
(Prerequisite: RDG 100. Corequisite: PHYS 151) Real-time experiments give each student a better conceptual framework for understanding mechanics, heat and sound. Computers are used extensively for data collection and analysis.

PHYS 154L Physics II Laboratory 1 credit hour
(Prerequisite: RDG 100. Corequisite: PHYS 152) This laboratory course features experiments in electricity, magnetism and optics. Computers are used for simulations and some data collection and analysis.

PHYS 160 General Physics I 4 credit hours
(Prerequisite: RDG 100. Pre- or corequisite: MATH 162. Recommended: Coenrollment in PHYS 163L and PHYS 167) A calculus-based study of mechanics and sound waves is offered for science and engineering students. Topics and demonstrations include Newton's laws of motion, force, moments, friction, work, energy, power, momentum and mechanical wave properties.

PHYS 161 General Physics II 4 credit hours
(Prerequisite: PHYS 160. Pre- or corequisite: MATH 163. Recommended: Coenrollment in PHYS 168) Calculus-based treatment of heat, electricity and magnetism is supplemented by demonstrations.

PHYS 163L General Physics Laboratory 1 credit hour
(Pre- or corequisite: PHYS 160) Real-time experiments enhance students' conceptual understanding of mechanics and waves. Computers are used extensively for data collection and analysis.

PHYS 167 Problems in General Physics I 1 credit hour
(Corequisite: PHYS 160) Recitation and problem solving related to PHYS 160 are handled. *Credit/No credit only.*

PHYS 168 Problems in General Physics II 1 credit hour
(Corequisite: PHYS 161) Recitation and problem solving related to PHYS 161 are handled. *Credit/No credit only.*

PHYS 262 General Physics III 4 credit hours
(Prerequisite: PHYS 161. Pre- or corequisite: MATH 264) This course, the third in the calculus-based sequence for science and engineering students, is a study of optics and topics in modern physics.

PHYS 267 Problems in General Physics III 1 credit hour
(Corequisite: PHYS 262) Recitation and problem solving related to PHYS 262 are handled. *Audit only.*

PSCI 110 The Political World 3 credit hours
This introduction to politics emphasizes how people can understand their own political systems and those of others.

PSCI 200 U.S. Politics 3 credit hours
This is a survey of American politics, including the theory of democracy and political institutions, governmental branches and their bureaucracies.

PSCI 210 State and Local Politics 3 credit hours
Analysis of the workings of politics at the state and local levels is the emphasis of this course. New Mexico is one of many states used as examples. *Fall, Spring only.*

PSCI 220 Comparative Government and Politics 3 credit hours
This course compares the roles of public opinion, electoral systems, political parties, interest groups, governmental institutions and policy performance in European democracies, developing third world nations and communist political systems.

PSCI 240 International Politics 3 credit hours
Students analyze various significant factors in international politics, including nationalism, ideology, deterrence, balance of power, international law and international conflict and collaboration.

PSCI 260 Political Ideas 3 credit hours
Discussion of classical and contemporary political ideas and ideologies supplements an introduction to many of the enduring political issues which are presented in descriptive, analytical and normative terms. *Fall only.*

PSCI 296 Topics in Political Science 1–3 credit hours
Various topics are offered. See class schedule.

PSY 105 Introduction to Psychology 3 credit hours
(Prerequisite: RDG 100) Students are introduced to psychology as a science: the study of behavior and mental processes. Topics surveyed include methodology, psychobiology, learning, memory, psychological disorders, therapy and social psychology.

PSY 106L Introduction to Psychology Laboratory 1 credit hour
(Pre- or corequisite: PSY 105) Laboratory projects relevant to topics covered in PSY 105 are conducted and analyzed with the goal of developing an understanding of methodology as applied to basic psychological concepts. Class meets for three hours each week.

PSY 200 Statistical Principles 3 credit hours
(Prerequisite: PSY 105. Recommended: MATH 119 or 120) Students are introduced to basic statistical principles for description and interpretation of psychological data. Topics include frequency distributions, graphing, measures of central tendency, variability, regression, correlation, hypothesis testing and analysis of variance. *Fall, spring only.*

PSY 220 Developmental Psychology 3 credit hours
(Prerequisite: PSY 105) This course is a study of the stages and processes of the development of physical, social, emotional and intellectual aspects of human personality starting from conception and leading to old age. Emphasis is on pertinent research and practical applications.

PSY 230 Psychology of Adjustment 3 credit hours
(Prerequisite: PSY 105) Emphasizing processes of normal human adjustment and coping in personal and interpersonal arenas, this course presents topics in the applications of psychology to stress and mood management, self-esteem, social adjustment, communication and relationships.

PSY 231 Human Sexuality 3 credit hours
(Recommended: ENG 101) The physiological, cultural, social and individual factors that influence sexual behavior, sex roles and sex identity are explored in this course.

PSY 232 Clinical Psychology 3 credit hours
(Prerequisite: PSY 105) This course introduces students to clinical psychology as a profession and area of research. Topics include psychometrics and assessment, systems of prevention and therapy, forensic psychology, program evaluation and professional and ethical issues.

PSY 233 Psychology and Film 3 credit hours
(Prerequisite: RDG 100) The changing perceptions of madness are investigated by screening popular films. Readings and lectures on psychiatric disorders are linked to films that offer students a unique opportunity to see realistic manifestations of "madness." Cinema's ability not only to reflect but also to affect our perceptions of mental illness and treatment is stressed.

PSY 240 Brain and Behavior 3 credit hours
(Prerequisite: PSY 105 or BIO 121/121L) This course surveys the role of the nervous system in the control of behavior and mental processes. *Fall only.*

PSY 260 Psychology of Learning and Memory 3 credit hours
(Prerequisite: PSY 105) This course surveys the variety of laboratory learning situations, emphasizing applications to practical situations and ranging from simple processes such as conditioning to complex ones such as transfer, memory and concept formulation. *Fall only.*

PSY 265 Cognitive Psychology 3 credit hours
(Prerequisite: PSY 105) Theories and research on various mental processes are presented: memory encoding, storage and retrieval; attention, comprehension, categorization, reasoning, problem solving, language and motor skills. *Spring only.*

PSY 271 Social Psychology 3 credit hours
(Prerequisite: PSY 105 or SOC 101) This course presents topics on social interaction: communication, perception of the self and others, attitudes and leadership. *Spring only.*

PSY 296 Topics in Psychology 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See course schedule.

PSY 299 Death and Dying 3 credit hours
(Prerequisite: RDG 100) Designed to give a deeper understanding of the psychological, emotional and sociological aspects of death in American culture, this course uses a variety of learning methods including lectures, experiential exercises, class projects and guest speakers.

RLGN 107 Living World Religions 3 credit hours
(Prerequisite: RDG 100) Students are introduced to the academic study of religion. The focus is on major world religions—including Hinduism, Buddhism, Judaism, Christianity and Islam—with some attention also given to religion in primal cultures.

RLGN 247 Topics in Religious Studies 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See course schedule.

SOC 101 Introduction to Sociology 3 credit hours
(Prerequisite: RDG 100) This course covers the basic concepts and theories of contemporary sociology, including culture, socialization, social groups, deviance, sexuality, race and ethnicity, gender, age, family, medicine and religion.

SOC 111 Criminal Justice System 3 credit hours
(Prerequisite: RDG 100) An overview of the criminal justice processes is provided, including an exploration of law, law enforcement, prosecution, defense, trial and sentencing.

SOC 211 Social Problems 3 credit hours
(Prerequisite: SOC 101) This course provides an analysis from a sociological perspective of a range of problems in contemporary U.S. society: racism and prejudice, crime and delinquency, mental disorders, family changes, poverty and substance abuse.

SOC 212 Juvenile Delinquency 3 credit hours
(Prerequisite: SOC 101) Topics covered in this course include theories of juvenile delinquency, child abuse, the juvenile justice system, probation, treatment and corrections for juveniles.

SOC 213 Deviant Behavior 3 credit hours
(Prerequisite: SOC 101) Students focus on the theories of deviance and examine such behaviors as rape, murder, theft, drug use, alcoholism, prostitution, mental disorders and suicide.

SOC 214 Sociology of Corrections 3 credit hours
(Prerequisite: SOC 101) This course covers the theory, practice and legal basis for the investigation, treatment and supervision of offenders in custody and on probation or parole. Included are the history of penology and its relationship to various penal philosophies.

SOC 215 Criminology 3 credit hours
(Prerequisite: SOC 101) The causes of crime are covered with emphasis on sociological factors, the various faces of crime, the criminal past and present criminology theory.

SOC 216 Ethnic and Minority Groups 3 credit hours
(Prerequisite: SOC 101) This course examines the relationships among majority and minority and ethnic groups. Prejudice, discrimination, stereotyping, pluralism and social mobility are explored.

SOC 225 Sociology of the Family 3 credit hours
(Prerequisite: SOC 101) This course addresses major theories of the family and the status of the modern family in an era of varied family forms.

SOC 230 Society and Personality 3 credit hours
(Prerequisite: SOC 101 or PSY 105) This course introduces topics in social psychology, such as personality theories, concepts of self, human relationships, small group dynamics and organizational theories.

SOC 235 The Sociology of Gender 3 credit hours
(Prerequisite: SOC 101 or PSY 105) This course focuses on the nature and content of gender in the U.S. Theoretical viewpoints from the social sciences are applied to issues of socialization, family, culture, media, education, work, politics and economics. The impact of gender differentiation on personality development and social interaction is also a theme in the course.

SOC 280 Social Science Research 3 credit hours
(Prerequisite: SOC 101) The methodology of experimental science is applied to the social sciences in this course. Topics include the study of methodologies of data collection and analysis. Library resources, including legal citations, are used.

SOC 296 Topics in Sociology 1–3 credit hours
(Prerequisite: RDG 100) Various topics are offered. See course schedule.

SPAN 101 Beginning Spanish I 4 credit hours
(Prerequisite: First-day diagnostic exam and RDG 100) Designed for students with no previous exposure to Spanish, this course develops listening, speaking and grammatical skills.

SPAN 102 Beginning Spanish II 4 credit hours
(Prerequisite: SPAN 101) Continuing SPAN 101, students develop listening and grammatical skills. Emphasis is placed on speaking.

SPAN 103 Beginning Spanish I Conversation 3 credit hours
(Pre- or corequisite: SPAN 102 or permission of instructor) Designed to give students basic conversational skills, this course provides practice in speaking Spanish at the beginning level.

SPAN 111 Beginning Spanish I for Bilinguals 4 credit hours
(Prerequisite: First-day diagnostic exam and RDG 100) This course is designed for students who begin classes with some native listening and speaking knowledge of Spanish. The objective is to enrich and expand the skills that exist within the student's dialect. A total language arts approach is employed: listening, speaking, reading, writing and culture.

SPAN 112 Beginning Spanish II for Bilinguals 4 credit hours
(Prerequisite: SPAN 101 or 111) Continuing SPAN 111, this course expands on the language and culture skills by means of a total language arts approach; however, emphasis is on reading and writing.

SPAN 201 Intermediate Spanish I 3 credit hours
(Prerequisite: SPAN 102 or Spanish placement exam) Students review grammar and expand conversational skills while further developing reading proficiency.

SPAN 202 Intermediate Spanish II 3 credit hours
(Prerequisite: SPAN 201 or Spanish placement exam) A continuation of SPAN 201, this course provides more conversational activities and more emphasis on writing skills.

SPAN 203 Intermediate Spanish II Conversation 3 credit hours
(Pre- or corequisite: SPAN 202 or permission of instructor) This course is designed to increase skills in speaking Spanish for those students who have previously completed or are currently enrolled in SPAN 202.

SPAN 275 Accelerated Beginning Spanish 4 credit hours
(Prerequisite: Spanish placement exam or permission of instructor) This course covers the material of SPAN 101 and 102 in one term. It is recommended for language enthusiasts or those who have had exposure to Spanish either in the home or from previous study.

SPAN 276 Accelerated Intermediate Spanish 3 credit hours
(Prerequisite: SPAN 102, SPAN 275, Spanish Placement Exam or permission of instructor) This course covers the material of SPAN 201 and 202 in one term. It is recommended for language enthusiasts or those who have had exposure to Spanish either in the home or from previous study.

SPAN 280 Readings in Spanish Literature 3 credit hours
(Prerequisite: SPAN 202 or permission of the instructor) This course focuses on class discussions and written essays based on selected readings from literature written in Spanish by Spanish and Spanish-American authors.

SPAN 296 Topics in Spanish 1–3 credit hours
(Prerequisites vary) Various topics are offered. See class schedule.

THEA 122 Introduction to Theater 3 credit hours
(Recommended: ENG 101) Through studying the history and role of the theater in the past and in the present, students examine and write about the nature of theater art. Students study theater traditions ranging from the Ancient Greeks to the Epic Theater of Bertholt Brecht as well as the elements that make up a production such as the actors, the director and designers.

THEA 296 Topics in Theater 1–3 credit hours
Various topics are offered. See course schedule.

Aerospace Studies

Students may register at TVI for University of New Mexico Aerospace (Air Force) Studies. Uniforms and textbooks are provided. Because all courses are offered at the main campus of UNM, students should contact UNM before enrolling:

Patrick R. Daly, Lt. Col.
Commander
University of New Mexico
AFROTC Detachment 510
Aerospace Studies Building
1901 Las Lomas NE
Albuquerque, NM 87131
277-4502

Credits in Aerospace Studies courses may not be applied to the associate of arts in liberal arts degree.

AFAS 010 Leadership Laboratory 0 credit hours
Meeting twice weekly for one hour, this course provides students with progressively challenging leadership and management experiences within the cadet corps. Training includes physical fitness activities and lectures on military policies, ethics, customs and courtesies, military drill and ceremonies. Enrollment in the laboratory is required. *Credit/No credit only.*

AFAS 250 Development of Air Power 1 credit hour
This course examines factors contributing to the development of air power from its beginnings to the present and the evolution of air power concepts and doctrine. Meets once weekly. *Fall only.*

AFAS 251 Development of Air Power 1 credit hour
Students examine factors contributing to the development of air power from its beginnings to the present and the evolution of air power concepts and doctrine. Meets once weekly. *Spring only.*

Business Occupations

The Business Occupations Department (BOD) offers students a variety of ways to prepare for and advance in careers in the diverse and changing business world. In addition to certificate and degree programs, college credit courses, professional advancement courses and self-paced learning courses are offered.

The Business Occupations Department offers the following certificate/degree programs: Accounting; Administrative Assistant; Bookkeeping (certificate only); Business Administration (with concentration options in continuous quality improvement, customer service representative, general business, health systems management, international business, merchandising, real estate, small business management and tourism/hospitality); Court Reporting; International Business Specialist and Microcomputer Management Specialist.

The department also offers a one-term certificate program in sales and cashiering. Departmental certificates are available for short-term courses in entrepreneurship (one term), data entry (open-exit, seven and one half weeks) and continuous quality improvement (six one-credit courses, five weeks each).

Associate degrees in Legal Assistant Studies and Pre-Management are available. Courses required and approved by the New Mexico Real Estate Commission and New Mexico Appraisers Board for pre-licensing and continuing education are offered.

The Business Occupations Learning Centers (BOLC) at the Main and Montoya campuses offer non-credit, self-paced courses.

Applications are accepted every term for all programs. Some elective courses are offered in alternate terms. A student who registers for a Business Occupations program may be required to take English, reading and/or math placement tests. Placement testing is provided for all incoming students. Advanced students may earn credit for on-the-job training through cooperative education and internship courses.

Albuquerque TVI has an articulation agreement with several high schools in Albuquerque through which students may earn TVI credit for selected high school courses. The credits will apply to an associate of applied science degree in Accounting, Administrative Assistant or Business Administration. The Business Occupations Department also has several articulation agreements with other New Mexico postsecondary institutions. Students should see program directors for details.

Credit by examination is available for selected courses. Challenge examinations are administered in the BOLC at the Main and Montoya campuses for a $15 fee (see page 18). Program directors can provide detailed information. Challenge exam credit may not be accepted by other postsecondary institutions.

North Central Association of Colleges and Schools, TVI's accrediting agency, requires that the Business Occupations Department provide outcomes assessment for each of its program areas. All Business Occupations students are required to participate in outcomes assessment as a graduation requirement; test scores will not affect graduation status. Program directors have information regarding testing procedures.

All textbooks and consumable course materials must be purchased by students enrolled in credit courses and are available in the TVI bookstores at the Main and Montoya campuses.

Business Occupations Learning Centers

Self-Paced, Non-Credit, Open-Entry Courses
Main, Montoya and South Valley Campuses

The Business Occupations Learning Centers (BOLCs) serve adult members of the public and TVI students who want to learn or review a particular subject or skill on a self-paced basis.

Individuals may begin a course in these centers at any time during a term and stop when course requirements have been met. The student is allowed 15 weeks to complete a course. Although college credit is not given, a certificate is granted upon completion of a course. Instruction is offered on up-to-date equipment including computers, electronic calculators, transcribing machines and audiovisual training aids. Hours are arranged to suit individual needs. For certain courses, scheduled hours are dependent upon equipment availability. The $40 fee per course includes textbooks or materials.

Course offerings may vary at different campuses.

The Main Campus center is located in Room 210 of Smith Brasher Hall. The Montoya Campus center is in Room H-127. Hours at both centers are 7:30 a.m. to 9 p.m. Monday through Thursday and 7:30 a.m. to 4:30 p.m. on Friday. The Montoya Campus center is open on Saturday from 9 a.m. to 1 p.m. Both BOLCs are closed during term breaks.

BOLC Subject/Skill Areas

Accounting Fundamentals
Business Mathematics Fundamentals
Computer Courses:
- dBase
- Fundamentals of DOS
- Introduction to Computers
- Keyboarding
- Keyboard Skill-building*
- Lotus 1-2-3*
- Microsoft Excel for Windows*
- Microsoft Windows*
- Microsoft Word for Windows*
- WordPerfect for DOS*
- WordPerfect for the PowerMacintosh* (Main Campus only)
- WordPerfect for Windows*

Electronic Calculators
English Review Courses:
- Basic English Review
- Comprehensive English Review

Filing
Machine Transcription*
Medical Terminology
Medical Transcription*
Proofreading
Shorthand Courses:
- Alphabetic Shorthand
- Gregg Shorthand
- Shorthand Review (ABC and Gregg)*

Spelling
Typing (see keyboarding courses listed under computer courses)

*See course descriptions below for prerequisites.

Course Descriptions

Accounting Fundamentals
Students are provided with a basic understanding of accounting principles and their applications.

Business Mathematics Fundamentals
This course provides a review of the following fundamental arithmetic operations in solving business problems: addition, subtraction, multiplication, division, fractions, decimals, estimating, percentages, business formulas, commissions and bank reconciliations.

Computer Courses

dBase
(Prerequisites: Introduction to Computers or equivalent and 25 wpm keyboarding speed) Database terminology, program management and applications are included using an individualized learning approach.

Fundamentals of DOS
(Prerequisite: Introduction to Computers or equivalent) Practical applications facilitate learning microcomputer systems, DOS commands and file management.

Introduction to Computers
Designed for the first-time user, this course provides basic instruction in computer hardware, DOS fundamentals, Windows, WordPerfect, Lotus 1-2-3 and dBase.

Keyboarding
Students work at their own pace to develop basic keyboarding skill. Goals emphasize mastery of the computer keyboard through correct techniques and accuracy.

Keyboard Skill-building
(Prerequisite: BOLC Keyboarding or 30 wpm keyboarding speed) Using a diagnostic approach, students improve accuracy and speed utilizing championship methods.

Lotus 1-2-3
(Prerequisite: Introduction to Computers or equivalent) Using an individualized approach, students learn the fundamentals of Lotus 1-2-3. Topics covered include creating and printing worksheets and graphs, database management, special functions and macros.

Microsoft Excel for Windows
(Suggested prerequisite: Microsoft Windows or related experience) An individualized approach is used to teach students the fundamentals of Excel. Topics include creating and printing worksheets, charts, databases and macros.

Microsoft Windows
(Prerequisite: Introduction to Computers or equivalent) The student is provided with an introduction to the basics of Windows.

Microsoft Word for Windows
(Prerequisite: 25 wpm keyboarding speed; suggested Microsoft Windows or related experience) Using an individualized, hands-on approach, students learn the beginning through the advanced features used in Word for Windows.

WordPerfect for DOS
(Prerequisites: Introduction to Computers or equivalent and 25 wpm keyboarding speed) An individualized approach is used to learn the basics and the advanced features of WordPerfect for DOS.

WordPerfect for the PowerMacintosh (Main Campus only) *(Prerequisite: 25 wpm keyboarding speed)* This course provides an individualized approach to learning WordPerfect on the Macintosh/PowerMac computer.

WordPerfect for Windows
(Prerequisite: 25 wpm keyboarding speed; suggested Microsoft Windows or related experience) Using an individualized hands-on approach, students learn the beginning through the advanced features used in WordPerfect for Windows.

Electronic Calculators
Skill is developed on electronic calculators using the touch method. This course is designed to assist students in acquiring competence in mathematical applications.

English Review Courses

Basic English Review
This basic review includes an easy-to-learn presentation of English grammar, punctuation, capitalization and word usage.

Comprehensive English Review
Course content provides a thorough and extensive review of grammar, punctuation, spelling, capitalization, abbreviations and number usage.

Filing
A hands-on approach presents the fundamentals of filing using a variety of business documents and filing systems.

Machine Transcription
(Prerequisites: demonstrated English proficiency and 50 net words per minute typing skill) Instruction is provided in the use of transcribing machines to prepare mailable business correspondence.

Medical Terminology
Students become familiar with medical terminology by means of a text and audio presentation. A vocabulary is developed through the learning of medical prefixes, roots and suffixes.

Medical Transcription
(Prerequisites: machine transcription skill and 50 net words per minute typing skill) This course develops familiarity with medical terminology and transcription.

Proofreading
An individualized approach provides rules, instruction and practice needed to improve proofreading skills.

Shorthand Courses

Alphabetic Shorthand I
This shorthand system uses alphabetic characters. Students learn to read, write and transcribe shorthand notes. A writing speed of 50 wpm should be reached upon completion.

Gregg Shorthand I
All theory and brief forms leading to the ability to read, write and transcribe Gregg shorthand are learned. A writing speed of 50 wpm should be reached upon completion.

Shorthand Review
This course is designed for students who have keyboarding and shorthand skills but need review and speed-building. Materials are available for ABC and Gregg.

Spelling
Each of the seven modular lessons uses two cassette tapes: one for instruction and one for testing. The student listens, reads, answers questions, works exercises and spells words, and checks his or her answers.

Accounting

Associate of Applied Science Degree/
Certificate Program
Main, Montoya, Rio Rancho and South Valley Campuses

Accounting is an excellent field for persons looking for a challenging career that has good potential for advancement.

Students in this program may earn a certificate and/or an associate of applied science degree. A certificate is awarded to students who complete the occupational component. The degree is awarded to students who complete both occupational and Arts & Sciences courses. Transfer agreements have been established with several four-year institutions. Students should consult the program director.

The associate of applied science degree in accounting is accredited by the Association of Collegiate Business Schools and Programs (ACBSP).

Many of TVI's accounting courses are accepted for fulfillment of the education requirement for the Certified Public Accountant (CPA) and Certified Management Accounting (CMA) exams. A bachelor's degree is a requirement for both exams.

Students may select from a number of elective courses, at least one of which must be an accounting course. A minimum of 12 students is required for a support course to be offered. A keyboarding skill of 25 words per minute is required of students before they enroll in some courses. Keyboarding courses are available in the Business Occupations Department and the Business Occupations Learning Centers.

All occupational courses must be passed with a minimum grade of C to qualify for graduation. In the Accounting program, *students do not have the option of taking occupational courses on a credit/no credit basis.* All classes may be offered both day and evening if there is sufficient demand.

Course fees are charged for some courses.

Course offerings may vary at different campuses.

A suggested schedule per term for the occupational component of the associate of applied science degree/certificate program in Accounting includes:

Term 1: ACCT 101, ACCT 111,
BA 113, BA 121, BA 131
Term 2: ACCT 102, BA 122, BA 133, BA 150
Term 3: ACCT 201, ACCT 240, ACCT 260, ACCT 254, BA 211
Term 4: ACCT 202, ACCT 255, ACCT 280, ACCT elective
(one elective required for certificate only)

Accounting Program

Certificate and Degree Requirements

			Credit Hours
ACCT	101A	Financial Accounting IA	3
	and		
ACCT	101B	Financial Accounting IB	3
	or		
ACCT	101	Financial Accounting I	6
ACCT	102A	Financial Accounting IIA	3
	and		
ACCT	102B	Financial Accounting IIB	3
	or		
ACCT	102	Financial Accounting II	6
ACCT	111	Accounting Math	3
ACCT	201	Intermediate Accounting I	4
ACCT	202	Intermediate Accounting II	4
ACCT	240	Tax Accounting I	3
ACCT	254	Electronic Spreadsheets	3
ACCT	255	Computerized Accounting	3
ACCT	260	Cost Accounting	3
ACCT	280	Managerial Accounting	3
BA	113	Introduction to Business	3
BA	121	Business Communications I	3
BA	122	Business Communications II	3
BA	131	Human Relations (7.5 weeks)	2
BA	133	Principles of Management	3
BA	150	Introduction to Computer Processing	3
	or		
CSCI	101	Computer Literacy	4
BA	211	Business Law	3
One elective (required for certificate only)			3-4
One ACCT elective			3
		Total	**64–66**

Additional Degree Requirements

ENG	101	College Writing	3
MATH	120	Intermediate Algebra	4
MATH	145	Introduction to Probability and Statistics	3
COMM	130 or 221 or 232 or 240		3
Social Science/Humanities Elective			3
		Total	**80–82**

Accounting Electives

ACCT	241	Tax Accounting II	3
ACCT	270	Governmental Accounting	3
ACCT	271	Auditing	3
ACCT	272	Accounting Systems Design	3
ACCT	296	Accounting Topics	1–3

General Electives

ACCT	298	Internship	4
ACCT	299	Cooperative Education	4
BA	215	Money and Banking	3
ECON	200	Macroeconomics	3
MMS Course(s)			3

Course Descriptions

ACCT 101 Financial Accounting I **6 credit hours**

(Prerequisites: MATH 099, RDG 099 or equivalent; pre- or corequisite: ACCT 111 or permission of the program director) This is an introductory course in the theory and practice of accounting. It is intended for the beginning student of business. Principles of the double-entry accounting system, including recording transactions, adjusting entries, preparing statements and closing accounts are studied. Accounting for cash, accounts receivable, inventories and tangible and intangible assets are studied. ACCT 101A plus ACCT 101B are equivalent to this course.

ACCT 101A Financial Accounting IA **3 credit hours**

(Prerequisites: MATH 099 or equivalent; RDG 099 or equivalent; pre- or corequisite: ACCT 111 or permission of the program director) This course is the first half of ACCT 101. Principles of the double-entry accounting system including recording transactions, adjusting entries, preparing statements and closing accounts are covered. ACCT 101A plus ACCT 101B are equivalent to ACCT 101.

ACCT 101B Financial Accounting IB **3 credit hours**

(Prerequisites: ACCT 101A and ACCT 111 or permission of the program director) This course is the last half of ACCT 101. Cash, accounts receivable, inventories and tangible and intangible assets are studied. ACCT 101A and ACCT 101B are equivalent to ACCT 101.

ACCT 102 Financial Accounting II **6 credit hours**

(Prerequisite: ACCT 101; pre- or corequisite: BA 150 or CSCI 101) This course examines accounting for current liabilities, payroll, partnerships, corporations, long-term liabilities, investments, statement of cash flows and financial statement analysis. ACCT 102A plus ACCT 102B are equivalent to this course.

ACCT 102A Financial Accounting IIA 3 credit hours
(Prerequisites: ACCT 101 or 101B and ACCT 111 or permission of the program director; pre- or corequisite: BA 150 or CSCI 101) This course is the first half of ACCT 102. This course covers various aspects of accounting for current liabilities, payroll, partnerships and corporations. ACCT 102A plus ACCT 102B are equivalent to ACCT 102.

ACCT 102B Financial Accounting IIB 3 credit hours
(Prerequisites: ACCT 102A; prerequisite: BA 150 or CSCI 101) This course is the second half of ACCT 102. Long-term liabilities, investments, statement of cash flows and financial statement analysis are studied. ACCT 102A plus ACCT 102B are equivalent to ACCT 102.

ACCT 111 Accounting Math 3 credit hours
(Prerequisite: MATH 099 or equivalent or permission of the program director) This course examines the basic arithmetic operations as they relate to business applications. It familiarizes the student with a wide range of accounting procedures for which math is required and develops touch method skills using electronic calculators.

ACCT 201 Intermediate Accounting I 4 credit hours
(Prerequisite: ACCT 102 or ACCT 102B) This course emphasizes accounting theory, concepts and their practical application. It focuses attention on the use of accounting data as a basis for decisions by management, stockholders, creditors and other users of financial statements and accounting reports. Emphasis is on the asset side of the balance sheet.

ACCT 202 Intermediate Accounting II 4 credit hours
(Prerequisite: ACCT 201) Accounting for current and long-term liabilities, capital stock transactions, dividends, retained earnings and cash flow statements and analysis are covered in this course.

ACCT 240 Tax Accounting I 3 credit hours
(Prerequisite: ACCT 101 or ACCT 101B) This course examines the fundamental characteristics of federal income taxes as applied to individuals.

ACCT 241 Tax Accounting II 3 credit hours
(Prerequisite: ACCT 240 or permission of the program director) This course examines the income tax aspects of corporations, partnerships, sub-chapter S corporations and fiduciaries. Also examined are the advanced concepts related to individual income taxes, tax planning and estate and gift taxation.

ACCT 254 Electronic Spreadsheets 3 credit hours
(Prerequisites: ACCT 102 or ACCT 102B, BA 150 or CSCI 101 or permission of the program director) This microcomputer lab uses electronic spreadsheets for accounting and business applications. A course fee of $15 covers printer supplies. (2 theory + 3 lab hours a week)

ACCT 255 Computerized Accounting **3 credit hours**
(Prerequisites: ACCT 102 or ACCT 102B, BA 150 or CSCI 101 or permission of the program director) This microcomputer course includes payroll, inventory control, accounts payable, accounts receivable and general ledger. Students use prepared integrated business software. A course fee of $15 covers printer supplies. (2 theory + 3 lab hours a week)

ACCT 260 Cost Accounting **3 credit hours**
(Prerequisite: ACCT 102 or ACCT 102B) This course emphasizes job order and process costing systems for construction and manufacturing.

ACCT 270 Governmental Accounting **3 credit hours**
(Prerequisite: ACCT 102 or ACCT 102B) This course provides the student with training in fund accounting for governmental and other non-profit entities.

ACCT 271 Auditing **3 credit hours**
(Prerequisite: ACCT 102 or ACCT 102B) This is a survey of auditing that includes audit standards, reports, professional ethics, legal liability, evidence accumulation, audit planning, internal control, transaction cycles, other engagements and operational auditing.

ACCT 272 Accounting Systems Design **3 credit hours**
(Prerequisite: ACCT 102 or ACCT 102B) Students design a manual accounting system which includes a chart of accounts, an accounting manual, flow charts, control and support systems and reports to management.

ACCT 280 Managerial Accounting **3 credit hours**
(Pre- or corequisite: ACCT 260) Students learn how accounting information can be interpreted and used for decision making by management in planning and controlling business activities.

ACCT 296 Accounting Topics **1–3 credit hours**
Current topics in accounting are presented.

ACCT 298 Internship **4 credit hours**
(Prerequisites: ACCT 102 or ACCT 102B and permission of the program director) Students work a minimum of 150 hours at business or training-related supervised work stations. Students are not paid for their work but are supervised jointly by TVI and the company. (1 theory + 9 lab hours a week)

ACCT 299 Cooperative Education **4 credit hours**
(Prerequisites: ACCT 102 or ACCT 102B and permission of the program director) Students work a minimum of 150 hours at business or training-related supervised work stations. Student trainees are paid by the cooperating firm and supervised jointly by TVI and the employer. (1 theory + 9 lab hours a week)

Administrative Assistant

Career in Office Technology

Associate of Applied Science Degree/
Certificate Program
Main, Montoya, Rio Rancho and South Valley Campuses

More and more businesses are actively looking for office workers—both men and women—who have the potential to be promoted to administrative positions. Today's office professional must possess greater technical, administrative and interpersonal skills. The Administrative Assistant program offers training in organizational and interpersonal skills, as well as office automation and written communication. Graduates are prepared to function in a highly productive office environment.

The associate of applied science degree in Administrative Assistant is accredited by the Association of Collegiate Business Schools and Programs (ACBSP).

Cooperative education is available. Students should see the program director for details.

All occupational courses must be passed with a minimum grade of C to meet prerequisite requirements and certificate or degree requirements. *Administrative Assistant students do not have the option of taking occupational courses on a credit/no credit basis.* Individuals who have already attained a Certified Professional Secretary (CPS) rating may receive credit hours toward the Administrative Assistant associate of applied science degree. Students may contact the program director at either Main or Montoya campus for more information about advanced placement.

The associate degree may be transferred to the University of New Mexico for credit toward a bachelor's degree in Training and Learning Technologies (see Administrative Assistant program director). All Administrative Assistant courses may be offered day and evening if there is sufficient demand.

Course offerings may vary at different campuses.

Course fees are charged for some courses.

A suggested schedule per term for the occupational component of the associate of applied science degree/certificate in Administrative Assistant includes:

Term 1: AA 101, AA 102, AA 111, AA 121, BA 131, BA 150
Term 2: AA 143, AA 107, AA 112, AA 122, BA 113, MMS 150
Term 3: AA 200, AA 202, AA 230, BA 157, AA 205
Term 4: AA 250, AA 260, BA 133, computer elective

Administrative Assistant Program

Certificate and Degree Requirements

			Credit Hours
AA	101	Beginning Keyboarding	3
AA	102	Keyboard Applications	3
AA	107	Intermediate Keyboard Skill-building	2
AA	111	Business Math/Calculators	3
		or	
ACCT	111	Accounting Math	3
AA	112	Office Accounting Procedures	3
AA	121	Office Communications I	3
		or	
BA	121	Business Communications I	3
AA	122	Office Communications II	3
AA	143	Word Processing	4
AA	200	Advanced Word Processing	3
AA	202	Information Processing	3
AA	205	Advanced Keyboard Skill-building	2
AA	230	Office Communications III	3
		or	
BA	122	Business Communications II	3
AA	250	Machine Transcription	3
AA	260	Business Procedures	3
BA	113	Introduction to Business	3
BA	131	Human Relations (7.5 weeks)	2
BA	133	Principles of Management	3
BA	150	Introduction to Computer Processing	3
	or		
CSCI	101	Computer Literacy	4
BA	157	Computer Accounting for Small Business (5 weeks)	1
Computer Elective (one three-credit course or a combination of three one-credit courses)			3
MMS	150	Microsoft Windows (5 weeks)	1
		Total	**57–58**

Additional Degree Requirements

COMM	221	Interpersonal Communications	3
ENG	101	College Writing	3
Biological and Physical Science Elective or			
MATH	120	Intermediate Algebra or higher	3–4
Social Science/Humanities Elective			3
Arts & Sciences Elective except Military Studies			3
		Total	**72–74**

Electives

AA	105	Keyboard Skill-building	2
AA	207	Law Office Technology	4
AA	299	Cooperative Education	4
BA	211	Business Law	3
CR	132	Medical Terminology and Anatomy	5
CR	240	Legal Terminology/Procedures	3
SSKL	211	Employment Skills - General	1

Computer Electives

MMS	134	WordPerfect for Windows	3
MMS	151	DOS Fundamentals (5 weeks)	1
MMS	152	Lotus Fundamentals (5 weeks)	1
MMS	153	dBase Fundamentals (5 weeks)	1
MMS	154	Desktop Publishing Using WordPerfect (5 weeks)	1
MMS	156	Office Management Software (5 weeks)	1
MMS	157	PowerPoint Fundamentals (5 weeks)	1
MMS	160	Introduction to Internet (5 weeks)	1
MMS	255	Desktop Publishing	3
MMS	257	Presentation Graphics	3

[1]COMM 221 may substitute for BA 131.

Course Descriptions

AA 101 Beginning Keyboarding **3 credit hours**

Emphasis is on keyboarding by the touch method and developing speed and accuracy. A minimum keyboarding average of 25 words per minute on five-minute timings should be attained. Personal computers are used and symbols and numbers are taught. A $10 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

AA 102 Keyboard Applications **3 credit hours**

(Prerequisite: AA 101) Basic keyboarding skills are reviewed. Production emphasis is on business letters, reports and tables. A minimum keyboarding average speed of 35 words per minute on five-minute timings should be attained. Skill-building software and personal computers are used. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

AA 105 Keyboard Skill-building **2 credit hours**

(Prerequisite: AA 101 or 25 words per minute typing speed on a five-minute timing) Students with various levels of keyboarding skill may enroll in this course. Evaluation is based on lessons completed and on individual speed and accuracy improvement. Skill-building software and personal computers are used. A $10 course fee is charged for printer supplies. (5 lab hours a week)

AA 107 Intermediate Keyboard Skill-building 2 credit hours
(Prerequisite: AA 102 or 35 words per minute typing speed on a five-minute timing) Skill-building software and personal computers are used to build speed and accuracy. A minimum keyboarding speed of 45 words per minute on five-minute timed writings is required to pass this course. A $10 course fee is charged for printer supplies. (5 lab hours a week)

AA 111 Business Mathematics/Calculators 3 credit hours
(Prerequisite: MATH 099 or equivalent) This course features a combined approach to teaching business mathematics and calculators. Students receive a thorough review of math fundamentals and their applications in solving business problems. Calculator instruction stresses use of the touch method. A $5 course fee is charged for calculator ribbon and tape.

AA 112 Office Accounting Procedures 3 credit hours
(Prerequisite: AA 111 or ACCT 111) This is a study of the complete bookkeeping cycle including preparation of the balance sheet, income statement and worksheet. Emphasis is on journalizing, posting, accounts payable, accounts receivable and payroll.

AA 121 Office Communications I 3 credit hours
(Prerequisite: RDG 099 or equivalent and ENG 099 or equivalent) This course is an introduction to oral and written communications with emphasis on vocabulary building, spelling, grammar, punctuation, sentence structure, oral expression and listening skills.

AA 122 Office Communications II 3 credit hours
(Prerequisite: AA 121 or BA 121; pre- or corequisite: AA 102 or permission of the program director) This course is a continuation of AA 121 with greater emphasis on oral communication, punctuation and sentence and paragraph construction. Students receive an introduction to telephone techniques.

AA 143 Word Processing 4 credit hours
(Prerequisites: Minimum typing speed of 35 words a minute on a five-minute timing and BA 150 or CR 133 or CSCI 101 or permission of the program director) Students receive instruction in the use of word processing software on the microcomputer. Formatting and word processing applications are emphasized. Emphasis is on practical office applications. A $15 course fee is charged for printer supplies. (3 theory + 3 lab hours a week)

AA 200 Advanced Word Processing 3 credit hours
(Prerequisites: AA 143 and minimum typing speed of 45 words a minute on a five-minute timing or permission of the program director) Students receive instruction in the use of advanced word processing applications. Emphasis is on practical office applications. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

AA 202 Information Processing 3 credit hours
(Prerequisite: AA 143 or permission of the program director) Advanced instruction is provided in the use of microcomputers. Applications include computerized office applica-

tions, electronic spreadsheets and database management. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

AA 205 Advanced Keyboard Skill-building 2 credit hours
(Prerequisite: AA 107 or 45 words per minute typing speed on a five-minute timing) Skill-building software and personal computers are used to build speed and accuracy. Final evaluation is based on an average of three five-minute timings that average 55 words per minute. A $10 course fee is charged for printer supplies. (5 lab hours a week)

AA 207 Law Office Technology 4 credit hours
(Prerequisites: AA 143 and CR 240) Instruction is provided in the preparation of mailable legal correspondence and forms from audio tape, typed copy and preprinted forms using the computer. Emphasis is on language usage and on introduction to a variety of formats and documents covering the major fields of law. A $15 course fee is charged for printer supplies. Offered fall term. (3 theory + 3 lab hours a week)

AA 230 Office Communications III 3 credit hours
(Prerequisites: AA 102, AA 122) Principles of writing and composition of business correspondence are covered. Continued emphasis is on grammar, punctuation, spelling, oral communication and listening skills.

AA 250 Machine Transcription 3 credit hours
(Prerequisites: AA 107, AA 122, AA 143 or permission of the program director) Emphasis is on the development of speed and accuracy in transcribing mailable copy. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

AA 260 Business Procedures 3 credit hours
(Prerequisites: AA 107, AA 122) Office procedures, records management, human relations and job portfolio preparation are included in this course. This course should be taken in the student's final term.

AA 299 Cooperative Education 4 credit hours
(Prerequisites: AA 143, AA 122 and a typing skill of 55 words per minute on a five-minute timed writing and permission of the program director) Students work a minimum of 150 hours at office- related supervised work stations. The student trainee is paid by the cooperating firm and supervised jointly by TVI and the employer. The student and employer determine the weekly contact hours. (1 theory + 9 lab hours a week)

Bookkeeping

Certificate Program
Main, Montoya, Rio Rancho and South Valley Campuses

There is a continual demand for bookkeepers in today's business. The bookkeeping certificate is designed for the student who needs occupational certification and employment quickly. However, this program is also designed to fit into the more intense programs of accounting, business administration or microcomputer management.

Each student receives an introduction to broad business operations as well as the basics of bookkeeping. These courses emphasize written and verbal communication, introductory computer and accounting skills.

All occupational courses must be passed with a minimum grade of C to qualify for graduation. *Bookkeeping students do not have the option of taking occupational courses on a credit/no credit basis.*

Course offerings may vary at different campuses.

Course fees are charged for some courses.

A suggested schedule per term for the bookkeeping certificate includes:

Term 1: ACCT 101, ACCT 111, BA 113, BA 131
Term 2: ACCT 102, BA 121, BA 150
Term 3: ACCT 254, BA 133, BA 298 or 299, ACCT elective

Bookkeeping

Certificate Requirements

			Credit Hours
ACCT	101A	Financial Accounting IA	3
	and		
ACCT	101B	Financial Accounting IB	3
	or		
ACCT	101	Financial Accounting I	6
ACCT	102A	Financial Accounting IIA	3
	and		
ACCT	102B	Financial Accounting IIB	3
	or		
ACCT	102	Financial Accounting II	6
ACCT	111	Accounting Math	3
ACCT	254	Electronic Spreadsheets	3
BA	121	Business Communications I	3
BA	113	Introduction to Business	3
BA	131	Human Relations (7.5 weeks)	2
BA	133	Principles of Management	3

BA	150	Introduction to Computer Processing	3
	or		
CSCI	101	Computer Literacy	4
BA	298	Internship	4
	or		
BA	299	Cooperative Education	4
Approved elective			3–4
		Total	**39–41**

Accounting Electives

ACCT	240	Tax Accounting I	3
ACCT	241	Tax Accounting II	3
ACCT	255	Computerized Accounting	3
ACCT	260	Cost Accounting	3
ACCT	280	Managerial Accounting	3
ACCT	270	Governmental Accounting	3
ACCT	271	Auditing	3
ACCT	272	Accounting Systems Design	3
ACCT	296	Accounting Topics	1–3

Course Descriptions

See the Accounting and Business Administration programs for course descriptions.

Business Administration

Associate of Applied Science Degree/
Certificate Program
Main, Montoya, Rio Rancho and South Valley Campuses

The Business Administration program is designed to provide students with the skills, knowledge and experience required in today's business. Each student receives a broad overview of business operations and should be prepared for several job options after successful program completion.

Early courses in the program emphasize written and verbal communications, management, accounting principles and computer skills. Those students completing all core occupational courses may receive business administration certificates.

An associate of applied science degree in Business Administration is awarded to students who complete the occupational requirements, Arts & Sciences components and a concentration in one of nine areas: continuous quality improvement (CQI), customer service representative, general business, health systems management, international business, merchandising, real estate, small business management or tourism/hospitality.

Structured sequences for the tourism/hospitality and real estate concentrations are necessary early in the programs. One or two specialty courses should be taken each term. The tourism/hospitality concentration includes elective courses sponsored by the Educational Institute (EI), an educational foundation of the American Hotel and Motel Association (AH&MA). These courses may be used toward industry-recognized professional certification. All courses in the real estate concentration are approved by the New Mexico Real Estate Commission (NMREC) for either pre-licensing or continuing education requirements. All courses offered in real estate appraisal are approved by the New Mexico Real Estate Appraisers Board (NMREAB).

A keyboarding skill of 25 words per minute is required before students can enroll in some courses. Keyboarding courses are available in the Business Occupations Department and the Business Occupations Learning Centers.

Degree students select from the list of elective courses in their concentration options to prepare for their employment goals. Not all elective courses are offered each term. A minimum of 12 students is required for an elective course to be offered.

Course offerings may vary at different campuses.

Most courses are offered in the evening as well as day. Several courses in the program may be transferred to four-year institutions. Students should see the program director for details.

All occupational courses must be passed with a minimum grade of C to qualify for graduation. Students who are undecided about their majors may contact a program director for advisement. In the Business Administration program, *students do not have the option of taking occupational courses on a credit/no credit basis.* Course fees are charged for some courses.

A suggested schedule per term for the occupational component of the associate of applied science degree/certificate program in Business Administration includes:

Term 1: ACCT 101 or ACCT 101A and ACCT 101B, ACCT 111, BA 113, BA 121, BA 131
Term 2: ACCT 102 or ACCT 102A and ACCT 102B, BA 122, BA 133, BA 150
Term 3: BA 211, BA 222, BA 284, ACCT 254, BA 157, elective
Term 4: Concentration options

Business Administration Program

Certificate and Degree Requirements

			Credit Hours
ACCT	101A	Financial Accounting IA	3
		and	
ACCT	101B	Financial Accounting IB	3
		or	
ACCT	101	Financial Accounting I	6

ACCT	102A	Financial Accounting IIA	3
		and	
ACCT	102B	Financial Accounting IIB	3
		or	
ACCT	102	Financial Accounting II	6
ACCT	111	Accounting Math	3
ACCT	254	Electronic Spreadsheets	3
BA	113	Introduction to Business	3
BA	121	Business Communications I	3
BA	122	Business Communications II	3
BA	131	Human Relations (7.5 weeks)	2
BA	133	Principles of Management	3
BA	150	Introduction to Computer Processing	3
		or	
CSCI	101	Computer Literacy	4
BA	157	Computer Accounting for Small Business (5 weeks)	1
BA	211	Business Law	3
BA	222	Principles of Marketing	3
BA	284	Sales	3
Approved Elective (see concentration options)			3–4
		Total	**48–50**

Additional Degree Requirements

COMM	221	Interpersonal Communication Studies	3
	or		
COMM	130	Public Speaking	3
	or		
COMM	232	Business and Professional Communication Studies	3
	or		
COMM	240	Organizational Communication Studies	3
ECON	200	Macroeconomics or higher level	3
ENG	101	College Writing	3
MATH	120	Intermediate Algebra or higher level math	4
PHIL	245B	Business Ethics	3

Concentration Options for Degree (One Option Required)

Continuous Quality Improvement (CQI)

BA	101	Introduction to Quality Management	1
BA	102	Fundamentals of Continuous Quality Improvement	1
BA	103	Quality Tools	1
BA	104	Team Building for Quality	1

BA	105	Re-engineering for Quality	1
BA	106	Quality Leadership	1
Approved Elective			3–4
		Total	**73–76**

Customer Service Representative

BA	115	Customer Call Center Representative	8
Approved Elective			3
		Total	**75–78**

General Business

BA	299	Cooperative Education	4
Two Approved Electives			6
		Total	**74–76**

Health Systems Management

BA	241	Decision Models for Health Risk Assessment	3
BA	244	Survey of Health Systems Intervention	3
Approved Elective			3–4
		Total	**73–76**

International Business

IB	101	Introduction to International Business	3
IB	202	International Management	3
Approved International Business Elective			3
		Total	**73–75**

Merchandising

BA	252	Customer Relations	3
BA	253	Retailing	3
	or		
BA	286	Advertising	3
Approved Elective			3–4
		Total	**73–76**

Real Estate (also see page 155)

BA	270	Real Estate Law	3
BA	271	Real Estate Practice	3
Approved Real Estate Elective			3
		Total	**73–75**

Small Business Management

ENTR	101	Entrepreneurship	6
BA	252	Customer Relations	3
BA	286	Advertising	3
		Total	**76–79**

Tourism/Hospitality

BA	252	Customer Relations	3
BA	263	Tourism and the Hospitality Industry	3
BA	267	Hospitality Supervision	3
		Total	**73–75**

Electives

ACCT	240	Tax Accounting I	3
ACCT	255	Computerized Accounting	3
ACCT	260	Cost Accounting	3
ACCT	272	Accounting System Design	3
ACCT	280	Managerial Accounting	3
BA	101	Introduction to Quality Management	1
BA	102	Fundamentals of Continuous Quality Improvement	1
BA	103	Quality Tools	1
BA	104	Team Building for Quality	1
BA	105	Re-engineering for Quality	1
BA	106	Quality Leadership	1
BA	115	Customer Call Center Representative	3
BA	215	Money and Banking	3
BA	241	Decision Models for Health Risk Assessment	3
BA	242	CPT Coding	3
BA	243	ICD-9-CM Coding	3
BA	244	Survey of Health Systems Intervention	3
BA	245	Introduction to Hospitality Today	3
BA	246	Hotel/Motel Facilities Management	3
BA	247	Hotel/Motel Housekeeping Management	3
BA	251	Retail Merchandising	3
BA	252	Customer Relations	3
BA	253	Retailing	3
BA	258	Hotel/Motel Organization and Administration	3
BA	259	Hotel/Motel Food and Beverage Management	3
BA	260	Purchasing	3
BA	263	Tourism and the Hospitality Industry	3
BA	264	Front Office Procedures	3
BA	265	Marketing of Hospitality Services	3
BA	266	Hotel/Motel Law	3
BA	267	Hospitality Supervision	3

BA	268	Resort Management	3
BA	269	Hotel/Motel Security Management	3
BA	270	Real Estate Law	3
BA	271	Real Estate Practice	3
BA	272	Real Estate Appraisal	3
BA	273	Real Estate Finance	3
BA	274	Real Estate Investment	3
BA	275	Property Management	3
BA	276	NMREC Mandatory Course (5 weeks)	1
BA	279	Uniform Standards of Professional Appraisal Practice	2
BA	280	Fair Housing Law (5 weeks)	1
BA	281	Americans with Disabilities Act & Related Handicap Discrimination Law (5 weeks)	3
BA	282	Appraising the Single Family Residence	3
BA	283	Rules & Regulations of the New Mexico Real Estate Commission (5 weeks)	1
BA	286	Advertising	3
BA	287	Delta Epsilon Chi Competition	1
BA	290	Hotel/Motel Food and Beverage	3
BA	291	Hotel/Motel Human Resources Management	3
BA	292	Hospitality Energy and Water Management	3
BA	293	Hospitality Purchasing Management	3
BA	294	Convention Management and Service	3
BA	295	Hospitality Industry Engineering Systems	3
BA	296	Business Topics	1–3
BA	298	Internship	4
BA	299	Cooperative Education	4
BA	299A	Cooperative Education I	1
BA	299B	Cooperative Education II	1
BA	299C	Cooperative Education III	1
BA	299D	Cooperative Education IV	1
ENTR	101	Entrepreneurship	6
ENTR	102	Entrepreneurship in a Global Setting	3
IB	101	Introduction to International Business	3
IB	201	International Marketing	3
IB	202	International Management	3
IB	203	International Finance and Trade	3
IB	205	Fundamentals of Exporting/Importing	3
MMS	134	WordPerfect for Windows	3
MMS	135	Microsoft Word for Windows	3
MMS	151	DOS Fundamentals (5 weeks)	1
MMS	152	Lotus Fundamentals (5 weeks)	1

MMS	153	dBase Fundamentals (5 weeks)	1
MMS	154	Desktop Publishing Using WordPerfect (5 weeks)	1
MMS	156	Office Management Software (5 weeks)	1
MMS	255	Desktop Publishing	3
MMS	257	Presentation Graphics	3
MMS	258	Local Area Network (LAN) Systems Manager (10 weeks)	2
[1]FSMG	101	Operations Management	3
[1]FSMG	102	Human Resource Management	3
[1]FSMG	103	Marketing/Cost Control Management	3
[1]FSMG	170L	Computers in Food Service	3
[1]FSMG	198	Cooperative Education	4
SSKL	211	Employment Skills—General	1

[1]Food Service Management course (see Trades & Service Occupations Department)

Course Descriptions

BA 111[1] Communications **2 credit hours**

(Offered for Trades and Technologies students) Students develop effective communications skills. Course content includes fundamentals of grammar, punctuation and oral communications. Effective expression in basic technical writing is stressed. (7.5 weeks)

BA 113 Introduction to Business **3 credit hours**

(Prerequisite: RDG 099 or equivalent) Students recognize the structure of business, business activities and problems. An understanding of the nature of the business world also is stressed.

BA 115 Customer Call Center Representative **8 credit hours**

Students are introduced to a quality approach to customer service in a customer call center environment. Students acquire basic word processing and computer skills and use software applications to review math and English. Human relations skills are emphasized in problem solving, time management, team building and telephone use. Proficiency is demonstrated in the classroom and workplace. Application for a department certificate may be made with a program director upon successful completion of the course. (6 theory + 6 lab hours a week)

BA 121 Business Communications I **3 credit hours**

(Prerequisites: RDG 099 or equivalent and ENG 099 or equivalent) The student gains the ability to communicate effectively through the study and application of writing fundamentals. Instruction in spelling, grammar, punctuation and sentence structure is included. Students also have the opportunity to develop oral and listening skills.

BA 122 Business Communications II **3 credit hours**

(Prerequisites: BA 121 and 25 words per minute typing skill) The student gains skills in writing effective business letters, reports and memoranda. Continued use of oral communication and listening skills is stressed.

BA 131 Human Relations **2 credit hours**

(Available also for Technologies students) The importance of interpersonal relationships and the work ethic are stressed. Topics covered may include self-awareness, time management, stress management, communications, goal setting, working in groups and personal management. Study skills are also covered. (7.5 weeks)

BA 133 Principles of Management **3 credit hours**

(Prerequisites: RDG 099 or equivalent, BA 113 or permission of the program director) Students learn to apply the basic management functions of planning, organizing, staffing, directing and controlling. Human relations skills and group process and leadership skills are emphasized.

BA 150 Introduction to Computer Processing **3 credit hours**

(Prerequisite: 25 words per minute typing skill) Students gain skills in using automated information systems, computer hardware, data entry and business software applications. Hands-on experience with microcomputers is provided. A $15 course fee is charged for computer paper and printing costs. (2 theory + 3 lab hours a week)

BA 157 Computer Accounting for Small Business **1 credit hour**

(Prerequisite: AA 112 or ACCT 101 or ACCT 101B or ENTR 101 or permission of the program director) Students use a comprehensive accounting software program for a small business. Students set up the records for a business, open accounts, enter transactions and print end-of-period reports. A $5 course fee is charged for computer paper and printing costs. (5 weeks; 2 theory + 3 lab hours a week)

BA 211 Business Law **3 credit hours**

(Prerequisites: RDG 099 or equivalent and ENG 099 or equivalent) This course provides a basic knowledge of law as it applies to all business dealings in our society. Particular emphasis is on contract law, Uniform Commercial Code, negotiable instruments and alternative dispute resolutions.

BA 215 Money and Banking **3 credit hours**

(Prerequisite: ACCT 102 or ACCT 102B) This course covers the history, nature and function of money. Students learn to apply methods of institutional control and theories of monetary policy.

BA 222 Principles of Marketing **3 credit hours**

(Prerequisites: BA 113 or permission of the program director) Students can apply total marketing concepts from product creation, pricing, promotion and distribution.

BA 241 Decision Models for Health Risk Assessment **3 credit hours**

Students work in teams to explore health care as a system. Technology, group processes and community involvement are an integral part of this course.

BA 242 Current Procedural Terminology (CPT) 3 credit hours

(Prerequisite: CR 132) This course is designed to familiarize students with the fundamentals of medical office coding using CPT codes. Students will become acquainted with the CPT book setup and the means by which appropriate codes for office visits, procedures, exams and diagnoses are selected.

BA 243 ICD-9-CM Coding 3 credit hours

(Prerequisite: CR 132) This course is designed to familiarize students with the fundamentals of hospital coding using International Classification of Diseases (ICD), 9th revision, and Clinical Modification codes. Students will become acquainted with the coding book setup and the means by which appropriate codes for diseases and procedures are selected.

BA 244 Survey of Health Systems Intervention 3 credit hours

This course provides a historical perspective and current survey of health maintenance organizations.

BA 245 Introduction to Hospitality Today 3 credit hours

A management perspective is introduced to students through the organization and structure of hotels, restaurants and clubs. Subjects include business ethics, franchising, management contracts and areas of management responsibility such as human resources, marketing and sales, and advertising. This course is equivalent to AH&MA Educational Institute 103.

BA 246 Hotel/Motel Facilities Management 3 credit hours

Students gain skills in how to manage the physical plant of a hotel or restaurant and work effectively with the engineering and maintenance department. This course is equivalent to AH&MA Educational Institute 280.

BA 247 Hotel/Motel Housekeeping Management 3 credit hours

This course presents a systematic approach to managing housekeeping operations in the hospitality industry. This course is equivalent to AH&MA Educational Institute 339.

BA 251 Retail Merchandising 3 credit hours

(Pre- or corequisite: BA 222 or permission of program director) Students study and apply methods and practice of retail merchandising including target market decisions, pricing, considering inventories, displaying layout and buying functions.

BA 252 Customer Relations 3 credit hours

Students study the relationship of self to customers, do problem solving and gain understanding of the importance of communicating with customers, understanding customers, anticipating customers' needs and offering assistance.

BA 253 Retailing 3 credit hours

(Prerequisite: RDG 099 or equivalent) This course is an overview of the industry of retailing. The students study and apply principles including target market decisions, pricing,

store locations, store organization, the scheduling of work, loss prevention and safety and strategic planning.

BA 258 Hotel/Motel Organization and Administration **3 credit hours**

Students analyze management's functions and responsibilities in such areas as administration, organization, communications, accounting, marketing and human relations. This course is equivalent to AH&MA Educational Institute 207.

BA 259 Hotel/Motel Food and Beverage Management **3 credit hours**

This course provides a basis for understanding the various challenges and responsibilities involved in managing a food and beverage operation. This course is equivalent to AH&MA Educational Institute 240.

BA 260 Purchasing **3 credit hours**

(Prerequisite: ACCT 101, ACCT 101B or permission of the program director) This course covers problems involved in public and private sector purchasing. Students apply value analysis, solicitation process and negotiation techniques, vendor selection, purchasing law, transportation considerations and inventory control practices.

BA 263 Tourism and the Hospitality Industry **3 credit hours**

This comprehensive course explains how and why people travel, how travel acts as a satisfier of needs and wants and how marketing efforts can influence travel decisions. This course is equivalent to AH&MA Educational Institute 321.

BA 264 Front Office Procedures **3 credit hours**

Students apply efficient management concepts to front office functions and relate how front office activities affect other departments. The computer is used throughout every phase of the guest cycle. This course is equivalent to AH&MA Educational Institute 333.

BA 265 Marketing of Hospitality Services **3 credit hours**

Students develop, implement and evaluate a marketing plan and identify and reach prospective customers using marketing tactics specific to hospitality services. This course is equivalent to AH&MA Educational Institute 371.

BA 266 Hotel/Motel Law **3 credit hours**

Students study potential legal problems associated with the hospitality industry and how important legal considerations can affect the industry. This course is equivalent to AH&MA Educational Institute 391.

BA 267 Hospitality Supervision **3 credit hours**

This course emphasizes managing people from a supervisor's viewpoint. Topics included are: controlling labor costs, time management, increasing productivity and managing change. This course is equivalent to AH&MA Educational Institute 251.

BA 268 Resort Management **3 credit hours**

This course focuses on principles and practices necessary for successful resort management. Topics include resort history, planning and development, major recreational activities, food and beverage, housekeeping and risk management. This course is equivalent to AH&MA Educational Institute 424.

BA 269 Hotel/Motel Security Management **3 credit hours**

The course content includes setting up the security program, security staffing, responsibilities in guest and asset protection, the accounting function and internal control, computer security and emergency procedures. This course is equivalent to AH&MA Educational Institute 386.

BA 270 Real Estate Law **3 credit hours**

The rights and obligations of the real estate agent with regard to contractual and fiduciary duties owed to the parties being represented are presented. Major topics include ownership rights, law of agency and law of contracts. This course has been certified to earn 30 hours of credit toward the New Mexico Real Estate License Exam.

BA 271 Real Estate Practice **3 credit hours**

This is a course in general real estate practice for persons needing a review or wanting a basic knowledge of the real estate business. This course has been certified to earn 30 hours of credit toward the New Mexico Real Estate License Exam.

BA 272 Real Estate Appraisal **3 credit hours**

(Prerequisite: BA 271 or permission of instructor or program director) An introduction to accepted methods for estimating the value of real property, this course covers fundamentals of real estate appraisal of both land and improved residential property and techniques used by professional appraisers.

BA 273 Real Estate Finance **3 credit hours**

(Prerequisite: BA 271) This is a study of financing real property, the money market, sources and cost determinants of mortgage money, financial leverage, value of existing mortgage in relation to the current market and purchaser qualification.

BA 274 Real Estate Investment **3 credit hours**

(Prerequisites: BA 270, BA 271) This course gives the student a basic understanding of principles for sound investment decisions and assessment of property potential. The student gains an awareness of the marketplace and the needs of the public through text, lecture and case study.

BA 275 Property Management **3 credit hours**

This course covers residential and commercial rental property management. Topics include marketing of services, market and prospect analysis, record-keeping, laws relating to rental properties, legal documents including leases and management contracts, property maintenance, employee relations, insurance, security and administration.

BA 276 **New Mexico Real Estate Commission (NMREC) Mandatory Course** **1 credit hour**

Real estate licensees are updated about new legislation affecting real estate, NMREC problem areas, disciplinary hearings, rules and regulations update, trust accounts, property management review, risk management, selected court cases, fiduciary responsibility, agency update, Real Estate Settlement Procedures Act, Americans with Disabilities Act and the Fair Housing Act. (5 weeks)

BA 279 **Uniform Standards of Professional Appraisal Practice** **2 credit hours**

This course focuses on the requirements for ethical behavior and competent performance by appraisers. (7.5 weeks)

BA 280 **Fair Housing Law** **1 credit hour**

Real estate licensees and pre-licensees are acquainted with issues, regulations, practices and court cases related to fair housing. (5 weeks)

BA 281 **Americans with Disabilities Act and Related Handicap Discrimination Law** **1 credit hour**

Real estate licensees and pre-licensees are presented issues and guidelines affecting employment, construction and operation of business. (5 weeks)

BA 282 **Appraising the Single Family Residence** **3 credit hours**

(Prerequisite: BA 272) Students are provided with a working knowledge of the procedures and techniques required to estimate the market value of vacant and improved single family residential property.

BA 283 **Rules & Regulations of the New Mexico Real Estate Commission (NMREC)** **1 credit hour**

This course emphasizes current rules and regulations, the intent of each and the Real Estate Commission's interpretations. (5 weeks)

BA 284 **Sales** **3 credit hours**

(Prerequisite: RDG 099 or equivalent) Students are presented sales principles, demonstrate selling skills and promote goods and services.

BA 286 **Advertising** **3 credit hours**

(Prerequisite: BA 222 or permission of the program director) This course gives the student the opportunity to apply many elements of advertising. The student develops an advertising plan, selects and schedules media, budgets, designs and produces advertisements and evaluates advertising effectiveness.

BA 287 Delta Epsilon Chi Competition 1 credit hour
Students acquire skills needed to compete at state and national career development conferences. Students use sample written tests, role-playing case problems and classroom assignments involving salesmanship, marketing, problem solving and human relations. (3 lab hours a week)

BA 290 Hotel/Motel Food and Beverage 3 credit hours
This course provides students with practical skills and knowledge for effective management of food and beverage service outlets ranging from cafeterias and coffee shops to room service, banquet areas and high check-average dining rooms. Students learn basic service principles with emphasis on special needs of guests. This course is equivalent to AH&MA Educational Institute 348.

BA 291 Hotel/Motel Human Resources Management 3 credit hours
A systematic approach to human resources management in the hospitality industry is presented. Students analyze contemporary issues and practices, as well as the trends that will transform the way people are managed. This course is equivalent to AH&MA Educational Institute 357.

BA 292 Hospitality Energy and Water Management 3 credit hours
This course explains energy and water problems and their impact on the hospitality industry and provides a practical approach to the development and implementation of an energy and water management program. This course is equivalent to AH&MA Educational Institute 383.

BA 293 Hospitality Purchasing Management 3 credit hours
Development and implementation of an effective purchasing program, focusing on issues pertaining to supplier relations and selection, negotiation and evaluation, are presented. This coure is equivalent to AH&MA Educational Institute 446.

BA 294 Convention Management and Service 3 credit hours
This course defines the scope and segmentation of the convention and group business market. Students learn marketing and sales strategies and techniques. This course is equivalent to AH&MA Educational Institute 478.

BA 295 Hospitality Industry Engineering Systems 3 credit hours
Students apply principles important to both the managerial and technical functioning of the engineering/maintenance department, stressing the knowledge needed by managers at all levels to make appropriate and cost effective decisions. This course is equivalent to AH&MA Educational Institute 488.

BA 296 Business Topics 1–3 credit hours
Current topics in business are presented.

BA 298 Internship 4 credit hours
(Prerequisites: ACCT 102 or ACCT 102B and permission of the program director) Students work a minimum of 150 hours at business or training-related supervised work stations. Students are not paid for their work but are supervised jointly by TVI and the company. (1 theory + 9 lab hours a week)

BA 299 Cooperative Education 4 credit hours
(Prerequisites: ACCT 102 or ACCT 102B and permission of the program director) Students work a minimum of 150 hours at business or training-related supervised work stations. Student trainees are paid by the cooperating firm and supervised jointly by TVI and the employer. (1 theory + 9 lab hours a week)

BA 299A Cooperative Education I 1 credit hour
Students employed in an on-going governmental or non-governmental cooperative program enroll in this course for the first term of employment. Students must work a minimum of 40 hours to qualify for credit. Students are paid by the employers and are supervised jointly by TVI and the employer. (3 lab hours a week)

BA 299B Cooperative Education II 1 credit hour
(Prerequisite: BA 299A) This course is a continuation of BA 299A for students in their second term of cooperative education. (3 lab hours a week)

BA 299C Cooperative Education III 1 credit hour
(Prerequisite: BA 299B) This course is a continuation of BA 299A and BA 299B for students in their third term of cooperative education. (3 lab hours a week)

BA 299D Cooperative Education IV 1 credit hour
(Prerequisite: BA 299C) This course is a continuation of BA 299A, BA 299B and BA 299C for students in their fourth term of cooperative education. (3 lab hours a week)

SSKL 211 Employment Skills—General 1 credit hours
This course provides the requisite skills for success in obtaining employment. Students prepare a cover letter, resume and follow-up letter. Employer expectations, interview techniques and communication with business and industry are also covered. Employability and job retention skills are stressed.

Continuous Quality Improvement (CQI)

Main and Montoya Campuses

The Continuous Quality Improvement (CQI) courses are designed to help improve processes and change the culture within organizations. The courses highlight quality improvement concepts and theories, fundamentals of continuous quality improvement (CQI), techniques for data gathering, quality tools, team building, action plans for process improvement and quality leadership.

The quality courses are also offered as a concentration option for the associate of applied science degree in Business Administration.

Course offerings may vary at different campuses.

Application for a department certificate may be made with a program director upon completion of the six CQI courses.

Course Descriptions

BA 101 Introduction to Quality Management 1 credit hour
This course introduces the concepts and theories of quality improvement. (5 weeks)

BA 102 Fundamentals of Continuous Quality Improvement (CQI) 1 credit hour
The fundamentals of continuous quality improvement (CQI)—data gathering for process improvements and organizational culture change—are studied. (5 weeks)

BA 103 Quality Tools 1 credit hour
Instruction is provided regarding continuous quality improvement (CQI) tools and techniques such as the cause and effect diagram, brainstorming, control charts and pareto diagrams. (5 weeks)

BA 104 Team Building for Quality 1 credit hour
This course covers the group process as it applies to team building for continuous quality improvement (CQI). (5 weeks)

BA 105 Re-engineering for Quality 1 credit hour
Students apply the tools and techniques for continuous quality improvement (CQI) to formulate action plans for process improvements. (5 weeks)

BA 106 Quality Leadership 1 credit hour
Students develop a mission statement, goals and strategies to implement quality leadership throughout an organization. (5 weeks)

Court Reporting

Associate of Applied Science Degree/
Certificate Program
Main campus

The Court Reporting program, approved by the National Court Reporters Association (NCRA), trains qualified men and women for entry into the highly technical court reporting profession. Instruction focuses on computer-aided transcription. The field is experiencing steady growth and offers many employment opportunities.

Court reporters are skilled professionals with machine shorthand and transcription skills who produce verbatim transcripts of proceedings. Responsibilities include preparing accurate transcripts of trials, hearings and depositions. Reporters are employed in many settings, including court proceedings, depositions, corporate meetings, arbitration hearings, conventions and legislative sessions. Court reporters also provide real-time and closed-captioning services.

Any person wishing to enroll in TVI's Court Reporting program must have completed high school or have a General Education Development (GED) diploma.

Students enrolled in machine shorthand courses are responsible for furnishing their stenotype machines (manual or electric). Rental or purchase arrangements for an educational stenotype machine are available through the TVI Bookstore. Students may prefer to rent a stenotype machine for CR 103L, Machine Shorthand I. Students must own a stenotype machine prior to enrolling in CR 104L, Machine Shorthand II.

CR 104L is an open-exit course; CR 210L, CR 220L, CR 231L and CR 233L are open-entry, open-exit courses. Students may advance to the next course upon reaching the required speed level.

All occupational courses must be passed with a minimum grade of C to qualify for graduation. In the Court Reporting program, *students are discouraged from taking Arts & Sciences courses on a credit/no credit basis. CR 104L, CR 210L, CR 220L, CR 231L* and CR 233L may be taken on a credit/no credit basis. Students in these courses should check with the program director or the financial aid office before selecting a grading option. Students who are unable to complete the certificate program should see the program director for information regarding a departmental certificate in text processor/scopist or rapid text writer.

One of the main goals of the certificate and degree programs is to prepare students to pass the New Mexico Court Reporting certification test.

To graduate from the Court Reporting program, students must pass two five-minute tests on literary material dictated at 190 wpm with 95% accuracy, three five-minute tests on jury charge dictated at 200 wpm with 95% accuracy and three five-minute tests on testimony at 235 wpm with 95% accuracy. Students must also keyboard at the rate of 60 net words per minute with no more than five errors on two five-minute timed writings from unfamiliar material. Students must also complete a court reporting internship with a minimum of 75 clock hours of practical experience under the supervision of a certified shorthand reporter. A minimum of 40 of those hours shall be spent in actual writing time.

Course fees are charged for some courses.

A suggested schedule per term for the occupational component of the associate of applied science degree/certificate program in Court Reporting includes:

Term 1: AA 107, BA 121, CR 121, CR 103L, MMS 150, MMS 160
Term 2: CR 132, BA 131, CR 105, CR 104L
Term 3: AA 143, CR 210L, AA 111, CR 240
Term 4: CR 220L, CR 250L, ENG 240, BA 211
Term 5: CR 230L, CR 260, CR 298

Court Reporting Program

Certificate and Degree Requirements

			Credit Hours
AA	101	Beginning Keyboarding	3
AA	102	Keyboard Applications I	3
AA	107	Intermediate Keyboard Skill-Building	1
AA	111	Business Math/Calculators	3
AA	143	Word Processing	4
		or	
MMS	134	WordPerfect for Windows	3
		or	
MMS	135	Microsoft Word for Windows	3
BA	121	Business Communications I	3
BA	131	Human Relations (7.5 weeks)	2
BA	211	Business Law	3
CR	103L	Machine Shorthand I	7
CR	104L	Machine Shorthand II	7
CR	105	Keyboard Skill-building	2
CR	121	Introduction to Court Reporting (7.5 weeks)	2
CR	132	Medical Terminology/Anatomy	5
CR	210L	Machine Shorthand III	8
CR	220L	Machine Shorthand IV	8
CR	230L	Machine Shorthand V	8
CR	240	Legal Terminology/Procedures	3
CR	250L	Computer-Aided Transcription	3
CR	260	Court Reporting Procedures (7.5 weeks)	3
CR	298	Internship	2
CR	299	Cooperative Education (optional)	4
ENG	240	Traditional Grammar	3
MMS	150	Microsoft Windows (5 weeks)	1
MMS	160	Introduction to Internet (5 weeks)	1
		Total	**84–89**

Additional Degree Requirements

COMM	221	Interpersonal Communications	3
ENG	101	College Writing	3
MATH	120	or higher or biological and physical science elective	3–4
Social science and behavioral science elective			3
		Total	**96–102**

[1]Required for certificate only

Electives

AA	207	Law Office Technology	4
CR	233L	Machine Shorthand Speed-building	3
CR	296	Topics Course	1–3
MMS	296	Topics Course	2
BOLC course		Medical Transcription	

Course Descriptions

CR 103L **Machine Shorthand I** **7 credit hours**

(Prerequisites: RDG 099 or equivalent and AA 101 and AA 102 or equivalent; pre- or corequisite: CR 121) In this course the keyboard is learned. Computer-compatible, conflict-free machine shorthand theory is presented. Computer tutorials are available to reinforce the theory. (5 theory + 5 lab hours a week)

CR 104L **Machine Shorthand II** **7 credit hours**

(Prerequisites: CR 103L, CR 121, BA 121) Computer-compatible, conflict-free machine shorthand theory is reviewed in this course. Vocabulary building is emphasized. This is an open-exit course. Students may advance to CR 210L after reaching 100 wpm. All dictation tests are given on unfamiliar material. Enrollment is limited to 45 weeks or three terms. (5 theory + 5 lab hours a week)

CR 105 **Keyboard Skill-building** **2 credit hours**

(Prerequisite: AA 107) Students are required to take this course to fulfill NCRA's keyboarding requirement of 60 net words per minute with no more than five errors on two five-minute timed writings from unfamiliar material. Skill-building software and personal computers are used. A $10 course fee is charged for printer supplies. (5 lab hours a week)

CR 121 **Introduction to Court Reporting** **2 credit hours**

This beginning course presents an overview of the court reporting profession, including real-time writing in the courtroom, the deposition, classroom, conventions and broadcasting. Information is given on the certification process, testing requirements and the NCRA organization. (7.5 weeks)

CR 132 Medical Terminology and Anatomy 5 credit hours
(Prerequisite: RDG 099 or equivalent) This course involves a study of medical terminology, using 350 Greek and Latin prefixes, suffixes, word roots and combining forms through videotaped presentations. A concentrated study of human anatomy is included.

CR 210L Machine Shorthand III 8 credit hours
(Prerequisite: CR 104L) Vocabulary building continues to be emphasized and machine shorthand theory is reviewed. On-the-job considerations are introduced. Speed-building continues using testimony, literary and jury charge materials. This is an open-entry, open-exit course. Students may advance to CR 220L after reaching 140 wpm, literary, and 150 wpm testimony. All test dictation is given on unfamiliar material. Enrollment is limited to 45 weeks or three terms. (5 theory + 10 lab hours a week)

CR 220L Machine Shorthand IV 8 credit hours
(Prerequisites: CR 210L, CR 132) Medical terminology and dictation are emphasized. Vocabulary building and speed-building continue. This is an open-entry, open-exit course. Students may advance to CR 231L after reaching 160 wpm, literary; 170 wpm, jury charge; and 190 wpm, testimony. All test dictation is given on unfamiliar material. Enrollment is limited to 45 weeks or three terms. (5 theory + 10 lab hours a week)

CR 230L Machine Shorthand V 8 credit hours
(Prerequisite: CR 220L) Speed-building and vocabulary building are emphasized. This is an open-entry, open-exit course. Students may advance to CR 232L after reaching 140 wpm, literary; 200 wpm, jury charge; and 235 wpm, testimony. All test dictation is given on unfamiliar material. Enrollment is limited to 45 weeks or three terms. (5 theory + 10 lab hours a week)

CR 233L Machine Shorthand Speed-building 3 credit hours
(Prerequisite: CR 230L or approval of the program director) This self-paced, elective course is designed for those students who have reached a minimum speed of 180 wpm literary and 225 wpm testimony and wish to increase speed in preparation for the state certification exam. Students take two-, three- and four-voice testimony and literary dictation from video and audio tapes. Tests are administered. This is an open-entry, open-exit course. (9 lab hours a week)

CR 240 Legal Terminology/Procedures 3 credit hours
This course emphasizes civil law, criminal law, the judicial system and Latin/legal terminologies.

CR 250L Computer-Aided Transcription (CAT) 3 credit hours
(Prerequisites: CR 210L, AA 133) This course provides hands-on training in using the computer to produce transcripts. The student produces a final ten-page transcript and builds a personal dictionary. A $10 fee is charged for computer-aided transcription hardware and software. (2 theory + 3 lab hours a week)

CR 260 Court Reporting Procedures **3 credit hours**

(Prerequisites: CR 220L, CR 250L) Students apply procedures in general courtroom, freelance reporting and transcript format. Instruction includes the reporting of depositions, administering oaths, handling exhibits, storing notes and applying ethics. Writing skills and techniques for computer-aided transcription are reviewed. Students prepare resumes and acquire interviewing skills. A $10 course fee is charged for computer-aided transcription hardware and software and printer supplies. (6 hours a week for 7.5 weeks)

CR 296 Topics Course **1–3 credit hours**

Current topics in court reporting are presented.

CR 298 Internship **2 credit hours**

(Prerequisites: CR 250L; students must have passed two five- minute dictation takes at 200 wpm on testimony material and have approval of the program director) The program director is responsible for arranging the internship position. Students acquire a minimum of 75 clock hours of practical experience under the supervision of a certified shorthand reporter. A minimum of 40 of those hours shall be spent in actual writing time. The student intern is required to record and transcribe a 40-page salable transcript. This course should be taken in the student's final term.

CR 299 Cooperative Education **4 credit hours**

(Prerequisite: CR 210L) Students work a minimum of 150 hours in a paid, training-related position. Students are supervised by their employer and TVI. (1 theory + 9 lab hours a week)

Data Entry

Main Campus

The wide use of computers in business and industry today has created a number of job opportunities for individuals with data entry skills.

The Data Entry course offers training designed to prepare students for entry-level positions in this field. A department certificate is awarded upon successful completion of the course.

DE 101 Data Entry Skill-building **2 credit hours**

(Prerequisites: AA 101, RDG 099 or equivalent, ENG 099 or equivalent, and MATH 099 or equivalent) The purpose of this open-exit course is development of speed and accuracy for computer data entry applications. (1 theory + 4 lab hours a week for 7.5 weeks)

Entrepreneurship

Main, Montoya, Rio Rancho and South Valley campuses

The Entrepreneurship course is for persons who plan to open a small business and who own or manage a business and want further training in principles, operations and/or expansion. The instructor works with each student to develop a business plan.

Students enrolled in this program may not be eligible to receive financial aid or Veterans Administration benefits.

Course offerings may vary at different campuses.

Course Descriptions

ENTR 101 Entrepreneurship **6 credit hours**

The instructor meets with each student to determine specific goals, problems or needs. Programs are then tailored to the individual. Tasks and activities are accomplished through lecture, group activities and independent work. Students complete a business plan.

ENTR 102 Entrepreneurship in a Global Setting **3 credit hours**

(Prerequisite: RDG 099 or equivalent) The challenge and opportunities of world trade through small business exporting and importing are presented. The basic mechanics, market analysis, pricing, financing, marketing, insurance, transportation and distribution of exports/imports and North American Free Trade Agreement (NAFTA) are covered.

International Business Specialist

Associate of Applied Science Degree/
Certificate Program
Main and Montoya campuses

The International Business Specialist program combines general business skills with contemporary international business skills. Student are prepared for the constantly changing international business environment. The graduates of this program will be able to work effectively in firms and government agencies whose operations center around international trade and will be prepared to engage in entrepreneurial activities.

The program provides a foundation in written and verbal communications, accounting principles, basic computer skills and international business. An associate of applied science degree is awarded to students who complete both certificate requirements and additional liberal arts requirements.

A keyboarding skill of 25 words per minute is required for entry into the program. Keyboarding courses are available in the Business Occupations Department and the Business Occupations Learning Centers.

Course offerings may vary at different campuses.

Most courses are offered in the evening as well as day. All occupational courses must be passed with a minimum grade of C to qualify for graduation. *Students do not have the option of taking occupational courses on a credit/no credit basis.*

Course fees are charged for some courses.

International Business Specialist Program

Certificate and Degree Requirements

			Credit Hours
ACCT	101A	Financial Accounting IA	3
	and		
ACCT	101B	Financial Accounting IB	3
	or		
ACCT	101	Financial Accounting I	6
ACCT	102A	Financial Accounting IIA	3
	and		
ACCT	102B	Financial Accounting IIB	3
	or		
ACCT	102	Financial Accounting II	6
ACCT	111	Accounting Math	3
BA	121	Business Communications I	3
BA	150	Introduction to Computer Processing	3
	or		
CSCI	101	Computer Literacy	4
ENTR	102	Entrepreneurship in a Global Setting	3
GEOG	102	Human Geography	3
	or		
COMM	291	Intercultural Communication Studies	3
GEOG	201	World Regional Geography	3
IB	101	Introduction to International Business	3
IB	201	International Marketing	3
IB	202	International Management	3
IB	203	International Finance and Trade	3
IB	205	Fundamentals of Exporting/Importing	3
		Foreign Language	3–4
		Foreign Language	3–4
		Foreign Language	3–4
		Total	**54–58**

Additional Degree Requirements

ENG	101	College Writing	3
ENG	119	Technical Writing	3
MATH	119	Methods of Problem Solving	3
	or		
MATH	120	Intermediate Algebra	4
MATH	145	Probability and Statistics	3
PHIL	245B	Business Ethics	3
		Total	**69–74**

Electives

BA	211	Business Law	3
BA	299	Cooperative Education	4

See program director for other approved electives.

Course Descriptions

IB 101 Introduction to International Business 3 credit hours
(Prerequisite: RDG 099 or equivalent) This is an integrated view of objectives, problems and challenges facing those who engage in business in foreign countries. Foreign organizations, cultural dynamics, trade channels, the legal environment and political considerations are examined.

IB 201 International Marketing 3 credit hours
(Prerequisite: RDG 099 or equivalent) This course provides a conceptual framework for analyzing marketing opportunities abroad. Development and implementation of marketing mixes in different cultures and nations are studied.

IB 202 International Management 3 credit hours
(Prerequisite: RDG 099 or equivalent) Students survey management practices within diverse international operations and learn to conduct business with people of different cultures.

IB 203 International Finance and Trade 3 credit hours
(Prerequisites: RDG 099 or equivalent, ACCT 101 and ACCT 102) This is an overview of international finance with emphasis on the multinational corporation. Emphasis is on foreign exchange risk management, investment analysis, capital asset management, working capital management, comparative advantage and trade restrictions. An overview of demographic, technical, social, political and business relationships among European, Asian, Latin American and third-world nations is provided.

IB 205 Fundamentals of Exporting/Importing 3 credit hours
(Prerequisite: RDG 099 or equivalent) The latest trends in the growing import and export area of traffic and transportation are covered, including forms, country regulations, methods of shipment and rates. Topics include the documents necessary in the conduct of foreign trade from the first inquiries through quotations, orders, banking, shipping and customs.

Legal Assistant Studies

Associate of Applied Science Degree
Main Campus

The Legal Assistant Studies program trains qualified men and women for entry into the legal profession. The Legal Assistant Studies program is approved by the American Bar Association (ABA).

Legal assistants are skilled professionals who perform substantive legal tasks under the supervision of a licensed attorney. Responsibilities include interviewing and assisting clients and witnesses, investigation, data analysis, drafting legal documents and correspondence, research, litigation support and case management.

Employment opportunities include placement in law firms, corporate legal departments, legal aid offices, public agencies, insurance companies and other commercial firms.

Students learn substantive and procedural law as well as legal skills. Studies cover the nature and philosophy of fundamental legal theory, the legal system and how that system relates to other disciplines, legal analytical skills, practice skills and the professional responsibilities of the legal assistant. The ethical issues inherent in the practice of the profession are stressed.

To earn an associate degree, a student must successfully complete legal theory, related laboratory work and Arts & Sciences courses. All occupational courses must be passed with a minimum grade of C to qualify for graduation. *Legal Assistant Studies students do not have the option of taking occupational courses on a credit/no credit basis.*

Course fees are charged for some courses.

A suggested schedule per term for the associate of applied science degree program in Legal Assistant Studies includes:

Term 1: LAS 101, LAS 102, LAS 123, ENG 101, PSY 105
Term 2: LAS 111, LAS 124, LAS 201, ENG 102, MMS 134 or MMS 135
Term 3: LAS 203 or LAS 206, LAS 204, LAS 224, PHIL 156, MATH 119
Term 4: LAS 221, LAS 231, LAS 298 or LAS 299, COMM 221 or COMM 225 or COMM 240, elective course (3 credits)

Legal Assistant Studies Program

Degree Requirements

			Credit Hours
COMM	221	Interpersonal Communication Studies	3
	or		
COMM	225	Small Group Communication Studies	3
	or		
COMM	240	Organizational Communication Studies	3
ENG	101	College Writing	3
ENG	102	Analytic Writing	3
LAS	101	Introduction to Legal Assistant Studies	3
LAS	102	Business Organizations	3
LAS	111	American Law and Ethics	3
LAS	123	Torts	3
LAS	124	Legal Research and Writing I	3
LAS	201	Contract Law	3
LAS	203	Civil Litigation, Investigation and Discovery	3
	or		
LAS	206	Criminal Litigation, Investigation and Discovery	3
LAS	204	Legal Research and Writing II	3
LAS	221	Wills, Probate and Estate Planning	3
LAS	224	Evidence	3
LAS	231	Computers in Law Practice	3
LAS	298	Internship	4
	or		
LAS	299	Cooperative Education	4
LAS elective (see list below)			3
MATH	119	Methods of Problem Solving or higher math course	4
MMS	134	WordPerfect for Windows	3
	or		
MMS	135	Microsoft Word for Windows	3
PHIL	156	Logic and Critical Thinking	3
PSY	105	Psychology	3
		Total	**62**

Electives

ACCT	101	Financial Accounting I	6
	or		
ACCT	101A	Financial Accounting IA	3
	and		
ACCT	101B	Financial Accounting IB	3
LAS	211	Real Estate Law for Legal Assistants	3

LAS	223	Domestic Relations	3
LAS	225	Constitutional Law	3
LAS	230	Advanced Civil Litigation	3
LAS	232	Personal Injury Law	3
LAS	233	Law Office Management	3
LAS	234	Administrative Law	3
LAS	236	Employment Discrimination Law	3
LAS	242	Native American Law	3
LAS	243	Advanced Criminal Litigation	3
LAS	244	Social Security Law (5 weeks)	1
LAS	245	Bankruptcy Law (5 weeks)	1
LAS	296	Topics Course	3
LAS	296A	Mediation	3
LAS	296B	Public Defender	3
MMS	151	DOS Fundamentals (5 weeks)	1
MMS	152	Lotus Fundamentals (5 weeks)	1
MMS	153	dBase Fundamentals (5 weeks)	1
MMS	154	Desktop Publishing Using WordPerfect (5 weeks)	1
MMS	156	Office Management Software (5 weeks)	1

*Pre- or corequisite: ACCT 111 or higher math or permission of the program director

Course Descriptions

LAS 101 Introduction to Legal Assistant Studies **3 credit hours**

(Prerequisites: ENG 100 or equivalent, RDG 100 or equivalent, Recommended Prerequisite: BA 150 or CSCI 101 or approval of the program director) This course introduces the student to the definition and role of the legal assistant, ethical responsibilities, human relations, the legal system, legal research and analysis, the process of litigation, technology in the law and topics in substantive law.

LAS 102 Business Organizations **3 credit hours**

(Prerequisites: ENG 100 or equivalent, RDG 100 or equivalent, Recommended Prerequisite: BA 150 or CSCI 101 or approval of the program director) Various types of business entities including sole proprietorships, partnerships and corporations are examined. Also looked at are agency principles, franchising and regulatory requirements.

LAS 111 American Law and Ethics **3 credit hours**

(Prerequisites: ENG 101, LAS 101, LAS 102, LAS 123) The origins, nature, history and structure of the American judicial system are studied. Students explore principles of federalism under the Constitution. The rules of professional conduct for lawyers are emphasized.

LAS 123 Torts 3 credit hours

(Prerequisites: ENG 100 or equivalent, RDG 100 or equivalent, Recommended Prerequisite: BA 150 or CSCI 101 or approval of the program director) This is a course in substantive tort law, concentrating on negligence, products liability, non-physical injuries and their remedies and defenses. Students are given an overview of the trial process and complete a project designed to develop practice skills.

LAS 124 Legal Research and Writing I 3 credit hours

(Prerequisites: ENG 101, LAS 101, LAS 102, LAS 123) The student is introduced to the principles and skills of writing case briefs and legal memoranda, with a focus on basic legal research sources and techniques, including Westlaw and other computer-assisted legal research. Significant time is spent at the law library.

LAS 201 Contract Law 3 credit hours

(Prerequisites: ENG 101, LAS 101, LAS 102, LAS 123) This is an introduction to the law of contracts, rights and responsibilities, consideration, types of contracts, remedies and assignments. The study, analysis and application of cases are emphasized, and students draft a simple contract.

LAS 203 Civil Litigation, Investigation and Discovery 3 credit hours

(Prerequisites: MMS 134 or MMS 135, ENG 102, LAS 111, LAS 124, LAS 201) Students learn the process of civil litigation from initial client contact through post-trial procedures by preparing documents. Rules of civil procedure and rules of the various courts are reviewed. Students develop a forms and procedures notebook.

LAS 204 Legal Research and Writing II 3 credit hours

(Prerequisites: MMS 134 or MMS 135, ENG 102, LAS 111, LAS 124, LAS 201) As a continuation of Legal Research and Writing I, this course is designed to provide training in more advanced legal research problems with a focus on analysis and writing. It requires the preparation of sophisticated legal memoranda and documents.

LAS 206 Criminal Litigation, Investigation and Discovery 3 credit hours

(Prerequisites: MMS 134 or MMS 135, ENG 102, LAS 111, LAS 124, LAS 201) Students learn the process of criminal litigation from initial appearance through post-conviction proceedings by preparing documents associated with the prosecution or defense at various stages, review rules of criminal procedure of several courts and develop a forms and procedures notebook.

LAS 211 Real Estate Law for Legal Assistants 3 credit hours

(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) This course provides knowledge of the fundamental rights of property ownership, surveys, easements and licenses, deeds, titles, financing, closings and regulations.

LAS 221 Wills, Probate and Estate Planning 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224) This course covers drafting of wills and trusts, administration of estates, formal and informal probate proceedings and estate tax returns.

LAS 223 Domestic Relations 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) Legal issues in family relations are explored in this course, with emphasis on local procedures in the domestic relations court.

LAS 224 Evidence 3 credit hours
(Prerequisites: MMS 134 or MMS 135, ENG 102, LAS 111, LAS 124, LAS 201) Students study issues and problems of proof of facts in civil and criminal trials, with a focus on the rules of evidence in the state and federal courts. Emphasis is on constitutional considerations, interviewing witnesses and organizing documents.

LAS 225 Constitutional Law 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) This is a course in civil rights and liberties under the Constitution, covering free speech, religious freedom, racial discrimination, group rights, privacy and political participation.

LAS 230 Advanced Civil Litigation 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) Students become involved in the civil litigation process by participating in a hypothetical case, completing more sophisticated tasks in civil litigation. Emphasis is placed on evidence rules, concepts and objections.

LAS 231 Computers in Law Practice 3 credit hours
(Prerequisites: BA 150 or CSCI 101, MMS 134 or MMS 135, LAS 203 or LAS 206, LAS 204, LAS 224) Students learn concepts and applications using computers in law practice. Students develop hands-on experience with various law-oriented application programs in the areas of data organization, analysis and retrieval, legal forms, calendar and docket control, reports and searches. A $15 course fee is charged for computer paper and printing costs. (2 theory + 3 lab hours a week)

LAS 232 Personal Injury Law 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) This course deals with medical aspects and documentation of personal injuries in the areas of tort, workers' compensation and Social Security disability.

LAS 233 Law Office Management 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) This course helps prepare the senior legal assistant or legal assistant intending to advance to or function in an administrative position in a law office to coordinate and over-

see the administrative needs of a small to medium firm. Students learn managerial techniques, law office systems, revenue tracking, personnel management, crisis resolution and ethical requirements.

LAS 234 Administrative Law 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) Principles relating to policies, practices and procedures of governmental agencies and state and local administrations are included in this course.

LAS 236 Employment Discrimination Law 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) This course includes study of the history of discrimination law and current federal protections, the principle of equal treatment, litigation involving unequal treatment, seniority, sexual and racial harassment, pay equity, pregnancy discrimination, labor relations and remedies.

LAS 242 Native American Law 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) This is a course in basic Native American law with the primary purpose of preparing students to work in paraprofessional positions in private law firms that specialize in Native American law and in tribal courts and agencies.

LAS 243 Advanced Criminal Litigation 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) Students become involved in the criminal litigation process by participating in a hypothetical case, completing more sophisticated tasks in criminal litigation. Emphasis is placed on evidence rules, concepts and objections.

LAS 244 Social Security Law 1 credit hour
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) Students are offered a practical approach to representing clients through the Social Security administrative process, with a focus on disability evaluation and procedural issues and regulations. Federal law and medical terminology are examined.

LAS 245 Bankruptcy Law 1 credit hour
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 or approval of the program director) This course provides an introduction to bankruptcy practice, with emphasis on the Bankruptcy Code and the Rules of Bankruptcy Procedure. The Bankruptcy Code's provisions will be examined from both the debtor's and creditor's view.

LAS 296 Topics Course 3 credit hours
(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 and approval of the program director) The student chooses an area of study in consultation with an instructor. A sophisticated legal research paper or project is completed.

LAS 296A Mediation **3 credit hours**

(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 and approval of the program director) Students learn fundamental skills involved in mediating disputes. Training may be provided by local mediation organizations at a student rate. The student is jointly evaluated by the mediation trainer and the instructor. The course is offered each term subject to availability of trainers.

LAS 296B Public Defender **3 credit hours**

(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224 and approval of the program director) Students are assigned to a supervising attorney from the Public Defender's Office and jointly supervised by the attorney and an instructor. The student works 135 hours and becomes familiar with all forms of case preparation with an emphasis on information gathering and investigation. The course is offered each term subject to availability of supervising attorney.

LAS 298 Internship **4 credit hours**

(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224, all Arts & Sciences courses in the first three terms and approval of the program director) Students work a minimum of 150 hours at legal assistant-related work stations. The student is jointly supervised by TVI and the employer.

LAS 299 Cooperative Education **4 credit hours**

(Prerequisites: LAS 203 or LAS 206, LAS 204, LAS 224, all Arts & Sciences courses in the first three terms and approval of the program director) Students work a minimum of 150 hours at legal assistant-related work stations. The student is paid by the cooperating firm and is jointly supervised by TVI and the employer.

Microcomputer Management Specialist

Associate of Applied Science Degree/
Certificate Program
Main, Montoya, Rio Rancho and South Valley campuses

The Microcomputer Management Specialist program combines microcomputer concepts, computer applications, accounting skills and problem solving in a business environment. Students are prepared to advise employers on hardware and software and to serve as training assistants and/or liaisons.

The program is accredited by the Association of Collegiate Business Schools and Programs (ACBSP).

Early courses in the program emphasize written and verbal communications, accounting principles and basic computer skills. An associate of applied science degree is awarded to students who complete the occupational requirements, Arts & Sciences components and

a concentration in one of three areas: Microcomputer Management Specialist, Network Specialist or Multimedia Specialist. Those students completing all core occupational courses and a concentration may receive a certificate.

A keyboarding skill of 25 words per minute is required for entry into the program. Keyboarding courses are available in the Business Occupations Department and Business Occupations Learning Centers.

Courses are offered both day and evening. All occupational courses must be passed with a minimum grade of C to qualify for graduation. In this program, *students do not have the option of taking occupational courses on a credit/no credit basis.*

Courses offered may vary at different campuses.

Course fees are charged for some courses.

A suggested schedule per term for the occupational component of the associate of applied science degree/certificate program in Microcomputer Management Specialist includes:

Term 1: ACCT 101, ACCT 111, BA 121, BA 150, MMS 151

Term 2: ACCT 102, BA 113, MMS 134 or MMS 135, MMS 150, MMS 160, BA 111 (Concentration options: MMS 170 and MMS 171 or MMS 161 and MMS 156)

Term 3: ACCT 254, MMS 255, MMS 257, MMS 260 (Concentration options:ACCT255, or MMS 258 and MMS 262 or MMS 270)

Term 4: MMS 201, BA 133 (Concentration options: CP 213, MMS 261, MMS263, MMS 298 or MMS 271 and MMS 256)

Microcomputer Management Specialist

Certificate and Degree Requirements

			Credit Hours
ACCT	101	Financial Accounting I	6
ACCT	102	Financial Accounting II	6
ACCT	111	Accounting Math	3
ACCT	254	Electronic Spreadsheets	3
BA	111	Communications (7.5 weeks)	2
BA	113	Introduction to Business	3
BA	121	Business Communications I	3
BA	133	Principles of Management	3
BA	150	Introduction to Computer Processing	3
	or		
CSCI	101	Computer Literacy	4
MMS	134	WordPerfect for Windows	3
	or		
MMS	135	Microsoft Word for Windows	3
MMS	150	Microsoft Windows (5 weeks)	1

MMS	151	DOS Fundamentals (5 weeks)	1
MMS	160	Introduction to Internet (5 weeks)	1
MMS	201	Hardware/Software Administration	2
MMS	257	Presentation Graphics	3
MMS	260	Word Processing Macro Programming (5 weeks)	1
		Total	**44–47**

Concentration Options for Degree or Certificate (one option required)

Microcomputer Management Specialist

ACCT	255	Computerized Accounting	3
[3]CP	213	Database Programming and Concepts	3
MMS	156	Office Management Software	1
MMS	161	Project Management	1
MMS	255	Desktop Publishing	3
MMS	258	Local Area Network (LAN) Systems Manager (10 weeks)	2
MMS	261	Spreadsheet Macro Programming (5 weeks)	1
		Total	**58–61**

Network Specialist

[3]CP	213	Database Programming and Concepts	3
MMS	258	Local Area Network (LAN) Systems Manager (10 weeks)	2
MMS	261	Spreadsheet Macro Programming (5 weeks)	1
MMS	262	LAN Management	3
MMS	263	Advanced LAN Management	3
MMS	298	Internship	4
		Total	**60–63**

Multimedia Specialist

MMS	170	Multimedia Production (10 weeks)	2
MMS	171	Hypertext Markup Language (HTML) (5 weeks)	1
MMS	255	Desktop Publishing	3
MMS	256	Advanced Desktop Publishing	3
MMS	270	Interactive Multimedia I	3
MMS	271	Interactive Multimedia II	3
		Total	**59–62**

Additional Degree Requirements

COMM	221	Interpersonal Communication Studies	3
	or		
COMM	130	Public Speaking	3
	or		
COMM	232	Business and Professional Communication Studies	3
	or		
COMM	240	Organizational Communication Studies	3
[2]ENG	101	College Writing	3
ENG	119	Technical Communications	3
MATH	120	Intermediate Algebra	4
PHIL	245B	Business Ethics	3
		Total	**74–77**

[1]Required for certificate only.
[2]This class should be taken in Term II for the degree.
[3]See the program director regarding prerequisites.

Electives

BA	157	Computer Accounting for Small Business (5 weeks)	1
MMS	152	Lotus Fundamentals (5 weeks)	1
MMS	153	dBase Fundamentals (5 weeks)	1
MMS	156	Office Management Software (5 weeks)	1
MMS	157	PowerPoint Fundamentals (5 weeks)	1
MMS	159	Access Fundamentals (5 weeks)	1
MMS	220	Desktop Publishing on a Mac	3
MMS	280	Postscript Illustration	3
MMS	281	Image Manipulation/Painting	3
MMS	282	Digital Prepress	3
MMS	296	Topics Course	1–3
MMS	298	Internship	4
MMS	299	Cooperative Education	4

Course Descriptions

MMS 134 WordPerfect for Windows **3 credit hours**
(Prerequisites: BA 150 or CSCI 101 or permission to enroll) Students receive instruction in the use of word processing software using Windows. The emphasis is on learning the functions and practical office applications. There is a $15 course fee for printer supplies. (2 theory + 3 lab hours a week)

MMS 135 Microsoft Word for Windows **3 credit hours**
(Prerequisites: BA 150 or CSCI 101 or permission to enroll) Students receive instruction in word processing using Microsoft Word for Windows. The emphasis is on learning the functions and practical office applications. There is a $15 course fee for printer supplies. (2 theory + 3 lab hours a week)

MMS 150 Microsoft Windows **1 credit hour**
(Prerequisites: BA 150 or CSCI 101 or permission to enroll) This course includes instruction in the basic elements of Windows. Emphasis is on software functions. There is a $5 course fee for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 151 DOS Fundamentals **1 credit hour**
(Prerequisite: 25 words per minute typing skill) Instruction includes the most important DOS commands. Students learn internal and external commands, directories, file management and batch files. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 152 Lotus Fundamentals **1 credit hour**
(Prerequisite: 25 words per minute typing skill) Instruction is provided for non-accounting spreadsheet applications. Areas included are graphs, range names, strings and basic formulas. A $5 course fee is charged for printer supplies. (5 weeks;
2 theory + 3 lab hours a week)

MMS 153 dBase Fundamentals **1 credit hour**
(Prerequisite: 25 words per minute typing skill) This course explores the function and purpose of database software, in particular the hierarchy of data organization, structure and creation of databases and processing inquiries involving searches, screening and sequencing of records. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 154 Desktop Publishing Using WordPerfect **1 credit hour**
(Prerequisites: knowledge of WordPerfect, BA 150 or equivalent or permission of the program director) Students learn to incorporate WordPerfect graphics and text to produce newsletters, instructional materials and other documents where figures, diagrams, logos and pictures are needed. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 156 Office Management Software **1 credit hour**
(Prerequisites: BA 150 or permission of the program director) This course focuses on using groupware to create, analyze and share information. Students will use an application development environment, document databases and a message system to create custom applications. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 157 PowerPoint Fundamentals 1 credit hour
(Prerequisite: 25 words per minute typing skill) Students are introduced to basic text charts and graph charts. Importing data to create these charts and exporting charts into documents are included. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 158 Excel Fundamentals 1 credit hour
(Prerequisite: 25 words per minute typing skill) This is an introductory course, and the focus is on business applications. Areas of instruction include creating, editing and enhancing worksheets; formatting cells; basic formulas and charts. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 159 Access Fundamentals 1 credit hour
(Prerequisite: 25 words per minute typing skill) This course focuses on hands-on applications that students can use to manage data effectively. Areas included are tables, queries, forms and reports. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 160 Introduction to Internet 1 credit hour
(Prerequisite: MMS 150 or permission of the program director) Course content includes how to access the Internet, how to use Internet community tools to explore databases and other resources and how to access and download information. Students are introduced to electronic mail and bulletin boards. (5 weeks; 3 theory + 2 lab hours a week)

MMS 161 Project Management 1 credit hour
(Prerequisites: BA 150, MMS 150 or permission of the program director) Students receive instruction in a business project planning system. The students gain experience in planning, scheduling, managing and communicating project information. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 170 Multimedia Production 2 credit hours
(Prerequisite: BA 150) Students receive instruction on how text, graphics, sound, images and video come together in a multimedia program. (10 weeks)

MMS 171 Hypertext Markup Language (HTML) 1 credit hour
(Pre- or corequisites: MMS 150, MMS 134 or 135, MMS 160) Students receive instruction in a format used for writing documents to be viewed with a World Wide Web browser. Items in the document will be text, images, sounds and links. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 201 Hardware and Software Administration 2 credit hours
(Prerequisites: BA 150 or CSCI 101 and MMS 151) Topics include computer viruses, utilities software, DOS and Macintosh operating systems, installation of boards and software integration. There is a $5 course fee for printer supplies. (10 weeks; 3 theory + 2 lab hours a week)

MMS 220 Desktop Publishing on a Mac **3 credit hours**
(Prerequisite: permission of the program director) This theory/lab course is for individuals in industry who need to upgrade their skills. The course teaches PostScript desktop publishing on the Macintosh computer from the basics to recent upgrades of the most popular page layout and illustration software. (2 theory + 3 lab hours a week)

MMS 255 Desktop Publishing **3 credit hours**
(Prerequisite: BA 150 or CSCI 101 or CR 133 or permission of the program director) Students get hands-on experience in desktop publishing, using microcomputers to edit, typeset, design and do graphic production and page makeup. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

MMS 256 Advanced Desktop Publishing **3 credit hours**
(Prerequisites: MMS 160, MMS 255, MMS 134 or MMS 135) Students get hands-on experience in advanced desktop publishing including design techniques, downloading materials from the Internet and managing linkages to PostScript graphics and photos. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

MMS 257 Presentation Graphics **3 credit hours**
(Prerequisite: BA 150 or CSCI 101 or CR 133 or permission of the program director) This course provides hands-on experience in graphics presentation software which emphasizes charting, drawing, organizing and displaying images. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

MMS 258 Local Area Network (LAN) Systems Manager **2 credit hours**
(Prerequisites: BA 150, MMS 151 or permission to enroll) This course is an introduction to network systems management. It includes a brief overview of network layouts and topology and provides instruction on creating workable directories, login scripts, user accounts and menus. A $5 course fee is charged for printer supplies. (10 weeks; 2 theory + 3 lab hours a week)

MMS 260 Word Processing Macro Programming **1 credit hour**
(Prerequisites: BA 150 or CSCI 101, MMS 134 or MMS 135) The basic procedures for writing and running macros are covered. Students examine data manipulation, flow-of-control, interactive and screen control macros. The students also examine the syntax and structure of advanced macro commands. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week.)

MMS 261 Spreadsheet Macro Programming **1 credit hour**
(Prerequisites: BA 150 or CSCI 101, ACCT 254) The basic procedures for writing and running a macro are covered. The students examine the five command categories: data manipulation, file manipulation, flow-of-control, interactive and screen control. The syntax or structure of advanced macro commands is covered. A $5 course fee is charged for printer supplies. (5 weeks; 2 theory + 3 lab hours a week)

MMS 262 LAN Management 3 credit hours
(Prerequisites: BA 150, MMS 150, MMS 151 or permission of the program director) Students receive instruction on the operation and security of a computer network using a specific LAN software. A $10 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

MMS 263 Advanced LAN Management 3 credit hours
(Prerequisites: MMS 258 or MMS 262) Students receive instruction on network performance, troubleshooting and ways to optimize network performance. A $10 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

MMS 270 Interactive Multimedia I 3 credit hours
(Prerequisites: MMS 134 or MMS 135, MMS 170 or permission of the program director) Students receive instruction in the use of an interactive multimedia authoring program. The emphasis is on learning to combine a variety of media. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

MMS 271 Interactive Multimedia II 3 credit hours
(Prerequisites: MMS 134 or MMS 135, MMS 170 or permission of the program director) Students receive instruction in the use of an interactive multimedia script language to create dynamic multimedia productions. The emphasis is on learning to combine a variety of media. A $15 course fee is charged for printer supplies. (2 theory + 3 lab hours a week)

MMS 280 Postscript Illustration 3 credit hours
(Prerequisite: MMS 255 or permission of the program director) Advanced training in the design and production of printable artwork is offered in FreeHand and Illustrator. The focus is on production techniques. (2 theory + 3 lab hours a week)

MMS 281 Image Manipulation/Painting 3 credit hours
(Prerequisite: MMS 255 or permission of the program director) Students learn to design and produce artwork, halftones, duotones and separations in Photoshop. An introduction to Painter is optional. (2 theory + 3 lab hours a week)

MMS 282 Digital Pre-press 3 credit hours
(Prerequisite: MMS 255 or permission of the program director) This course covers top-end print production in a pure PostScript environment. Students learn preflighting, image production, trapping and imposition. The focus is on real projects printed on a digital press. (2 theory + 3 lab hours a week)

MMS 296 Topics Course 1–3 credit hours
Current topics in computers are presented.

MMS 298 Internship **4 credit hours**

(Prerequisites: ACCT 254, ACCT 255, MMS 255 or MMS 257 and permission of the program director) Students work a minimum of 150 hours at business or training-related supervised work stations. Students are not paid for their work but are supervised jointly by TVI and the company. (1 theory + 9 lab hours a week)

MMS 299 Cooperative Education **4 credit hours**

(Prerequisites: ACCT 254, ACCT 255, MMS 255 or MMS 257 and permission of the program director) Students work a minimum of 150 hours at business or training-related supervised work stations. Student trainees are paid by the cooperating firm and supervised jointly by TVI and the employer. (1 theory + 9 lab hours a week)

Pre-Management

Associate of Arts Degree
Requirements for Admission to Anderson Schools of Management,
University of New Mexico
Main, Montoya, Rio Rancho and South Valley campuses

This degree is designed to fulfill the freshman and sophomore course requirements for admission to the baccalaureate degree program at the Anderson Schools of Management, University of New Mexico.

The program is accredited by the Association of Collegiate Business Schools and Programs (ACBSP). The curriculum is based on an articulation agreement between TVI and UNM which facilitates the transfer process. The agreement states that the student's cumulative grade point average (GPA) should be 2.0 and the GPA in the specific requirements should be 2.4. Specific requirements courses must be passed with a grade of C or better. The credit/no credit option is not available for specific requirements courses; students may select the option only for general education requirements courses. Transfer and non-traditional credit accepted by TVI toward the completion of this program may not be accepted by UNM. Students who apply transfer and non-traditional credit toward the Pre-Management program at TVI and/or enroll in specific requirements courses on a credit/no credit basis are not covered by this articulation agreement.

Students should request the program director's approval before registering each term. Program directors are located in the Business Occupations Department at Main and Montoya campuses. Students should also communicate with the Bachelor of Business Administration program director at the Anderson Schools of Management at the University of New Mexico.

Course offerings may vary at different campuses.

A suggested schedule per term for the associate of arts degree in Pre-Management includes:

Term 1: BA 113, ENG 101, PSY 105 or SOC 101, BA 150 or CSCI 101, Math 121
Term 2: ENG 102, ECON 200, MATH 180, PSY or SOC 200 or higher
Term 3: ECON 201, Math 245 and 245L, Arts & Sciences requirements: 7 credit hours
Term 4: ACCT 101, BA 113, Arts & Sciences requirements: 6 credit hours
Term 5: ACCT 102, Arts & Sciences requirements: 9 credit hours

Associate of Arts in Pre-Management

General Education Requirements

Credit Hours

General Electives

COMM 130; ART 101, 151, 201 or 260; MUS 139 or 140; or modern languages, philosophy, humanities (except history*), literature, English above 102 except ENG 119 9

Social Science Electives

Anthropology; history*; political science; geography 9

Lab Science Electives

Biology; chemistry; physics (must include lab) 4

Subtotal 22

*Defined by UNM as a social science; listed in TVI Arts & Sciences as humanities.

Specific Requirements

These courses are prerequisites. They must be passed with a grade of C or better and cannot be taken on a credit/no credit basis.

ENG	101 and 102 or equivalent	6
MATH	121 or 150 and 162 or 180	6–7
ECON	200 and 201	6
PSY	105 and 200 or higher	
	or	
SOC	101 and 200 or higher	6
MATH	245 and MATH 245L	4
BA	150 or CSCI 101	3–4
#ACCT	101 or ACCT 101A and ACCT 101B	6

ACCT	102 or ACCT 102A and ACCT 102B	6
BA	113	3
	Subtotal	**46–48**
	Total	**68–71**

#Pre- or corequisite: ACCT 111 or higher math or permission of the program director

Real Estate

The real estate courses are for persons seeking New Mexico state licensing or continuing education credits in real estate and appraisal. All courses are approved by the New Mexico Real Estate Commission. Courses listed in this section may be used to meet requirements for the real estate concentration for the associate of applied science degree in Business Administration; course descriptions are in the Business Administration section.

Students enrolled in this program may not be eligible to receive financial aid or Veterans Administration benefits.

Credit courses which meet New Mexico Real Estate Commission requirements are:

		TVI Credit Hours	Cont Ed Contact Hours	Pre-Licensing Contact Hours
BA 270	Real Estate Law	3	20	30.0
BA 271	Real Estate Practice	3	20	30.0
BA 272	Real Estate Appraisal	3	20	30.0 37.5*
BA 273	Real Estate Finance	3	20	30.0
BA 274	Real Estate Investment	3	20	30.0
BA 275	Property Management	3	20	30.0
BA 279	Uniform Standards of Professional Appraisal Practice	2	0	15.0*
BA 282	Appraising the Single Family Residence	3	20	30.0 37.5*

*Pre-licensing for Appraisal Credit

Sales and Cashiering

Certificate Program
Main Campus

Persons who want to learn a skill quickly and find a job as soon as possible should consider this program. It is designed for those preparing for entry-level careers in retail and service occupations.

The sales-cashier laboratory teaches the skills of sales, the cash register touch system and human relations. Students work with various makes and models of electronic cash registers.

The 15-week program provides up to 225 hours of classroom instruction and a minimum of 150 hours of paid supervised work experience with an approved cooperating employer. Students who complete the course receive certificates.

This program does not qualify students for Veterans Administration training benefits or other student financial aid.

Sales and Cashiering Program

			Credit Hours
SALE	101L	Sales-Cashier Lab	9
SALE	299	Cooperative Education	4
		Total	**13**

Course Descriptions

SALE 101L **Sales-Cashier Lab** **9 credit hours**

(Prerequisite: placement test) Students apply fundamentals of merchandising math and cashiering and demonstrate techniques of retail salesmanship. Human relations and customer service are covered extensively. Students demonstrate computer literacy skills of keyboarding, hardware and basic word processing by taking the TVI computer literacy test. Tutorials and self-paced modules are also available. (5 theory + 10 lab hours a week)

SALE 299 **Cooperative Education** **4 credit hours**

Students work a minimum of 150 hours at retailing-related, teacher-approved work stations. The student trainee is paid by the cooperating employer and supervised jointly by TVI and the employer. There are times when it is impossible to place all students in work stations because of local employment requirements. (1 theory + 9 lab hours a week)

Health Occupations

Helping other people makes for a satisfying career, and the Health Occupations Department provides entry-level training and skill upgrading in a variety of medical fields as well as child development.

In 1996-1997, associate degrees are offered in Child, Youth and Family Development; Medical Laboratory Technology; Nursing and Respiratory Therapy. Certificates are offered in Clinical Laboratory Assistant, Healthcare Technician, Health Unit Clerk, Nursing Assistant, Pharmacy Technician, Phlebotomy and Practical Nurse.

Classes for most programs are held in Jeannette Stromberg Hall at Main Campus. The Helene Fuld Library and audiovisual collections are part of the Main Campus Learning Resources Center. Learning laboratories are equipped with hospital furnishings and supplies, respiratory therapy machines and life-like models which give students the chance to practice basic skills needed for clinical experiences. Students have supervised patient practicums and observations at different community agencies.

Textbooks: All Health Occupations programs require the student to purchase textbooks.

Enrollment: All Health Occupations programs except Nursing Assistant require a high school diploma or equivalent. All programs require completion of the TVI placement test. In addition, many programs require prerequisite courses. Most Health Occupations programs require that students be in good physical condition and be free of health conditions that could endanger themselves or others. Students may be required to have a physical exam. The TVI Health Center provides this exam for a fee if the student does not have a private physician.

Credit by examination (challenge) is available for selected courses. The Health Occupations counselor and program directors have detailed information.

Grading Policy: It is strongly recommended that all *required* courses be taken for a traditional letter grade. Most courses within Health Occupations *must* be taken for a traditional letter grade; the credit/no credit option may be used for selected courses. Students will graduate under the catalog in effect when they begin their clinical/core courses.

Handbooks: For specific policies and procedures regarding classroom expectations, clinical experiences, learning laboratories, standards of practice and professional codes of ethics, students should consult their programs' student handbook.

Computer Literacy: The TVI computer literacy requirement may be met either by completion of a computer course or by passing the computer literacy test. Training materials are available in the Health Occupations computer lab for students who do not complete a formal computer course.

Special Courses

Special courses available through Health Occupations are listed below. These courses do not lead to a program certificate although a certificate of completion is given. At least 12 students must sign up for a special course before it can be offered, and each student must meet all stated prerequisites. These courses may not be offered every year. Special courses are:

Emergency Medical Technician
Licensed Practical Nurse Refresher
Nursing Home/Home Health Attendant
Perioperative Nurse Specialist
Registered Nurse Refresher

Emergency Medical Technician

Special Course
Main Campus
Summer, Fall, Spring Terms

This course trains ambulance attendants to recognize, stabilize and transport patients with life-threatening emergencies. The course is taught by New Mexico licensed emergency medical technician (EMT) instructors. The class includes theory and lab. Upon successful completion of the course, a TVI and EMS (Emergency Medical System) Academy certificate is awarded. The students completing the course are eligible to take the state licensure exam to become licensed emergency medical technicians.

Each student must have current BLS provider CPR certification and must be a high school graduate or equivalent before being enrolled in EMS 160L.

The course is offered each term during evening hours. Participants pay the TVI registration fee, an $18 uniform fee and a $15 supply fee, and purchase the required textbook. The uniform fee covers the cost of EMS certification.

Students enrolled in this course may not be eligible to receive financial aid or Veterans Administration benefits.

			Credit Hours
*EMS	160L	Basic EMT Skills	7

*Course is offered in the evening.

EMS 160L Basic Emergency Medical Technician Skills 7 credit hours
(Prerequisites: RDG 099 or equivalent, ENG 099 or equivalent, MATH 099 or equivalent)
Emergency medical techniques currently used to provide emergency care with rescue squads or ambulances are covered in the class. Content includes use of airway adjuncts, oxygen therapy, splinting, patient assessment and treatment for shock. (5 theory + 5 lab hours a week)

Licensed Practical Nurse Refresher

Special Course
7.5 Weeks, Main Campus
Spring Term

The LPN Refresher course meets the requirements of the State of New Mexico Nursing Practice Act 61-3-24.D. for nurses who have not been engaged in nursing for five years or more and is approved by the New Mexico Board of Nursing.

The curriculum focuses on updates in all major areas of nursing practice including medical and surgical, cardiac, geriatric, obstetric, pediatric, oncology and psychiatric nursing, pharmacology and IV therapy.

A physical examination and a current CPR certification for health professionals (BLS) are required before the first clinical day.

The $20 course fee covers the cost of name tags, transfer belt, pen light, parking permits and preventive lab tests in case of needle stick exposure. Students must purchase required textbooks. White uniform and shoes, and a stethoscope are required for clinical practice. There are additional fees payable to the New Mexico State Board of Nursing for licensure endorsement and reinstatement if a nursing license has expired. A certificate of completion is awarded at the end of the course.

The LPN Refresher course is offered once a year in the spring term. Students are enrolled on a first come, first served basis and enrollment is limited to 21 persons. Interested persons can contact the Health Occupations Department for more information.

This program does not qualify students for Veterans Administration benefits or other financial aid.

			Credit Hours
LPNR	155L	Refresher Theory/Lab	7
LPNR	165C	Refresher Clinical Experience	2
		Total	**9**

LPNR 155L **Refresher Theory/Lab** **7 credit hours**

(Prerequisite: a valid LPN license; corequisite: LPNR 165C) Medical-surgical and specialty nursing trends, procedures and pharmacology are covered in the course. (11 theory + 3 lab hours a week)

LPNR 165C **Refresher Clinical Experience** **2 credit hours**

(Corequisite: LPNR 155L) Supervised medical and surgical clinical experiences include administration of medications and patient care. This course is offered for credit/no credit.

Nursing Home/Home Health Attendant

Special Course
11 Weeks, Main Campus
Fall and Spring Terms

This 88-hour course is designed to teach basic nursing skills to individuals who wish to work or are working either in a nursing home as a nursing home attendant or in patients' homes as a home health attendant. It has been developed for people who would like to become state certified. This course meets the training requirements of the state.

The theory portion of the course includes geriatrics, simple anatomy and physiology, rehabilitation, residents' rights and housekeeping chores. Lab experiences focus on personal care, vital signs and mobility skills.

Interested persons should contact the Health Occupations Department for more information. Twenty-four persons are enrolled in each course on a first come, first served basis. A certificate of completion is awarded at the end of the course. Graduates are eligible to take the state certification exam.

Participants pay the TVI registration fee and are required to purchase the textbook.

This course may not qualify students for Veterans Administration benefits or other financial aid.

NAHA 102L **Nursing Home/Home Health Attendant Theory/Lab** **5 credit hours**

This course teaches basic nursing skills necessary to work in a nursing home, rehabilitation center or private home. Personal care and restorative care skills are taught in a lab setting. (5 theory + 3 lab hours a week)

Perioperative Nurse Specialist

Special Course
12 weeks, Main Campus
Summer Term

These courses provide RNs and LPNs with the skills and knowledge to work in hospital operating rooms or free-standing day surgical units. The curriculum offers an introduction to the history, scope and role of the perioperative nurse; the concept of team management and collaboration; the surgical environment, including principles of asepsis, sterilization and safety; use and care of basic instruments and equipment; standards of practice and legal, moral and ethical issues; the nursing process; continuity of care; surgical pharmacological agents; wound healing; and management skills. Students have an opportunity to apply theory to practice in hospital operating rooms.

Written permission of the instructor is required for enrollment in these courses. Applicants should call the Health Occupations Department to schedule an interview with the instructor. Applicants must be current licensed nurses. During the first week of the course, students must submit proof to the instructor of current immunizations, New Mexico RN or PN license, CPR card and a physical exam.

There is a $35 course fee which covers the cost of parking permits, name tags and preventive lab tests in case of needle stick exposure.

Students must make grades of C or better in all coursework to receive a certificate.

These courses will be offered in *the summer term only*.

These courses may not qualify students for Veterans Administration benefits or other financial aid.

			Credit Hours
PRNS	255L	Perioperative Nurse Specialist Theory/Lab	8
PRNS	265C	Perioperative Nurse Specialist Clinical Experience	6
		Total	**14**

PRNS 255L Perioperative Nurse Specialist Theory/Lab 8 credit hours
(Prerequisite: written permission of the instructor; corequisite: PRNS 265C) This course covers the history and philosophy of perioperative nursing, the surgical environment, perioperative care, intraoperative care and postoperative
care. Laboratory experiences in a mock operating room allow practice of skills. (6 theory + 6 lab hours a week)

PRNS 265C Perioperative Nurse Specialist Clinical Experience 6 credit hours
(Corequisite: PRNS 255L) Students apply new and previously learned concepts to perioperative nursing in hospital operating rooms.

Registered Nurse Refresher

Special Course
7.5 Weeks, Main Campus
Summer Term

The RN Refresher course meets the requirements of the State of New Mexico Nursing Practice Act 61-3-24.D. for nurses who have not been engaged in nursing for five years or more and is approved by the New Mexico Board of Nursing.

The curriculum focuses on updates in all major areas of nursing practice including medical and surgical, cardiac, geriatrics, obstetrics, pediatrics, oncology, psychiatric, pharmacology and IV therapy,

A physical examination and a current CPR certification for health professionals (BLS) are required before the first clinical day.

The $20 course fee covers the cost of name tags, transfer belt, pen light, parking permits and preventive lab tests in case of needle stick exposure. Students must purchase required textbooks. White uniform, shoes and a stethoscope are required for clinical practice. There are additional fees payable to the New Mexico State Board of Nursing for licensure endorsement and reinstatement if a nursing license has expired. A certificate of completion is awarded at the end of the courses.

The RN Refresher course is offered once a year in the summer term. Students are enrolled on a first come, first served basis and enrollment is limited to 21 persons. Interested persons can contact the Health Occupations Department for more information.

This course does not qualify students for Veterans Administration benefits or other financial aid.

			Credit Hours
RNR	255L	Refresher Theory/Lab	7
RNR	265C	Refresher Clinical Experience	2
		Total	**9**

RNR 255L **Refresher Theory/Lab** **7 credit hours**

(Prerequisite: a valid RN license; corequisite: RNR 265C) Trends in medical-surgical and specialty nursing, pharmacology and procedures are covered in the course. (11 theory + 3 lab hours a week)

RNR 265C **Refresher Clinical Experience** **2 credit hours**

(Corequisite: RNR 255L) Supervised medical-surgical clinical experiences include total patient care. This course is offered for credit/no credit.

Child, Youth and Family Development

Associate of Arts Degree
Main and South Valley Campuses

The Child, Youth and Family Development (CYFD) program facilitates the learning of theory and skills required for working with children, youth and families. The two-year program includes classroom instruction and practical experience. Students observe and interact with children and families in child care facilities and elementary and secondary classrooms.

The curriculum provides beginning education courses as well as specialty courses in child, youth and family development and coursework that promotes reading, writing, speech, math, English and science. The TVI computer literacy requirement can be met by completion of a computer course or by completion of learning modules in the Health Occupations computer lab. This competency is required of all graduates of the Child, Youth and Family Development program.

Graduates of the program may find employment in the public school setting as educational assistants and Head Start teachers. They may also find jobs in child care centers or other child, youth or family development programs. Note: federal law requires a background check and a fingerprint check on all persons employed in child care centers.

Not all courses are offered each term. Courses require a minimum enrollment of 12 students. Students are required to maintain a TVI GPA of 2.0 and to earn at least a C in all required courses.

Students interested in transferring to the University of New Mexico for a bachelor's degree in education or family studies must complete all UNM requirements and the College of Education application process. Advisement will be provided by the UNM College Advisement Center to clarify course selections and insure proper planning. Students should contact the center when they begin their studies at TVI.

The enrollment requirement is a high school diploma or equivalent.

Concentration Speciality: Child Development Associate (CDA)

The CDA track of study prepares students for the national Child Development Associate (CDA) credential assessment administered by the Council for Early Childhood Professional Recognition. It is designed for those currently working or planning to work with children from birth through age six in settings such as Head Start, family care homes, Even Start, child care facilities and private and public pre-schools. Portions of this track are designed to articulate into the associate of arts degree.

Child, Youth and Family Development Program

			Credit Hours
CDV	103	Pre-school Growth and Development	3
CDV	104	Theories of Child, Youth and Family Development	3
CDV	105L	Infant Growth and Development, Theory and Lab	4
CDV	201	Middle Childhood Growth and Development	3
CDV	202	Adolescent Growth and Development	3
CDV	212	Special Issues In Child, Youth and Family Development	3
CDV	214C	Practicum	3
CDV		Electives	8

Required Arts & Sciences Courses

ART	101 or 151		3
COMM	130, 221, 270, 291 or 293		3
ENG	101	College Writing	3
ENG	102	Analytic Writing	3
HIST	101, 102, 161, 162 or 260		3
MATH	120, 145 or 121		3
NUTR	125 or 120		3
PHIL	156 or 250		3
PSY	105 or PSY 220 or SOC 101		3
Biological and Physical Sciences			8
		Total	**65**

Child Development Associate (CDA) Concentration

CDV	120	Introduction to CDA Training	1
CDV	121	Training Seminar I	3
CDV	122	Training Seminar II	3
CDV	123	Assessment Preparation	1
CDV	124	Supervised Field Experience I	1
CDV	125	Supervised Field Experience II	1

Child, Youth and Family Development Electives

CDV	101	Parents and Young Children	3
CDV	106	Healthy Young Children	3
CDV	204	Introduction to Classroom Learning	3
CDV	206	Working with Special Needs Children	3
CDV	207	Management of Early Childhood Programs	3
CDV	208	Child Abuse and Neglect	1
CDV	209	Early Childhood Learning Environments	3
CDV	210	Guidance and Early Childhood Development	3
CDV	213	Family Relations	3
CDV	296	Topics	1-3

Course Descriptions

CDV 101 Parents and Young Children 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) Students study the interactions of parents and children in diverse family configurations throughout the life cycle.

CDV 103 Preschool Growth and Development 3 credit hours
(Pre- or corequisites: CDV 104 and ENG 101) Students examine the cognitive, physical and social-emotional development of the pre-school child. The course requires observation in a child care setting.

CDV 104 Theories of Child, Youth and Family Development 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) This course presents an overview of significant theories and research of children's development and family interactions.

CDV 105L Infant Growth and Development Theory and Lab 4 credit hours
(Pre- or corequisites: CDV 104 and ENG 101) This course examines the basic needs and growth factors of children with an emphasis on the pre-natal period through 36 months. This course replaces CDV 102 and CDV 102L. (3 theory + 3 lab hours per week)

CDV 106 Healthy Young Children 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) Students are provided with an awareness of basic health and safety management procedures which contribute to the prevention of childhood illnesses and communicable diseases. Also emphasized in the course are safe environments as a means of prevention and reduction of injury; good nutrition as important to a child's total development and an overview of assessment of young children.

CDV 120 Introduction to CDA Training 1 credit hour
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) An in-depth study of the history of CDA, the assessment system and competency standards is presented. A review is provided of the six competency and 13 functional areas as well as what is needed to complete the CDA through the direct assessment route.

CDV 121 CDA Training Seminar I 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) Formalized instruction covers the first four core content areas: health environments; physical, emotional, intellectual and social development; and strategies for establishing productive family relationships.

CDV 122 CDA Training Seminar II 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) Formalized instruction covers four of the eight core content areas: effective program operation, commitment to professionalism, observing and recording children's behavior, growth and development principles.

CDV 123 CDA Assessment Preparation 1 credit hour
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) This course presents clarification of the steps involved in preparation for the assessment, information on how to prepare a professional resource file, distribution of parent questionnaires and practice and review for the interview and situational assessment.

CDV 124 Supervised Field Experience I, II 1 credit hour
(Pre- or corequisite: CDA Training Seminar I and II) Experience is scheduled that includes working with children at various early childhood settings, as well as home visitor settings serving children birth through age six.

CDV 201 Middle Childhood Growth and Development 3 credit hours
(Pre- or corequisites: CDV 104 and ENG 101) This course presents the principles of growth and development for 6- to 11-year-old children in cognitive, physical and social-emotional areas.

CDV 202 Adolescent Growth and Development 3 credit hours
(Pre- or corequisites: CDV 104 and ENG 101) Students examine the development and communication patterns of adolescents within the family setting.

CDV 204 Introduction to Classroom Learning 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) An introduction to educational psychology and learning with an emphasis on practical application is presented.

CDV 206 Working with Special Need Children 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) The course examines the characteristics and educational needs of exceptional children. Definition, etiology, characteristics and various educational alternatives for each of the exceptionalities are surveyed. (This course was formerly titled Education of the Exceptional Person.)

CDV 207 Management of Early Childhood Programs 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) The course provides students with knowledge and skills to develop an effective early childhood program. Students examine staff responsibilities, program development, scheduling, behavioral observation and evaluation techniques.

CDV 208 Child Abuse and Neglect 1 credit hour
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) A survey of research about the dysfunctional family is presented with an emphasis on identifying the potential victim of child abuse. Preventive methods are explored.

CDV 209 Early Childhood Learning Environments 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) The course demonstrates how to set up and maintain healthy learning environments. Students learn to use space, relationships, materials and routines as resources for developing environments that encourage play and learning for children.

CDV 210 Guidance and Early Childhood Development 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) This course covers positive guidance and discipline techniques. Emphasis is on providing appropriate experiences for the development of autonomy, self-esteem and social competency in children.

CDV 212 Special Issues in Child, Youth, and Family Development 3 credit hours
(Prerequisite: must be in final term of courses for graduation or have permission of the program director) This special exit course is designed to present a balance of research findings, theory and application and to integrate these aspects of the study of child, youth and family development for the graduating student. The seminar-style course focuses on critical contemporary issues in the field with an emphasis on the working applications of expert knowledge.

CDV 213 Family Relations 3 credit hours
(Prerequisites: RDG 100 or equivalent or ENG 100 or equivalent) An introductory study of marriage and family life as viewed through the family life cycle and differing family ethnicities, this course presents a solid foundation for understanding issues such as gender, dating, commitment, sexuality and couple communication.

CDV 214C Practicum 3 credit hours
(Prerequisites: RDG 100 or equivalent, ENG 100 or equivalent) The course provides students with a supervised field experience (nine hours per week) in a child, youth or family setting. Students work in such settings as Head Start classrooms, child care centers and public school classrooms.

CDV 296 Topics 1–3 credit hours
Various topics are offered.

Clinical Laboratory Assistant

Certificate Program
Main Campus
Spring Term

The Clinical Laboratory Assistant (CLA) program prepares students to perform basic laboratory testing. A CLA works in a medical laboratory under the supervision of a medical technologist, medical laboratory technician or pathologist. A CLA collects and processes blood specimens and performs test procedures in chemistry, hematology, microbiology and urinalysis.

Enrollment in the CLA program requires:

- a high school diploma or equivalent;
- qualifying score on the Accuplacer math and reading tests;
- qualifying score on the Health Occupations MLT/Nursing Math Test (or MATH 099H); and
- successful completion of the TVI Phlebotomy program within the last three years or documentation of ASCP or NCA certification in phlebotomy and recent work experience.

Phlebotomy challenge exams are available for applicants who have completed other phlebotomy programs or who have other phlebotomy certifications.

Applicants must present evidence of current TB testing, immunizations (including Hepatitis B, rubella and rubeola) and CPR certification prior to the clinical portion of the program.

Students should possess the ability to communicate with clients and the manual dexterity required to handle laboratory equipment. A grade of C or better is required in all CLA course work in order to receive a certificate. Students are required to fulfill the TVI computer literacy requirement prior to graduation. Students will graduate under the catalog in effect when they begin clinical/core courses.

Students must pay the TVI registration fee, a $50 equipment fee that covers the cost of a lab coat, health tests, name tags, clinical parking fees and lab tests in case of needle stick exposure. Students are also required to purchase textbooks.

Clinical Laboratory Assistant Program

			Credit Hours
CLA	101L	Introduction to Laboratory Technique (7 weeks)	4
CLA	102L	Basic Hematology/Chemistry (7 weeks)	4
CLA	103C	Clinical Experience (8 weeks)	5
		Required Arts & Sciences Courses	
BIO	136	Anatomy & Physiology	3
		Total	**16**

Course Descriptions

CLA 101L Introduction to Laboratory Technique 4 credit hours
(Prerequisites: Written permission of instructor, RDG 099 or equivalent, ENG 099 or equivalent, MATH 099 or equivalent; pre- or corequisite: BIO 136; corequisite: CLA 102L) This course describes the function of the medical laboratory and the role of the clinical laboratory assistant. The student is introduced to basic medical terminology, communications and laboratory techniques using applied theory in urinalysis, serology and microbiology. Safety issues and practices are stressed. (6 theory + 6 lab hours per week)

CLA 102L Basic Hematology/Chemistry 4 credit hours
(Pre-or corequisite: BIO 136; corequisite: CLA 101L) This course emphasizes the instrumentation and concepts of quality control and calibration. Basic techniques using applied theory in hematology and chemistry are studied. The clinical significance of laboratory testing is emphasized. (6 theory + 6 lab hours per week)

CLA 103C Clinical Experience 5 credit hours
(Pre- or corequisite: BIO 136; pre-requisites: CLA 101L, CLA 102L) In this clinical practicum students perform urinalysis, serology, microbiology, hematology and chemistry procedures in affiliated medical laboratories. (28 hours per week)

Clinical Laboratory Assistant Advanced Placement

Applicants seeking advanced placement to the Clinical Laboratory Assistant Program must meet all admission requirements for the program and submit all documentation by the end of the term preceding the desired term of entry.

Applicants granted advanced placement must pay the required TVI fees, including course fees and challenge fees, before the term of entry. Documentation of CPR certification and required immunizations must be received by the program director prior to the start of clinical. Advanced placement applicants will be allowed to enroll in CLA courses on a space-available basis. Advanced placement students must complete at least 13 credit hours at TVI in order to receive a certificate.

Transfer: Transfer credit may be awarded for equivalent course work completed at a regionally accredited technical-vocational school, college or university. Credit is given for courses with equivalent content and credit hours that were completed with a grade of C or better. Official transcripts must be sent to the TVI records office for consideration.

Challenge: Challenge exams may be administered for applicants with the appropriate documented work experience in human laboratory science within the last three years. The phlebotomy prerequisite and CLA courses may be challenged through theory and skills competency exams taken before the end of the term preceding the desired term of entry. Courses must be challenged in the order in which they appear in the curriculum. There is a $15 fee for each challenge exam.

Healthcare Technician

Certificate Program
Main Campus
Summer Term Only

The Healthcare Technician program is a one-term certificate program that prepares persons to assist nurses in hospitals. Students acquire the skills of drawing blood, collecting specimens and preparing and maintaining equipment used to obtain blood specimens. Transcribing written doctors' orders, ordering supplies and communicating with patients as well as healthcare personnel are presented. A third component includes specific skills such as sterile techniques, urinary catheterization, respiratory care and physical therapy. Instruction is provided in classrooms, laboratories and healthcare agencies.

To be eligible to enroll in the Healthcare Technician courses, a student must be a state certified nursing assistant (CNA). For recent graduates of the TVI Nursing Assistant program (within two years of the beginning of the HCT program) there are no additional qualifying requirements.

Applicants who are graduates of other nursing assistant programs and those who completed the TVI Nursing Assistant program more than two years prior to beginning the HCT course must:

- pass the TVI placement exam in math and reading;
- pass a written nursing assistant exam; and
- pass a nursing assistant skills exam.

All applicants must have a current CPR card and current immunizations (MMR, PPD, hepatitus B and tetanus).

To receive a certificate, a student must complete the 12-week, 330-hour program which includes six weeks of classroom instruction in theory and lab and six weeks of experience in local hospitals and/or clinics. All Healthcare Technician courses must be completed with a grade of C or better. The TVI computer literacy requirement may be met by completion of a computer course or by completion of a computer literacy exam in the Testing Center.

There is a $40 lab fee that includes a lab coat, bandage scissors, name tag, parking fees and health tests. There is a $10 supply fee. Students are also required to purchase textbooks. Students are required to have their own stethoscopes and transfer belts.

This program may not qualify students for Veterans Administration benefits or other financial aid.

Healthcare Technician Program

			Credit Hours
HCT	101/101L	HCT Phlebotomy Skills and Laboratory	2
HCT	102/102L	HCT Health Unit Coordinator Skills and Laboratory	2
HCT	103/103L	HCT Special Skills Theory and Laboratory	4
HCT	110C	HCT Phlebotomy Skills Clinical	2
HCT	120C	HCT Multi-skilled Clinical	2
		Total	**12**

Course Descriptions

HCT 101/101L HCT Phlebotomy Skills and Laboratory 2 credit hours
(Corequisites: HCT 102L and HCT 103L; prerequisites: RDG 099 or equivalent, ENG 099 or equivalent, MATH 099 or equivalent, permission of instructor) During this six-week class, theory and skills of basic venipuncture and blood collection techniques, specimen handling and reference procedures are presented. Theory associated with these procedures is stressed. (4 theory + 4 lab hours a week for 6 weeks)

HCT 102/102L HCT Health Unit Coordinator Skills and Laboratory 2 credit hours
(Corequisite: HCT 101L) This is a six-week class in which students acquire skills in basic Health Unit Coordinator skills including medical terminology, abbreviations, communications, pharmacological terms and data forms. (2 theory + 8 lab hours a week for 6 weeks)

HCT 103/103L HCT Special Skills Theory and Laboratory 4 credit hours
(Corequisite: HCT 101L) During this six-week class students acquire technical nursing skills such as sterile technique, urinary catheterization and respiratory care. (4 theory + 8 lab hours a week for 6 weeks)

HCT 110C HCT Phlebotomy Skills Clinical 2 credit hours
(Prerequisite HCT 101L; corequisite: HCT 120C) For three weeks students apply fundamental phlebotomy techniques within the healthcare environment.

HCT 120C HCT Multi-skilled Clinical 2 credit hours
(Corequisite: HCT 110C) During this three-week class students apply health unit coordinatoring and special skills in nursing in a healthcare setting under the supervision of a nurse. (30 clinical hours a week for 3 weeks)

Health Unit Clerk

Certificate Program
Main Campus
Fall, Spring Terms

The Health Unit Clerk program prepares persons to work in hospitals, elder care centers and out-patient clinics. Transcribing doctors' written orders, typing, ordering supplies, answering the telephone, working with computers and communicating with patients, visitors and staff are typical activities.

Enrollment in the Health Unit Clerk program requires a high school diploma or equivalent, the ability to read at the seventh-grade level and a passing score on the math placement test. Students also must be able to write clearly and accurately and have the ability to speak distinctly to others. The TVI computer literacy requirement can be met by comple-

tion of a computer course or by successful completion of the computer literacy test; computer literacy learning modules are available in the Health Occupations Computer Lab. This competency is required of all graduates of the Health Unit Clerk Program.

There is a $30 uniform fee which covers the required uniform top, parking fees, name tag and health tests. Neutral-colored slacks or skirts are required but are not covered by the fee.

The 375-hour program lasts 15 weeks, with nine weeks of classroom theory and six weeks of clinical practice in local hospitals and out-patient clinics. A grade of C or better is required for all coursework. A certificate is awarded upon completion.

Health Unit Clerk is offered in the *fall and spring terms only.*

This program may not qualify students for Veterans Administration benefits or other financial aid.

Health Unit Clerk Program

			Credit Hours
HUC	101L	Health Unit Clerk Theory and Lab	8
HUC	131C	Health Unit Clerk Clinical Practice	4
		Total	**12**

Course Descriptions

HUC 101L Health Unit Clerk Theory and Lab 8 credit hours
(Prerequisites: RDG 099 or equivalent, ENG 099 or equivalent, MATH 099 or equivalent, enrollment in the program; corequisite: HUC 131C) This course combines a number of topics including orientation to the hospital, patient confidentiality, role of the health unit clerk, medical terminology, anatomy, abbreviations, communications, pharmacological terms, computerized patient information systems and data forms. (5 theory +20 lab hours a week)

HUC 131C Health Unit Clerk Clinical Practice 4 credit hours
(Prerequisites: HUC 101L) Supervised clinical experience takes place in local hospitals and hospital out-patient clinics during the last six weeks of the program.

Medical Laboratory Technician

Associate of Science Degree
Main Campus
Spring Term

The Medical Laboratory Technician program prepares students to perform laboratory procedures which aid the physician and pathologist in the diagnosis and treatment of disease. Medical laboratory technicians (MLTs) work under the supervision of a pathologist in clinics, hospitals, private laboratories and physician office labs, collecting blood specimens and performing test procedures in such disciplines as clinical chemistry, hematology, immunohematology, immunology, microbiology and urinalysis.

The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences. Graduates are eligible to take both the American Society of Clinical Pathologists and the National Certification Agency exams to obtain Certified Medical Laboratory Technician credentials.

The clinical practicum experience at affiliated hospitals and laboratories provides experience in performing laboratory tests under the direction of a clinical instructor. Students must arrange for their own transportation to the hospitals or labs.

A grade of C or better must be earned in all theory courses and credit earned for all clinical courses to advance to the next term and graduate with an associate of science degree. The computer literacy requirement may be met by completion of a computer course or by completion of learning modules in the Health Occupations computer lab. This competency is required of all graduates of the Medical Laboratory Technician program. Students will graduate under the catalog in effect when they begin clinical/core courses.

There is an equipment charge of $65 for two lab coats, parking fees, name tag and preventive lab tests in case of needle stick exposure. Each MLT laboratory course also has a $20 supply fee.

Orientation sessions for the Medical Laboratory Technician Program are scheduled regularly; students should contact the Health Occupations Department for dates and times. Orientation sessions include detailed information about the petitioning and selection process, program requirements and general information about laboratory medicine as a career including the physical demands of the job. *Anyone interested in the Medical Laboratory Technician program is strongly encouraged to attend one of these orientation sessions. In addition, it is strongly recommended that applicants review prerequisites and program requirements with the Health Occupations counselor.*

Prospective MLT students should declare MLT as their major and submit a petition packet to the Health Occupations counselor to be considered for the MLT class beginning in January. Students should call the Health Occupations office to learn the dates of the summer petition period.

To be eligible to enroll in MLT courses a student must:

- Be a high school graduate or equivalent as stated on the TVI application.
- Submit official transcripts of previous education including vocational school or college.

- Fulfill requirements in English, math, reading and science by qualifying scores on the ACT or SAT, or placement exams, or successful completion of 100 level courses or college coursework.
- Provide proof of successful completion of MATH 121 or a higher level math course (completed with a C or better); MATH 121 may be waived with a math placement test indicating math proficiency.
- Provide proof of successful completion of CHEM 111/112L or a higher level college chemistry course with a lab (completed with a C or better).
- Score at least 85 percent on the Health Occupations Nursing/MLT Basic Math Test within the 12 months prior to the petition date. Students failing to score 85 percent may retake this exam once. Students with two failed attempts must successfully complete MATH 099H and then pass the Nursing/MLT Basic Math Test. Information is available from the Health Occupations counselor.
- Have a cumulative GPA of 2.0 or higher

Students are responsible for meeting the eligibility requirements. Once all requirements are fulfilled, students may petition for enrollment in the core MLT curriculum. Required Arts & Science courses may be taken prior to enrollment in MLT courses. Should the number of students eligible to enroll exceed the class size, priority will be given to those who have completed all required Arts & Sciences courses.

Physical exam forms will be given to students for completion after selection for the MLT core courses. Students must submit completed health forms providing evidence of current immunizations and physical exam before enrolling in MLT 151C. This physical exam may be done at the TVI Health Center for a fee or it may be completed by a private physician.

Students must submit evidence of current cardiopulmonary resuscitation (CPR) certification prior to enrolling in MLT 151C and MLT 205C. Students also must be immunized against hepatitis or sign a waiver prior to these clinical courses.

Medical Laboratory Technician Program

			Credit Hours
MLT	110L	Introduction to Medical Technology	4
MLT	114	Immunology	1
MLT	114C	Clinical Immunology	1
MLT	151C	Clinical Experience Urinalysis/Phlebotomy	4
MLT	201L	Clinical Chemistry	7
MLT	203L	Clinical Hematology/Coagulation	6
MLT	204L	Clinical Immunohematology	3
MLT	205C	Clinical Experience	13
MLT	206	MLT Microbiology	3
MLT	206C	Clinical MLT Microbiology	2

Required Arts & Sciences Courses[1]

[2]BIO	123	Biology for Health Sciences	3
[2]BIO	124L	Biology for Health Sciences Lab	1
ENG	101	College Writing	3
CHEM	121L	General Chemistry I	4
[3]BIO	136	Human Anatomy and Physiology for Non-Majors	3
[3]BIO	139L	Human Anatomy and Physiology Lab for Non-Majors	1
CHEM	122L	General Chemistry II	4
BIO	239	Microbiology	3
BIO	239L	Microbiology Lab	1
[4]Humanities/Social Science Elective			3
		Total	**70**

[1]Courses taught by University of New Mexico faculty at the Health Sciences and Service Building on the UNM campus. Students are charged TVI tuition rates for these courses.

[2]BIO 121L may be substituted for BIO 123/124L.

[3]BIO 237/247L and BIO 238/248L may be substituted for BIO 136/139L.

[4]PHIL 245M—Biomedical Ethics strongly recommended.

An agreement with the UNM Medical Laboratory Science (MLS) Department allows for the transfer of some or all credits earned at TVI toward the UNM MLS bachelor's degree. Students should contact the program director for specifics.

In order to satisfy prerequisite and corequisite requirements, the following order of courses is recommended:

Prerequisite Courses:	MATH 121, CHEM 111/112L (or higher level chemistry)
Spring Term:	MLT 110L, BIO 123/124L, ENG 101, CHEM 121L
Summer Term:	MLT 151C, BIO 136/139L, CHEM 122L, HUM/SOC elective
Fall Term:	MLT 114L, MLT 114C, MLT 201L, BIO 239/239L
Spring Term:	MLT 203L, MLT 204L. MLT 206, MLT 206C
Summer Term:	MLT 205C

Medical Laboratory Technician Advanced Placement

Applicants seeking advanced placement to the Medical Laboratory Technician Program must meet *all* admission requirements for the program and submit all required documentation by the end of the term preceding the desired term of entry. Applicants must also complete all the general college course requirements scheduled in the curriculum prior to the term of desired entry. Professional MLT courses must be challenged in the order in which they appear in the curriculum.

Applicants granted advanced placement must pay the required TVI fees, including equipment fees and challenge fees, before the start of the term of entry. Documentation of a physical exam, CPR certification and hepatitis vaccination must be received by the program director prior to the first clinical experience. Advanced placement applicants will be allowed to enroll in MLT courses on a space-available basis.

Route One: transfer of credit for equivalent coursework completed at a regionally accredited technical-vocational school, college or university. Equivalent professional (MLT) courses must have been completed through a NAACLS accredited program in the last five years. Credit is given for courses completed with a grade of C or better with equivalent content and credit hours.

Official transcripts must be sent to the TVI Records Office for consideration of transfer credit eligibility. Qualified applicants for advanced placement will be admitted on a space-available basis and will be required to complete at least Term V at TVI in order to be awarded the associate of science degree.

Route Two: documented work experience in laboratory medicine on specimens from humans. MLT 110L and each subject area of the clinical experiences may be challenged through a skills competency test taken before the beginning of the anticipated clinical rotation. There is a $15 fee for each exam. Applicants must be able to document at least 200 hours of work experience in the appropriate lab section in an accredited medical laboratory in the last five years.

Applicants challenging the clinical experience are required to complete all required MLT theory courses, with the exception of MLT 110L, at TVI in order to be awarded the associate degree.

Route Three: Applicants may transfer credit for required coursework and challenge clinical experiences by the routes listed above. In order to be awarded the associate degree and receive verification for certification, these students must complete at least 15 credit hours of required MLT coursework at TVI. These MLT courses may be theory and/or clinical experiences.

Registered medical technologists or medical laboratory technicians interested in auditing MLT courses for refresher should contact the program director and will be allowed to audit on a space available basis with proof of certification.

Course Descriptions

MLT 110L **Introduction to Medical Technology** **4 credit hours**

(Prerequisite: permission of the program director; corequisites: ENG 101, BIO 123/124L, CHEM 121L) The student is introduced to basic medical laboratory techniques emphasizing urinalysis. The course includes principles and procedures of the chemical and microscopic analysis of urine, laboratory mathematics instrumentation, quality control and safety procedures. (3 theory + 3 lab hours a week)

MLT 114 **Immunology** **1 credit hour**

(Prerequisite: MLT 151C; pre- or corequisites: BIO 239/239L, MLT 201L; corequisite: MLT 114C) This course offers a basic study of the body's immune response and an introduction to diseases involving deficiencies in the immune system.

MLT 114C Clinical Immunology **1 credit hour**
(Prerequisite: MLT 151C; pre- or corequisites: BIO 239/239L, MLT 201L; corequsite: MLT 114) This course offers the students an opportunity to perform serological testing on specimens from hospital patients using current methodologies.

MLT 151C Clinical Experience Urinalysis/Phlebotomy **4 credit hours**
(Prerequisite: MLT 110L; pre- or corequisites: BIO 130/139L, CHEM 122L, humanities/ social science) This course allows students to practice procedures learned in urinalysis and phlebotomy and gives them practical experience at affiliated hospitals. This is a credit/no credit course.

MLT 201L Clinical Chemistry **7 credit hours**
(Pre- or corequisites: MLT 114, MLT 114C, BIO 239/239L) The basic chemical reactions that occur in normal and disease processes of the body and the principles and methods used in testing for chemical components in blood and other body fluids are studied in this course. It includes basic instrumentation and laboratory experiences for performing the basic procedures used in a clinical chemistry laboratory. (5 theory +6 lab hours a week)

MLT 203L Clinical Hematology/Coagulation **6 credit hours**
(Pre- or corequisites: MLT 204L, MLT 206, MLT 206C) A basic study is presented of normal and abnormal blood cell enumeration and morphology and the coagulation mechanisms. Included are the principles of routine procedures performed in the hematology laboratory. (4 theory + 6 lab hours a week)

MLT 204L Clinical Immunohematology **3 credit hours**
(Pre- or corequisites: MLT 203L, MLT 206, MLT 206C) This course is a basic study of theory, principles and test methods for determining blood group typing, antibody detection and identification, cross matching and component therapy. (2 theory + 3 lab hours a week)

MLT 205C Clinical Experience **13 credit hours**
(Prerequisites: MLT 203L, MLT 204L, MLT 206, MLT 206C) Supervised clinical practice takes place in the clinical laboratories of affiliated hospitals with rotations through hematology/coagulation, microbiology, chemistry and immunohematology departments. Students practice procedures and apply theory learned in previous MLT courses. This is a credit/no credit course.

MLT 206 MLT Microbiology **3 credit hours**
(Prerequisite: MLT 201L; corequisites: MLT 203L, MLT 204L, MLT 206C) A comprehensive study of clinical bacteriology, mycology and parasitology is presented including macroscopic and microscopic identification of organisms, antibiotics susceptibility testing, life cycles, and pathology and etiology of various diseases. Virology is introduced.

MLT 206C Clinical Microbiology **2 credit hours**
(Prerequisite: MLT 201L; corequisites: MLT 203L, MLT 204L, MLT 206) This course offers the students an opportunity to identify microorganisms of clinical significance from

specimens obtained from hospital patients. Students utilize current methodologies and identification techniques.

MLT 296 Topics in Laboratory Medicine 1–4 credit hours
(Prerequisites: may vary) Various topics in laboratory medicine are presented.

Nursing Assistant

Certificate Program
Main Campus
Fall and Spring Terms

This program provides training in basic nursing skills required for the care and comfort of the sick in hospitals, outpatient clinics, nursing homes, public health agencies, private medical offices and the home. Persons successfully completing the program with grades of C or better in all coursework receive certificates of completion. Graduates are then eligible to take the state certification exam.

Enrollment in the Nursing Assistant program requires a passing score on the math and reading placement tests. Good communication skills and the desire as well as the ability to care for others are necessary for this program. Students must have a New Mexico driver's license and a car because students will visit patients' homes. (City buses are not adequate.)

The TVI computer literacy requirement may be met by completion of a computer course or by completion of learning modules in the Health Occupations Computer Lab. This competency is required of all graduates of the Nursing Assistant program.

The 15-week program includes 330 instructional hours. Nine weeks are spent in the classroom and laboratory, followed by six weeks of extensive supervised clinical experiences. A student attends class an average of 22 hours per week throughout the program.

The student will be required to have a physical exam, PPD and current immunizations (including tetanus, rubella and rubeola and hepatitis B) to go to clinical. The TVI Health Center is able to provide these services if the student does not have a private physician.

A $35 uniform fee covers the cost of the required uniform top, name tag, stethoscope, health test, CNA pin, parking fees, CPR and first aid certification, a transfer belt and preventive lab tests in case of needle stick exposure. A watch with a second hand, uniform slacks, shirt and shoes are required but not covered by the fee.

Students enrolled in this program may not be eligible to receive financial aid or Veterans Administration benefits.

Nursing Assistant Program

			Credit Hours
NA	101	Nursing Assistant Theory	4
NA	110L	Nursing Assistant Lab	1
NA	121C	Nursing Assistant Clinical Experiences	3
NA	131	Health Communications	3
NA	171	Nursing Assistant-Applications	3
NA	161	Nursing Assistant Issues	2
		Total	**16**

Course Descriptions

NA 101 Nursing Assistant Theory 4 credit hours
(Prerequisites: RDG 099 or equivalent, ENG 099 or equivalent, MATH 099 or equivalent, enrollment in the program; corequisites: NA 110L, NA 131, NA 161, NA 171) During the first nine weeks students attend classes covering basic nursing skills used in healthcare agencies and homes. Other topics covered are medical terminology, home care issues and community resources.

NA 110L Nursing Assistant Lab 1 credit hour
(Corequisites: NA 101, NA 131, NA 161, NA 171) Students practice basic nursing skills in the laboratory. (5 lab hours a week for five weeks)

NA 121C Nursing Assistant Clinical Experiences 3 credit hours
(Corequisite: NA 161) Successful completion of NA 101, NA 110L, NA 131 and NA 171 is required before going to clinical. The last six weeks of the program include supervised practice of nursing skills in hospitals, long-term care centers and patient homes throughout the city.

NA 131 Health Communications 3 credit hours
(Corequisite: NA 101, NA 110L, NA 161, NA 171) This course includes introductions to anatomy and physiology and nutrition. The basic structure and normal functions of the body systems and some of the aging problems which can occur in those systems are covered.

NA 161 Nursing Assistant Issues 2 credit hours
(Corequisite: NA 101, NA 110L, NA 121C, NA 131, NA 171) Special topics are covered such as nutrition labs, blood pressure practice, home healthcare post-conferences and clinical seminars.

NA 171 Nursing Assistant–Applications 3 credit hours
(Corequisites: NA 101, NA 110L, NA 131, NA 161) Basic math is reviewed for part of the term with practice working selected problems. Tests cover eight areas of concentration. The other part of the term deals with geriatric issues and the application of nursing assistant theory to them.

Practical Nursing

Certificate Program
Main Campus
Summer Term

This program prepares practical nurses to care for patients in a variety of healthcare facilities under the supervision of registered nurses and physicians. The TVI/Presbyterian Hospital School of Practical Nursing is accredited by the National League for Nursing and approved by the New Mexico State Board of Nursing (NMSBN).

Graduates of this program are eligible to take the licensing examination for practical nurses administered by the NMSBN. Following licensure, LPNs may find employment in long-term care facilities, hospitals, physicians' offices and other healthcare agencies.

Orientation sessions for the nursing programs are scheduled regularly. These sessions review levels of nursing, the petition process, program requirements and curriculum changes. Individuals interested in nursing are strongly encouraged to attend one of these sessions and continuing students are encouraged to attend a session at least once a year. When ready to enter clinical courses, students must petition for selection. Petitions for selection to the clinical courses are accepted early in the term prior to the term of enrollment. Students should contact the Health Occupations Department for the dates and times of the orientation sessions and acceptance of petitions. In addition, it is strongly recommended that applicants review prerequisites and program requirements with the Health Occupations counselor. Students will graduate under the catalog in effect when they begin clinical/core courses.

To be eligible to petition for Practical Nursing courses a student must:

- Be a high school graduate or equivalent as stated on the TVI admissions application.
- Fulfill requirements in English, math, reading and science by qualifying scores on the ACT or SAT, or placement exams, or successful completion of 100-level courses (MATH 100A) or college coursework.
- Score at least 85 percent on the Health Occupations Nursing/MLT Basic Math Test within the 12 months prior to the petitioning date. Students failing to score 85 percent may retake this exam once. Students with two failed attempts must successfully complete MATH 099H and then pass the Nursing/MLT Basic Math Test. Information is available from the Health Occupations counselor.
- Have a cumulative TVI GPA of 2.0 or higher.
- Provide proof of completing the following courses with a C or better: BIO 237/247L, Human Anatomy and Physiology I/Lab, and ENG 101, College Writing. Anatomy and physiology courses must be taken within five years from the date of application to the nursing program.

Students are responsible for meeting the prerequisites and petitioning for selection into the clinical courses. Should the number of students eligible to enroll in the first clinical course exceed the class size quota, priority will be given to those students who have completed all required liberal arts courses including anatomy and physiology. If there are

more people who have completed these courses than there is space, the selection will be based upon the first date of attendance at TVI.

After selection into the first clinical course, students must submit:

- Completed physical examination and health forms with evidence of current immunizations before beginning clinical courses. It is advisable that the student be able to lift 50 pounds or more.
- Evidence of current certification in cardiopulmonary resuscitation (CPR) for health professionals before beginning clinical courses. CPR certification must be kept current throughout the program.

The Practical Nurse program includes liberal arts courses for which college credit is awarded. A minimum grade of C must be earned in all courses (nursing and liberal arts) to continue in the program and graduate. In addition, competency in dosage calculations, as tested by the PN calculation exam, must be maintained for progress in the program. The TVI computer literacy requirement may be met by completion of a computer course or by completion of learning modules in the Health Occupations computer lab. This competency is required of all graduates of the Practical Nurse program.

Students must arrange for their own transportation to attend all classes, observations and clinical experiences as scheduled. There may be some required evening clinical hours as well as daytime hours.

There is a $90 equipment fee for required uniforms, stethoscope, scissors, parking fee, transfer belts, identification tags and preventive lab tests in case of needle stick exposure. Students are responsible for the expenses of the physical examination, a watch with a second hand, safety goggles, uniform shoes, graduation pin, textbooks and licensing exam fees. In addition, each course has fees for standardized testing.

Information about Licensure as a Practical Nurse (P.N.)

The New Mexico Board of Nursing may deny, revoke or suspend any license held or *applied for* under the Nursing Practice Act, upon grounds that the licensee or applicant violates any of the following actions:

1. is guilty of fraud or deceit in procuring or attempting to procure a license or certificate of registration;
2. is unfit or incompetent;
3. is convicted of a felony;
4. is habitually intemperate or is addicted to the use of habit-forming drugs;
5. is mentally incompetent;
6. is guilty of unprofessional conduct; or
7. willfully or repeatedly violates any provisions of the Nursing Practice Act;
8. has had a license to practice revoked, suspended or denied in any jurisdiction, territory or possession of the United States or another country for acts of the license similar to acts described in this subsection.

(From BON Manual #91-2, 61-3-28)

Practical Nurse Program

Required Liberal Arts Courses

			Credit Hours
BIO	237	Human Anatomy and Physiology I	3
BIO	247L	Human Anatomy and Physiology I Lab	1
BIO	238	Human Anatomy and Physiology II	3
BIO	248L	Human Anatomy and Physiology II Lab	1
ENG	101	College Writing	3
[1]NUTR	225	Nutrition 244/125	3
[2]PSY	105	General Psychology	3

Either Nurse Never Offered

Practical Nurse Courses

NURS	115	Dosage Calculations	1
PN	126C	Foundations of Practical Nursing	8
PN	27C	Family Nursing	8
[3]PN	131	Pharmacology	3
PN	128C	Nursing of the Family with Complex Problems	14
PN	129	Trends and Issues in Practical Nursing	1
		Total	**52**

[1]NUTR 125 may be substituted if taken before Fall, 1996.
[2]PSY 220 may be substituted.
[3]NURS 231 may be substituted.

PRESBYTERIAN HEALTHCARE SERVICES

Presbyterian Hospital School of Practical Nursing

The Presbyterian Healthcare Services (PHS) School of Practical Nursing was started in 1956 at Presbyterian Hospital. In 1965 TVI assumed administrative responsibility for the school. Presbyterian continues to support the school by providing clinical facilities for patient care experiences. The TVI/PHS School of Practical Nursing in 1972 became the first practical nursing program in New Mexico to be accredited by the National League for Nursing. The program was reaccredited in 1989. It is also included in TVI's accreditation from the Commission on Higher Education of the North Central Association of Colleges and Schools.

Practical Nurse Advanced Placement

There are two ways in which advanced standing can be given to Practical Nurse applicants: credit granted for equivalent coursework and/or successful completion of a challenge exam.

The liberal arts courses required in the Practical Nurse program must be transferred, taken or challenged through the Arts & Sciences Department. The nursing courses must be transferred, taken or challenged through the Health Occupations Department. All advanced placement students must complete NURS 202C prior to entry into the program.

Transfer Application: TVI will grant credit for equivalent coursework completed at an accredited technical-vocational school or college when official transcripts show grades of C or better on equivalent courses. Students desiring to transfer nursing courses to TVI's Practical Nurse program should contact the program director. Nursing courses are only valid for three years from the date of application to TVI. Transfer students are required to enroll a minimum of one term and complete 15 credit hours.

Challenge Application: Advanced placement by challenge exam is offered to students who meet one of the following criteria: completion of a formal course of study in a nursing-related field within a postsecondary educational institution (e.g. military corps member) or performance of basic nursing skills during employment in an in-patient setting within the last three years.

Individuals interested in challenging nursing coursework must make an appointment with the director of the nursing programs to determine eligibility and to discuss the procedure. The challenge procedure includes theory and practical exams. Students may contact the department for information on what courses are available for challenge. A fee is charged for each course.

Course Descriptions

PN 126C Foundations of Practical Nursing **8 credit hours**
(*Prerequisites: nursing director approval, BIO 237/247L, ENG 101; corequisites: NURS 115, BIO 238/248L, NUTR 225)* A study is presented of the foundations of practical nursing including an introduction to nursing process with a focus on assessment. Key concepts of basic and higher order needs within a caring framework are developed. Clinical focuses on assessment of healthy clients across the life-span and measures to maintain/promote mental and physical health. (5 hours theory + 9 hours clinical)

PN 127C Family Nursing **8 credits hours**
(*Prerequisites: BIO 238/248L, NURS 115, PN 126C, NUTR 125; pre- or corequisites: PSY 105, PN 131*) Using nursing process, study of the childbearing and child rearing family is provided. Clinical focuses on experiences with maternity and pediatric clients in community and hospital settings. Also included is nursing care of clients with prevalent oncological conditions across the lifespan. (4 hours theory; 12 hours clinical)

PN 128C **Nursing of the Family with Complex Problems** **14 credit hours**
(Prerequisites: Calculation Exam II, PN 127C, PN 131, PSY 105; corequisite PN 129)* This course is continued study of the family, using nursing process, focusing on the impact of illness on clients and their families. Clinical focuses on medical and surgical clients with multi-system health problems in acute and long-term healthcare settings. (8 hours theory; 18 hours clinical)

PN 129 **Trends and Issues in Practical Nursing** **1 credit hour**
(Corequisite: PN 128C) Students discuss the role of the practical nurse in relation to legal/ethical issues, professional relationships, the Nurse Practice Act and the changing health-care delivery system.

PN 131 **Pharmacology** **3 credit hours**
(Prerequisites: BIO 238/248L, PN 126C; corequisite: PN 127C) Focus is on the effects of commonly used drugs on various body systems. Dosages, application, side effects and/or toxicity, laboratory tests performed to monitor actions, and effects of specific drugs are discussed. Nursing implications and responsibilities are integrated.

*Calculation exams must be passed with a score of 90% or better.

Nursing

Associate of Science
Main Campus
Fall and Spring Terms

The associate degree in nursing (ADN) program prepares technical nurses to provide nursing care to individuals or groups admitted to healthcare agencies. The clients have common, well defined health problems. Graduates work in structured healthcare settings where they provide and manage client care, teach and promote communication while participating as members of the nursing profession.

The ADN program is accredited by the National League for Nursing and approved by the New Mexico State Board of Nursing (NMSBN). Graduates are eligible to take the licensing examination for nurses administered by the NMSBN.

Orientation sessions for the nursing programs are scheduled regularly. These sessions review levels of nursing, the petition process, program requirements and curriculum changes. Individuals interested in nursing are strongly encouraged to attend one of these sessions and continuing students are encouraged to attend a session at least once a year. *Students may declare the associate degree in nursing as their major at any time but must petition for selection into the clinical courses.* Students should contact the Health Occupations Department for the dates and times of the orientation sessions and to find out the dates petitions for selection will be accepted.

To be considered eligible to petition for enrollment in Nursing courses a student must:

- Be a high school graduate or equivalent as stated on the TVI admissions application.
- Submit official transcripts of previous education including vocational school or college.
- Fulfill requirements in English, math, reading and science by qualifying scores on the ACT or SAT, or placement exams, or successful completion of 100-level courses (MATH 100A) or college coursework.
- Score at least 85 percent on the Health Occupations Nursing/MLT Basic Math Test within the 12 months prior to the petitioning date. Students failing to score 85 percent may retake this exam once. Students with two failed attempts must successfully complete MATH 099H and then pass the Nursing/MLT Basic Math Test. Information is available from the Health Occupations counselor.
- Have a cumulative TVI GPA of 2.0 or higher.
- Provide proof of completion of the following courses with a C or better: BIO 237/247L, Anatomy and Physiology I; BIO 238/248L, Human Anatomy and Physiology II; BIO 239/239L, Microbiology; PHIL 245M, Biomedical Ethics; PSY 105, General Psychology; PSY 220, Developmental Psychology; ENG 101, College Writing; NUTR 225, Nutrition; and an elective. Anatomy and physiology courses must be taken within five years of the date of application to the nursing program.

Once all criteria are fulfilled students must petition for enrollment in the first clinical course in nursing. Should there be more petitioners than available spaces, the date of admission to TVI will be used as the final selection criterion. Should there be more than one person with the same date of admission competing for the same slot, the date of completion of all required liberal arts courses will be used as the final selection criterion. The date of completion will be the last day of the term in which the course was successfully completed.

Because of the high demand for this program it may take two years after petitioning to begin the nursing core coursework.

Prior to entering Nursing 124C, students must submit to the nursing programs office:

- Completed physical examination and health forms with evidence of current immunizations before beginning clinical courses. It is advisable that the student be able to lift 50 pounds or more.
- Evidence of current certification in cardiopulmonary resuscitation (CPR) before beginning clinical courses. (CPR certification must be kept current throughout the program).

Required anatomy and physiology and microbiology courses have prerequisites in chemistry and advanced biology, which may be waived by appropriate high school courses. In addition, required anatomy and physiology and microbiology courses must have been taken within five years of the date of application to the nursing programs.

Students must earn a minimum grade of C in all courses to advance to the next term and graduate. In addition, competency in dosage calculations, as tested by calculation exams, must be maintained for progress in the program. The TVI computer literacy requirement may be met by completion of a computer course or by completion of learning modules in the Health Occupations computer lab. This competency is required of all grad-

uates of the associate degree nursing program. Students will graduate under the catalog in effect when they begin clinical/core courses.

Students must attend classes, observation and clinical experiences as scheduled and must arrange for their own transportation to the agencies and hospitals. There may be some required evening clinical hours as well as daytime hours.

Uniform fee for the first term is $90 for required uniforms, stethoscope, scissors, transfer belts, parking fees, identification tags, achievement tests and preventive lab test in case of needle stick exposure. There is a $10 fee the third term for parking fees. In addition, each course has a fee for standardized testing. Students are responsible for the expenses of the physical examination, a watch with a second hand, uniform shoes, safety goggles, graduation pin and licensing exam fees.

Information about Licensure as a Registered Nurse (R.N.)

The New Mexico Board of Nursing may **deny,** revoke or suspend any license held or *applied for* under the Nursing Practice Act, upon grounds that the licensee or applicant violates any of the following actions:

1. is guilty of fraud or deceit in procuring or attempting to procure a license or certificate of registration;
2. is unfit or incompetent;
3. is convicted of a felony;
4. is habitually intemperate or is addicted to the use of habit-forming drugs;
5. is mentally incompetent;
6. is guilty of unprofessional conduct; or
7. willfully or repeatedly violates any provisions of the Nursing Practice Act;
8. has had a license to practice revoked, suspended or denied in any jurisdiction, territory or possession of the United States or another country for acts of the license similar to acts described in this subsection.

(From BON Manual #91-2, 61-3-28)

Associate Degree in Nursing Program

Credit Hours

Required Liberal Arts Courses

BIO	237	Anatomy and Physiology I	3
BIO	247L	Anatomy and Physiology I Lab	1
ENG	101	College Writing	3
PSY	105	General Psychology	3
BIO	238	Anatomy and Physiology II	3
BIO	248L	Anatomy and Physiology II Lab	1
NUTR	225	Nutrition 244-125	3
PSY	220	Developmental Psychology	3
BIO	239	Microbiology for Health Sciences	3

BIO	239L	Microbiology for Health Sciences Lab	1
PHIL	245M	Biomedical Ethics	3
[2]Elective			3

Required Nursing Courses

NURS 115	Dosage Calculations	1
NURS 126C	Foundations of Nursing	8
NURS 127C	Family Nursing I	8
NURS 226C	Family Nursing II	10
NURS 227	Manager of Care	1
NURS 231	Pharmacology in Nursing	3
NURS 247C	Complex Health Problems in the Family	10
	Total	**71**

[1]NUTR 125 may be substituted if taken before Fall 1996.
[2]May be outside of Arts & Sciences with departmental approval; may not be a lab/ science course

Associate Degree in Nursing Advanced Placement

To apply for advanced standing in the Associate Degree Nursing program, individuals must meet the enrollment requirements for the program.

All advanced placement students must take NURS 202C prior to enrollment in the nursing courses.

Advanced placement may be granted in three ways:

Challenge: challenge exam for students who meet one of the following criteria: Completion of a formal course of study in a nursing related field within a postsecondary educational institution (e.g. military corps member), or performance of basic nursing skills during employment in an in-patient setting within the last three years. Individuals interested in challenging nursing coursework must make an appointment with the director of the nursing program to determine eligibility and to discuss the procedure. The challenge process includes theory and practical exams. Students should check with the department for courses that are available for challenge. A fee is charged for each challenge exam.

Transfer: transfer from an approved associate degree or baccalaureate nursing program with equivalent courses. To apply for transfer, the individual must submit evidence of completion of equivalent courses with minimum grades of C. Nursing courses are only valid for three years from the date of application. Transfer students are required to enroll a minimum of one term and complete 15 credit hours at TVI. For specific information, students should contact the director of the nursing programs.

LPN Mobility: The associate degree program is designed to enroll qualified licensed practical nurses into the third term who meet the following requirements:

- Meet all enrollment criteria for the ADN program including official transcripts of previous education in a vocational school or college.

- Pass the Nursing Mobility Profile I examinations as indicated by the program.
- Provide proof of completion or challenge of the following courses with a minimum grade of C (anatomy and physiology and microbiology courses must be taken within five years from the date of application to the nursing program):
  - —BIO 237/247L, Anatomy and Physiology I
  - —BIO 238/248L, Anatomy and Physiology II
  - —BIO 239/239L, Microbiology for Health Sciences
  - —ENG 101, College Writing
  - —PSY 105, General Psychology
  - —PSY 220, Developmental Psychology
  - —NUTR 225, Nutrition
  - —NURS 115, Dosage Calculations (CR/NC)
  - —NURS 202C, Concepts for Transition Students

Students are responsible for meeting the prerequisites and notifying the nursing director of their readiness to enter advanced placement at the beginning of the term just prior to when they want to enter. Students are notified by mail when they are selected to enter the clinical courses. Should the number of advanced placement students eligible to enroll exceed the class size, priority will be given to those students who have completed all required liberal arts courses and NURS 231. After selection for enrollment in the clinical courses, students must submit:

- Completed physical examination and health forms with evidence of current immunizations before beginning clinical courses. It is advisable that the student be able to lift 50 pounds or more.
- Evidence of current certification in cardiopulmonary resuscitation (CPR) before beginning clinical courses. CPR certification must be kept current throughout the program.

Upon enrollment into nursing courses students pay a total of $25 in equipment fees for parking, name tags, achievement tests and preventive lab tests in case of needle stick exposure (fees are attached to specific courses). Students also are responsible for the expenses of physical exams, uniforms, transfer belts, shoes, watch with a second hand, safety goggles, stethoscope, bandage scissors, graduation pin and licensing fees.

Course Descriptions

NURS 115 Dosage Calculations 1 credit hour

(Prerequisites: Nursing Basic Math Test and nursing director approval) Methods of dosage calculations for oral and parenteral medications, including intravenous therapy and pediatric dosages, are presented. The course is offered for CR/NC.

NURS 126C Foundations of Nursing 8 credit hours

(Prerequisites: nursing director approval, BIO 237/247L, ENG 101, PSY 105, NUTR 125; corequisites: NURS 115, BIO 238/248L, PSY 220) Foundations of nursing are reviewed including an introduction to the nursing process with a focus on assessment. Key concepts of basic and higher order needs within a caring framework are developed. Clinical focuses on assessment of healthy clients across the lifespan and measures to maintain/promote mental and physical health. (5 hours theory + 9 hours clinical)

NURS 127C Family Nursing I **8 credit hours**
(Prerequisites: BIO 238/248L, NURS 115, NURS 126C, PSY 220; pre- or corequisite: BIO 239/239L, PHIL 245M OR PHIL 156) Using nursing process, the childbearing and child rearing family are studied. Clinical focuses on experiences with maternity and pediatric clients in community and hospital settings. (4 hours theory; 12 hours clinical)

NURS 202C Concepts for Transition Students **2 credit hours**
(ADN Students: prerequisites: ENG 101, PSY 105, BIO 238/248L. PN Students: pre- or corequisites: ENG 101, NUTR 125, BIO 238/248L) The conceptual framework of the nursing program and an in-depth study of the nursing process are introduced. There is in-depth focus on assessment across the lifespan. This course is required for all applicants who seek advanced placement in the practical nurse or associate degree program. Course is only offered two times per year. (1 hour theory + 3 hours clinical)

NURS 226C Family Nursing II **10 credit hours**
(Prerequisites: Calculation Exam II, NURS 127C, BIO 238/248L, BIO 239/239L, ENG 101, NUTR 125, PSY 220; pre- or corequisite: NURS 231; corequisite: NURS 227)* This course is continued study of the family, using nursing process, focusing on the impact of illness on clients and their families. Clinical focuses on medical and surgical clients in community and hospital settings. (5 hours theory + 15 hours clinical)

NURS 227C Manager of Care **1 credit hour**
(Prerequisites: NURS 127C; corequisite: NURS 226C) This course introduces management principles to prepare the ADN nurse to manage care of groups of clients. Clinical application will be in NURS 226C.

NURS 231 Pharmacology in Nursing **3 credit hours**
(Prerequisites: BIO 238/248L, NURS 124C; pre- or corequisite: BIO 239/239L) Using nursing process concepts necessary for nursing judgment in the use of chemical agents and the theoretical base required to administer medications is introduced. Information covers drugs in current use, including pharmacokinetics, pharmacodynamics, therapeutic uses, adverse reactions, precautions and contraindications.

NURS 247C Complex Health Problems in the Family **10 credit hours**
(Prerequisites: Calculation Exam III, NURS 226C, NURS 227, NURS 231, elective)* This course studies complex, multi-system health problems and their impact on the individual and families. Content includes psychiatric disorders, cultural factors and practice issues. Clinical focuses on providing and managing care of clients across the lifespan. (5 hours theory; 15 hours clinical)

NURS 296 Topics in Nursing **1–10 credit hours**
(Prerequisites: may vary) Various topics in nursing are presented.

*Calculation exams must be passed with a score of 90% or higher.

Pharmacy Technician

Certificate program
Main Campus
Fall Term

The Pharmacy Technician program is a two-term certificate program that prepares persons to assist pharmacists in the community or hospital pharmacy. Students learn to prepare, mix, assemble and label medications. They also learn to prepare sterile products including irrigations and intravenous admixtures. Instruction is provided in the classroom, in laboratories on campus and in local healthcare facilities.

Enrollment in the Pharmacy Technician program requires a high school diploma or equivalent, the ability to read at an eighth-grade level and a passing score on the math placement test.

Arts & Sciences courses listed in the curriculum may be taken prior to entering the program. These courses must be completed with a grade of C or better. The TVI computer literacy requirement is met by completion of CSCI 101. This competency is required of all graduates of the Pharmacy Technician program.

There is a $35 uniform fee for one lab coat, name tag and parking fee. Students are also required to purchase their own textbooks.

Pharmacy Technician Program

Pharmacy Technician Courses

			Credit Hours
PT	110	Introduction to Pharmacy Technology	3
PT	111L	Pharmacy Technician Lab I	3
PT	115	Pharmacy Technician Anatomy and Physiology	3
PT	116	Pharmacy Calculations	2
PT	120	Advanced Pharmacy Technology	3
PT	121L	Pharmacy Technician Lab II	3
PT	122C	Pharmacy Technician Practicum	5
PT	125	Pharmacology for Pharmacy Technicians	3

Required Arts & Sciences Courses

*CHEM	111/112	Introduction to Chemistry	4
COMM	221	Interpersonal Communication Studies	3
CSCI	101	Computer Literacy	4
		Total	**36**

*Check prerequisite

PT 110 Introduction to Pharmacy Technology 3 credit hours
(Prerequisites: RDG 099 or equivalent, ENG 099 or equivalent, MATH 099 or equivalent, enrollment in the program; corequisites: PT 111L, PT 115, PT 116; pre-or corequisites: CHEM 111/112L, CSCI 101) This beginning course provides a discussion of the pharmacy technician's role, the Pharmacy Practice Act, ethics, prescription preparation and institutional drug distribution systems.

PT 111L Pharmacy Technician Lab I 3 credit hours
(Corequisite: PT 110, PT 115, PT116; pre- or corequisites: CHEM 111/112L, CSCI 101) This campus lab provides opportunities for skill development in prescription preparation including oral, parenteral and IV preparation. Medical terminology and infection control, including universal precautions, are also emphasized.

PT 115 Pharmacy Technician Anatomy and Physiology 3 credit hours
(Corequisites: PT 110, PT 111L, PT 116; pre- or corequisites: CHEM 111/112L, CSCI 101) This is an integrated study of the structures and function of the human body. Common disease entities related to body systems are presented.

PT 116 Pharmacy Calculations 2 credit hours
(Corequisites: PT 110, PT 111L, PT 115; pre- or corequisites:CHEM 111/112L, CSCI 101) This math course is designed to provide skills in pharmaceutical calculations for oral, parenteral and IV preparations.

PT 120 Advanced Pharmacy Technology 3 credit hours
(Prerequisites: PT 110, PT 111L, PT 115, PT 116, CHEM 111/112L, CSCI 101; corequisites: PT 121L, PT 122C, PT 125; pre- or corequisite: COMM 221) This course covers compounding and packaging of drugs, preparation of intravenous admixtures, inventory maintenance, clerical skills and institutional drug distribution processes.

PT 121L Pharmacy Technician Lab II 3 credit hours
(Corequisites: PT 120, PT 122C, PT 125; pre- or corequisite: COMM 221) This campus lab provides opportunities for skill development in compounding/reconstitution, labeling, aseptic technique, use of laminar flow hoods and use of the computer.

PT 122C Pharmacy Technician Practicum 5 credit hours
(Corequisites: PT 120, PT 121L, PT 125; pre- or corequisite: COMM 221) Students are assigned to institutional and community pharmacies for practical experience in applying what they have learned in classrooms and labs.

PT 125 Pharmacology for Pharmacy Technicians 3 credit hours
(Corequisites: PT 120, PT 121L, PT 122C; pre- or corequisite: COMM 221) This is a study of therapeutic drug categories.

Phlebotomy

Certificate Program
Main Campus
Fall, Spring Terms

The primary work of a phlebotomist is to draw blood specimens for testing from healthcare clients. A phlebotomist works full or part time in a medical laboratory under the supervision of a registered medical technologist.

The job includes establishing a professional relationship with the client, obtaining blood specimens by venipuncture and skin puncture procedures, performing bedside testing, preparing and maintaining equipment used to obtain blood specimens and perform bedside testing, entering data into the computer for the testing process and performing clerical duties related to laboratory test record keeping. The job also requires a lot of walking, bending and standing.

Enrollment in the Phlebotomy program requires a high school diploma or equivalent, the ability to read at the tenth-grade level and a passing score on the math placement test. Applicants are required to present evidence of current hepatitis B (HBV), tetanus, rubella and rubeola immunizations, PPD testing and certification in cardiopulmonary resuscitation (CPR) before beginning the clinical part of the course. Students should possess good organizational skills and the ability to prioritize duties, the ability to communicate with clients, basic math skills for timing tests and manual dexterity required to handle laboratory equipment. Students must be able to read and interpret orders associated with medical procedures.

To receive a certificate, a student must complete the 15-week, 375-hour program, which includes six weeks of classroom instruction in theory and lab and nine weeks of experience in local hospital and/or clinics, with a grade of C or better in all courses. The TVI computer literacy requirement may be met by completion of a computer course or by completion of learning modules in the Health Occupations computer lab. This competency is required of all graduates of the Phlebotomy program.

A $40 equipment fee covers the cost of a lab coat, health tests, name tags, parking fees and preventive lab tests in case of needle stick exposure. Students are also required to purchase textbooks.

This program does not qualify students for Veterans Administration benefits or other financial aid.

Phlebotomy Program

			Credit Hours
PHLB	101L	Phlebotomy Theory and Lab	7
PHLB	121C	Phlebotomy Clinical Practice	5
		Total	**12**

PHLB 101L Phlebotomy Theory and Lab **7 credit hours**

(Prerequisites: RDG 099 or equivalent, ENG 099 or equivalent, MATH 099 or equivalent, enrollment criteria for the program; corequisite: PHLB 121C) During this six-week class students learn the procedures for collecting blood and other specimens from patients. Theory associated with the procedures is stressed. An introduction to the anatomy and physiology of the major body systems, computer processes and laboratory clerical duties is also included. (10 theory + 15 lab hours a week)

PHLB 121C Phlebotomy Clinical Practice **5 credit hours**

(Prerequisite: CPR certification; corequisite: PHLB 101L) This is a nine-week class in which students practice skills and apply the theory learned in class during supervised clinical practice in city hospitals and/or clinics.

Respiratory Therapy

Associate of Science Degree
Main Campus
Fall Term

Respiratory care is a health profession which specializes in diagnostic testing, therapeutic treatment and critical care support for patients suffering from life-threatening or chronically disabling cardiopulonary disorders.

Under medical direction, the respiratory care practitioner applies medical and scientific knowledge to the assessment and treatment of clinical problems. Respiratory care practitioners monitor and evaluate cardiorespiratory function, perform diagnostic tests and treatments, research treatment effectiveness in cardiopulmonary disease and act as consultants to physicians, nurses and other healthcare specialists. Respiratory care practitioners manage respiratory care departments in hospitals and supervise other practitioners. The respiratory care practitioner also serves as educator to patients and the public and in formal training programs.

Employment opportunities for respiratory care practitioners are available in urban and rural healthcare facilities nationwide, including veteran and military base hospitals. Employment opportunities also exist with medical equipment suppliers and agencies providing home healthcare and rehabilitation services for pulmonary patients.

A respiratory therapist is a graduate of a two-year associate of science degree or four-year bachelor of science degree program and is capable of performing at the advanced level of respiratory care practice.

The Respiratory Therapy (RT) program presents the knowledge and skills required for diagnosis, treatment and care of patients with breathing problems. The two-year program includes classroom and laboratory instruction and supervised clinical experiences at local hospitals and other healthcare facilities. The program includes theory, laboratory and

clinical coursework progressing from entry level through the advanced practitioner level. The curriculum includes basic and advanced instruction in cardiorespiratory anatomy, physiology and pathophysiology. Coursework includes the study of critical care medicine, evaluation of cardiopulmonary function, respiratory home care, pulmonary rehabilitation and emphasis on developing problem-solving and decision-making skills for the advanced practitioner.

The RT program includes extensive instruction by faculty from the University of New Mexico Medical Center and School of Medicine. An associate of science degree is awarded upon completion of the curriculum, which includes Arts & Sciences requirements. Students will graduate under the catalog in effect when they begin clinical/core courses.

The Respiratory Therapy program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Joint Review Committee for Respiratory Therapy Education (JRCRTE). Graduates of this program are eligible to take the National Board for Respiratory Care Certification and Registry examinations to obtain Certified Respiratory Therapy Technician (CRTT) and Registered Respiratory Therapist (RRT) credentials. Successful completion of the certification exam qualifies individuals to become recognized as licensed Respiratory Care Practitioners (RCP) in New Mexico.

Orientation sessions for the Respiratory Therapy program are scheduled regularly; students should contact the Health Occupations Department for dates and times. Orientation sessions include detailed information about the petition and selection process, program requirements and general information about respiratory care as a career including the physical demands of the job. *Anyone interested in the Respiratory Therapy program is strongly encouraged to attend one of these orientation sessions. In addition, it is strongly recommended that applicants review prerequisites and program requirements with the Health Occupations counselor.*

To be *eligible to petition* for enrollment in RT courses students must:

- Declare RT as his or her major at TVI.
- Be a high school graduate or equivalent as stated on the TVI application.
- Meet math requirements with:
  a. qualifying score on the ACT or SAT (score may not be more than five years old) or
  b. qualifying score on the Accuplacer test (score may not be more than one year old) or
  c. successful completion of MATH 100 or
  d. successful completion of higher level math course (MATH 120)
- Achieve a TVI cumulative GPA of 2.0 or higher.
- Complete the following courses with a grade of C or better:
  a. BIO 123/124L (or its equivalent)
  b. ENG 101 (or its equivalent)
  c. PSY 105 or SOC 101 (or equivalent)
  d. CSCI 101 (or its equivalent)

The TVI computer literacy requirement will be met by completion of CSCI 101. This competency is required of all graduates of the Respiratory Care program.

Students are responsible for meeting the eligibility requirements. Once all requirements are fulfilled, students may petition for enrollment in the core courses of the RT curriculum.

If the number of eligible petitioners exceeds the number of positions available, preference is given to those who have completed all required Arts & Sciences courses for the RT curriculum. Petitioners are then ranked by date of completion of petition eligibility requirements. If necessary, petitioners are randomly selected. Additional positions may be made available for individuals with established residence in rural communities of New Mexico and the desire to return there for employment in respiratory care. The policy for admission to the program under this condition is available from the director of the Respiratory Care program.

Arts & Sciences courses listed in the curriculum may be taken prior to entering the program. It is highly recommended that students complete as many of the Arts & Sciences courses as possible prior to entering the RT core courses. *Priority for selection is based upon the number of required Arts & Sciences courses completed.*

Students selected to enroll in RT courses in the fall term must have a physical exam and submit a completed health form with evidence of current immunizations before beginning clinical courses.

Students pay a $90 fee when they begin the program to cover the cost of the required uniform, stethoscope, identification badges, CPR certification, parking fees and preventive lab tests in case of needle stick exposure. An additional $20 fee is required to continue coverage of parking fees and preventive lab tests during the second year of coursework. Students also pay a $75 fee when they begin their last clinical course to cover the cost of assessment exams to prepare for national board tests. Students keep their exams and scoring analyses for study after graduation. Additional student costs include purchase of bandage scissors, graduation pin, pre-entrance physical exam and textbooks.

Students must earn a minimum grade of C or better in all courses to advance to the next term and graduate.

A 2.0 GPA is required to graduate from the program.

Respiratory Therapy Program

			Credit Hours
RT	110	Respiratory Therapy Principles and Practices I	3
RT	111	Respiratory Therapy Principles and Practices II	3
RT	115L	Respiratory Therapy Lab I	1
RT	116L	Respiratory Therapy Lab II	1
RT	121C	Clinical Experiences I	5
RT	122C	Clinical Experiences II	5
RT	131	Physics of Respiratory Therapy	3
RT	133	Pharmacology of Respiratory Therapy	3
RT	210	Advanced Respiratory Therapy I	3
RT	215L	Advanced Respiratory Therapy Lab I	1
RT	221C	Advanced Clinical Experiences I	5
RT	211	Advanced Respiratory Therapy II	3
RT	216L	Advanced Respiratory Therapy Lab II	1
RT	222C	Advanced Clinical Experiences II	5
RT	212	Advanced Respiratory Therapy III	3

RT	217L	Advanced Respiratory Therapy Lab III	1
RT	223C	Advanced Clinical Experiences III	5

Required Arts & Sciences Courses

[2]BIO	136	Human Anatomy and Physiology	1
[2]BIO	139L	Human Anatomy and Physiology Lab	3
MATH	120	Intermediate Algebra	3-4
CHEM	111	Introduction to Chemistry	3
CHEM	112L	Introduction to Chemistry Lab	1
PHIL	245M	Biomedical Ethics	3
BIO	239	Microbiology	3
BIO	239L	Microbiology Lab	1
		Total	**69–70**

[1]A college physics course may be substituted for RT 131.
[2]BIO 237/247L and BIO 238/248L may be substituted for BIO 136/139L.

Note: Additional college courses may be substituted for transfer credit if completed at a regionally accredited college or university with a grade of C or better and equivalent content coverage of subject and credit hours. Official transcripts must be sent to the T-VI Records Office for consideration of transfer credit eligibility prior to admission to the program.

Suggested order of coursework: In order to satisfy prerequisite and corequisite requirements along with RT courses, the following order of coursework is recommended:

Fall Term:	RT 110, RT 115L, RT 121C, RT 131 and BIO 136/139L
Spring Term:	RT 111, RT 116L, RT 122C, RTT 133 and MATH 120
Summer Term:	RT 210, RT 215L, RT 221C, and PHIL 245M
Fall Term:	RT 211, RT 216L, RT 222C and CHEM 111/112L
Spring Term:	RT 212, RT 217L, RT 223C and BIO 239/239L

Respiratory Therapy Advanced Placement

There are two ways in which advanced placement can be granted to Respiratory Therapy applicants: transfer and challenge. Advanced placement means enrollment in RT coursework at or above the level of RT 210. Persons wanting to transfer or challenge RT courses should contact the Health Occupations Department.

Transfer: Transfer credit may be awarded for equivalent respiratory therapist coursework completed at other CAAHEP/JRCRTE accredited programs or equivalent arts and sciences coursework from other regionally accredited institutions. Credit will be given when the TVI Records Office receives official transcripts showing a grade of C or better on equivalent courses. Transfer applicants must provide documented evidence of completed respiratory therapy courses and prerequisite arts and science courses. Courses completed in an approved respiratory care program will be applied toward the associate of science degree.

Challenge: Technician graduates with documented work experience in respiratory care may apply to challenge portions of the RT curriculum. There is a $15 fee for each challenge exam.

Challenge and transfer applicants must submit transcripts of prior education and proof of high school graduation or GED. They must also meet all prerequisites for admission to the RT program including arts and science courses required for the associate in science degree in respiratory therapy.

Entry will be granted on a space available basis.

Course Descriptions

RT 110 Respiratory Therapy Principles and Practices I 3 credit hours
(Prerequisites: permission of program director and BIO 123/124L, CSCI 101, ENG 101, PSY 105 or SOC 101; corequisites: RT 115L, RT 121C, RT 131, BIO 136/139L) This course covers respiratory therapy as a health sciences profession. It also covers practices of basic respiratory care including cardiopulmonary assessment, medical gas administration, oxygen therapy, microbiology, infection control, equipment maintenance, incentive breathing exercises and chest physiotherapy.

RT 111 Respiratory Therapy Principles and Practices II 3 credit hours
(Prerequisites: BIO 136/139L, RT 110, RT 115L, RT 121C, RT 131; corequisites: RT 116L, RT 122C, RT 133, MATH 120) Additional theory of respiratory therapy procedures is presented with emphasis on positive pressure breathing treatments, airway management, pulmonary function testing, arterial puncture and blood gas analysis. The procedure of administering medicated aerosol therapy is taught.

RT 115L Respiratory Therapy Lab I 1 credit hour
(Corequisites: RT 110, RT 121C, RT 131) Students practice basic respiratory care procedures learned in RT 110, using state-of-the-art equipment in the learning laboratory under simulated patient situations.

RT 116L Respiratory Therapy Lab II 1 credit hour
(Corequisites: RT 111, RT 122C, RTT 133) Students practice additional respiratory care procedures learned in RT 111. Students use equipment in simulated patient situations.

***RT 121C Clinical Experiences I 5 credit hours**
(Corequisites: RT 110, RT 115L, RT 131) Supervised clinical experiences in the hospital setting allow students to apply knowledge and skills learned in classroom and laboratory sessions. Students apply basic respiratory therapy skills in direct patient contact situations supervised by clinical faculty members.

***RT 122C Clinical Experiences II 5 credit hours**
(Corequisites: RT 111, RT 116L, RT 133) Supervised clinical experiences continue in area hospitals and healthcare facilities.

RT 131 Physics of Respiratory Therapy 3 credit hours
(Corequisites: RT 110, RT 115L, RT 121C) Basic concepts of physics are covered relating to physiology of the lungs, gas laws, gas flow and mechanics of breathing. Concepts are applied to operation of respiratory therapy equipment. Basic math calculations are covered relating to respiratory physiology.

RT 133 Pharmacology of Respiratory Therapy 3 credit hours
(Corequisites: RT 111, RT 116L, RT 122C) Concepts and principles of pharmacologic agents used in cardiopulmonary care are presented. Coursework includes study of biologic interactions, dosage calculations, side effects and indications for using drugs in cardiopulmonary diseases. Application to respiratory care, therapeutic and diagnostic procedures is covered. Ethical and legal issues of drugs used in healthcare are covered.

RT 210 Advanced Respiratory Therapy I 3 credit hours
(Prerequisites: RT 111, RT 116L, RT 122C, RT 133; corequisites: RT 215L, RT 221C; corequisite: PHIL 245M) The course presents an integrated study of cardiopulmonary assessment and diagnosis for the advanced practitioner. Correlation of cardiopulmonary anatomy, physiology and pathophysiology with evaluation of cardiac and pulmonary function is presented.

RT 211 Advanced Respiratory Therapy II 3 credit hours
(Prerequisites: RT 210, RT 215L, RT 221C; corequisites: RT 216L, RT 222C, CHEM 111/ 112L) This course presents concepts of adult critical care medicine for the advanced practitioner. Topics cover adult intensive care and pathophysiology of diseases which require critical care medicine for adults.

RT 212 Advanced Respiratory Therapy III 3 credit hours
(Prerequisites: RT 211, RT 216L, RT 222C; corequisites: RT 217L, RT 223C, BIO 239/ 239L) This course presents concepts of critical care medicine for children and infants. An integrated study in the concepts of rehabilitative practice and home healthcare for patients with chronic cardiopulmonary diseases is provided.

RT 215L Advanced Respiratory Therapy Lab I 1 credit hour
(Corequisites: RT 210, RT 221C) Clinical assessment techniques, cardiopulmonary anatomy and physiology, pulmonary function testing and hemodynamic monitoring are presented using state-of-the-art equipment in the learning laboratory under patient simulated situations and using computer simulation. Instruction in advanced cardiac life support is provided.

RT 216L Advanced Respiratory Therapy Lab II 1 credit hour
(Corequisites: RT 211, RT 222C) Students practice mechanical ventilation procedures related to critical care medicine for adults. Activities include simulated patient situations using state of the art equipment in the learning laboratory and the use of computer simulation.

RT 217L **Advanced Respiratory Therapy Lab III** **1 credit hour**
(Corequisites: RT 212, RT 223C) Students practice mechanical ventilation procedures related to critical care medicine for children and infants. Activities include simulated patient situations using state-of-the-art equipment in the learning laboratory and the use of computer simulation.

***RT 221C** **Advanced Clinical Experiences I** **5 credit hours**
(Corequisites: RT 210, RT 215L) Students are supervised in the applications of advanced respiratory care in clinical settings with emphasis on problem-solving and decision-making skills. Experiences include cardiopulmonary function and evaluation activities. Related activities correlate the cardiopulmonary system in health and disease.

***RT 222C** **Advanced Clinical Experiences II** **5 credit hours**
(Corequisites: RT 211, RT 216L) Students are supervised in the clinical application of respiratory care in adult critical care environments. Emphasis is placed on development of problem-solving and decision-making skills, patient evaluation skills and the evaluation of therapeutic care plans.

***RT 223C** **Advanced Clinical Experiences III** **5 credit hours**
(Corequisites: RT 212, RT 217L) Students are supervised in the clinical application of respiratory care in pediatric and neonatal critical care environments and for home healthcare and pulmonary rehabilitation. Additional experiences are provided in special clinical areas chosen by each student.

RT Elective

RT 296 **Special Topics in Respiratory Care** **1–6 credit hours**
(Prerequisite: permission of program director) Students participate in supervised learning activities of advanced, specialized practices. Areas of focus include rural healthcare, interdisciplinary problem-based learning, cardiopulmonary diagnostics, specialized perinatal/pediatric or adult critical care and expanded practices of respiratory care. Students may take this course in preparation for national board exams or for challenge exams in the RT program.

*RT 121C, RT 122C, RT 221C, RT 222C, and RT 223C: During each term, students meet for formal lectures on the pathophysiology of the cardiopulmonary system. These lectures are given by the program's medical director and physicians from the UNM School of Medicine or other physicians in the community. Clinical pathologic disorders which require respiratory therapy diagnosis, treatment and care are covered. Students participate in problem-based learning sessions with physicians to discuss clinical cases. Students are required to develop written and verbal communication skills by completing case studies, article reviews and pathology reports. They must also present oral reports to the class and the medical director. Students develop interpersonal communication skills through patient interactions in the clinical settings. They also develop appropriate interactive communication skills during physician rounds supervised by the program's medical director.

Technologies

The high-skilled, high-tech jobs of the 21st century will demand specialized entry-level training and skill upgrading, and the Technologies Department offers both, along with state-of-the-art equipment to support them. Programs in the Technologies Department are among the longest at the Institute. The time necessary to complete most of the Technologies programs varies from 16 to 24 months depending on the student's course load.

To enter Technologies courses, the student must meet the prerequisites of MATH 100B or equivalent, reading at a minimum of eighth-grade level and CP 176L or equivalent.

Students in Electronics Technology, Business Computer Programming Technology or its Computer Animation/Graphics option, Manufacturing Technology and Architectural/Engineering Drafting Technology may choose to complete an associate of applied science degree or a certificate. Students in Electronics Technology must choose one of the four options: Consumer Electronics/Communication, Digital Computer Networking, Laser Electro-Optics or Process Control.

Because the Technologies programs are in high demand, interested persons should apply as early as possible.

Electronics Engineering Technology courses are offered at the Montoya Campus only. The Business Computer Programming Technology program is offered at both campuses. Other Technologies programs are offered only at the Main Campus. There are beginning groups in most Technologies majors each term.

Challenge examinations are available for most courses numbered below 200. The cost is $15 per examination.

A number of optional courses are available to enhance the education of those students meeting the prerequisites. Optional courses and courses numbered 200 or above may not be offered every term and are subject to cancellation before the first day of the term due to insufficient enrollment; a minimum of 12 students is required. Some credit courses are offered in the evening. Information is available in the Schedule of Classes each term.

Students enrolled in Technologies courses must purchase their textbooks, and some courses have a fee. Students needing financial support should contact the Financial Aid Office.

Students working toward an associate degree or a certificate must earn a grade of C or better in each Technologies course. Credit/no credit is not a grading option for students in Technologies courses except Manufacturing Skills.

Architectural/Engineering Drafting Technology

Associate of Applied Science Degree/
Certificate Program
Main Campus

Architectural/Engineering Drafting Technology offers career preparation for persons with a strong interest in building design and construction.

The program integrates mathematics, technical writing and blueprint reading into the technical courses at all levels. Computer applications are emphasized throughout the program. The curriculum includes the principles of architectural and engineering graphics and the theory and practice of construction technology. To prepare students for work in the construction industry, the development and use of communication, team work and problem solving skills are incorporated throughout the program.

Graduates are prepared for entry-level jobs as architectural or engineering drafting technicians in residential and commercial construction, and for estimating and sales positions with contractors, fabricators and suppliers. The potential for advancement into jobs with increasing responsibility and wider scope is good.

To enter Architectural/Engineering Drafting Technology courses the student must meet the prerequisites of MATH 100B, reading at a minimum of eighth-grade level, CP 176L or equivalent and ENG 100. If a student takes MATH 099 or MATH 100B it is recommended that he or she also take COMM 232 and/or PHIL 245T.

To receive an associate degree in Architectural/Engineering Drafting Technology a student must complete all required ARDR courses and the required Arts & Sciences courses. A grade of C or better in each ARDR course is required for either a certificate or degree. Students must purchase their own drafting tools.

Optional courses and courses numbered 200 or above may not be offered every term and are subject to cancellation before classes start due to insufficient enrollment. Optional courses are used to enhance the education of the student. These courses may be taken at any time when prerequisites are met. Entry into a course without the prerequisite may be allowed with the permission of the program advisor.

Because TVI strives to respond to changes in the workforce needs of the design professions and the construction industry, topics courses may be revised or added during the academic year. Students are encouraged to review the class schedule each term.

Architectural/Engineering Drafting Technology Program

Certificate and Associate Degree Program Prerequisites

ENG 100 or equivalent
MATH 100B or equivalent
CP 176L, Introduction to Microcomputers, or equivalent
Reading at a minimum of eighth-grade level

Courses Required for Certificate

			Credit Hours
Term 1			
ARDR	107L	Architectural Drafting I	7
ARDR	108	Architectural Mathematics	4
ARDR	109	Building Materials and Methods I	4
ARDR	176	Orientation to the Construction Industry	1
Term 2			
ARDR	213	CAD Analysis	4
ARDR	214L	Architectural CAD Drafting II	7
ARDR	115	Building Materials and Methods II	4
Term 3			
ARDR	119L	Architectural Drafting III	7
ARDR	182	Advanced CAD	3
BA	111	Communications (7.5 weeks)	2
or			
COMM	232	Business and Professional Communication Studies	3
BA	131	Human Relations (7.5 weeks)	2
or			
PHIL	245T	Ethics of Technology	3
		Total for Certificate	**45–47**

Courses Required for Associate Degree

Term 1			
ARDR	107L	Architectural Drafting I	7
ARDR	108	Architectural Mathematics	4
ARDR	109	Building Materials and Methods I	4
ARDR	176	Orientation to the Construction Industry	1
Term 2			
ARDR	213	CAD Analysis	4
ARDR	214L	Architectural CAD Drafting II	7
ARDR	115	Building Materials and Methods II	4

Term 3			
ARDR	119L	Architectural Drafting III	7
ARDR	182	Advanced CAD	3
ART	260	Architectural History: Ancient through Modern	3
PHYS	102	Introduction to Physics	3
Term 4			
ARDR	113	Site Analysis	2
ARDR	201	Structural Systems Analysis	4
ARDR	203L	Structural Systems Drafting	5
COMM	232	Business and Professional Communication Studies	3
MATH	120	Intermediate Algebra	3
Term 5			
ARDR	209L	Architectural Design	3
ARDR	212L	M/E Systems Drafting	5
ARDR	215	M/E Systems Analysis	4
ARDR	221	Architectural/Engineering Drafting Seminar	1
PHIL	245T	Ethics of Technology	3
or			
PSY	105	Introduction to Psychology	
		Total for Associate Degree	**80**

Optional Courses

ARDR	180	Fundamentals of Computer-Assisted Drafting	3
ARDR	181	Intermediate Computer-Assisted Drafting	3
ARDR	183	Fundamentals of Microstation Computer-Assisted Drafting	3
ARDR	184	Intermediate Microstation Computer-Assisted Drafting	3
ARDR	261L	Construction Surveying	3
ARDR	296	Topics	Variable
ARDR	297	Special Problems	Variable
ARDR	298	Internship	3
ARDR	299	Cooperative Education	3
CP	177L	Introduction to Computer Graphics	3
CP	178L	Computer Animation	3

Course Descriptions

ARDR 107L Architectural Drafting I 7 credit hours

(Pre- or corequisites: ARDR 108, ARDR 109, ARDR 176) The fundamentals of architectural graphic representation are introduced as the foundation of all A/E drafting courses. Basic common assembly systems are explored and schedules are introduced. (3 theory + 12 lab hours a week) Course fee: $15. Note: Students must provide their own drafting kits.

ARDR 108 Architectural Mathematics 4 credit hours
(Prerequisite: Math 100B) Basic concepts of geometry and trigonometry are covered with an emphasis on architectural and engineering applications and calculator use. Students must provide a full-function scientific calculator with a ten-digit display. (4 theory + 1 lab hours a week)

ARDR 109 Building Materials and Methods I 4 credit hours
(Prerequisites: CP 176L, ENG 100 and MATH 100B or equivalent; corequisites: ARDR 108, ARDR 176) Basic common materials, systems and assemblies with wide applications in the building industry are examined. (4 theory + 1 lab hours a week)

ARDR 113 Site Analysis 2 credit hours
(Prerequisites: ARDR 119L, ARDR 182, ART 260, PHYS 102) Analytical factors of site design are examined, such as orientation and view, sound and light intrusions, contours and grading, drainage and foliage. Planning aspects of site size are introduced. (1 theory + 4 lab hours a week)

ARDR 115 Building Materials and Methods II 4 credit hours
(Prerequisites: ARDR 107L, ARDR 108, ARDR 109, ARDR 176) This is a continuation of ARDR 109 with an intensified examination of interior and exterior finish materials and systems and an introduction to structural materials and systems. (4 theory + 1 lab hours a week)

ARDR 119L Architectural Drafting III 7 credit hours
(Prerequisites: ARDR 213, ARDR 214L, ARDR 115) In this continuation of ARDR 107L, the student develops representative architectural construction drawings and architectural detail drawings using the appropriate conventions of graphic, dimensioning and notation systems. (3 theory + 12 lab hours a week) Course fee: $15

ARDR 176 Orientation to the Construction Industry 1 credit hour
(Prerequisites: CP 176L, ENG 100 or equivalent) Students are introduced to the industry and the variety of jobs available. Topics include the construction environment, the related disciplines of architects, engineers, landscape architects, interior designers, contractors, suppliers, insurers and other consultants, and the drawings typical of each discipline.

ARDR 180 Fundamentals of Computer-Assisted Drafting 3 credit hours
(Prerequisite: CP 176L) The student is introduced to the fundamentals of computer assisted drafting using AutoCAD. (2 theory + 3 lab hours a week) Course fee: $15

ARDR 181 Intermediate Computer-Assisted Drafting 3 credit hours
(Prerequisite: ARDR 180) Topics covered include customized menu-making, attribute editing and extracting, and the drawing of isometrics using AutoCAD. (2 theory + 3 lab hours a week) Course fee: $15

ARDR 182 Advanced Computer-Assisted Drafting 3 credit hours
(Prerequisites: ARDR 213, ARDR 214L) This course is an introduction to three-dimensional CAD modeling using AutoCAD to enhance graphic representation and visualization. (2 theory + 3 lab hours a week) Course fee: $15

ARDR 183 Fundamentals of Microstation CAD 3 credit hours
(Prerequisite: CP 176L) The student is introduced to the fundamentals of computer-assisted drafting using Intergraph's Microstation CAD. (2 theory + 3 lab hours a week) Course fee: $15

ARDR 184 Intermediate Microstation CAD 3 credit hours
(Prerequisite: ARDR 183) Continuing ARDR 183 and Intergraph's Microstation software, topics include user interface development and introduction to three-dimensional design. (2 theory + 3 lab hours a week) Course fee: $15

ARDR 201 Structural Systems Analysis 4 credit hours
(Prerequisites: ARDR 119L, ARDR 182, ART 260, PHYS 102. Corequisite: ARDR 203L) The basic principles of physics as they apply to construction and structural analysis are covered. Students are introduced to structural design in wood, steel and concrete. Students learn to set up and solve elementary beam design problems. (4 theory + 1 lab hour a week)

ARDR 203L Structural Systems Drafting 5 credit hours
(Prerequisites: ARDR 119L, ARDR 182, ART 260, PHYS 102. Corequisites: ARDR 201, ARDR 113) Students are introduced to the conventions of structural drafting. They develop representative drawings of pre-cast and site-cast concrete, structural steel and heavy timber structures. Development of graphic skills in a variety of media is emphasized. Non-mathematical concepts of building structures and methods of construction are covered. (2 theory + 8 lab hours a week) Course fee: $15

ARDR 209L Architectural Design 3 credit hours
(Prerequisites: ARDR 113, ARDR 201, ARDR 203L, COMM 232, MATH 120) The student executes two- and three-dimensional abstract exercises that teach basic design concepts. These concepts are applied to various built environment circumstances. Sketch drawings and study models are made to develop and explain design concepts in specific applications. (2 theory + 3 lab hours a week) Course fee: $15

ARDR 212L M/E Systems Drafting 5 credit hours
(Prerequisites: ARDR 113, ARDR 201, ARDR 203L, COMM 232, MATH 120. Corequisite: ARDR 215) The student receives instruction in conventional drafting methods of mechanical and electrical systems including overlaying electrical, heating, ventilation and plumbing systems on architectural views. Engineering drawings are developed and engineering graphic skills are emphasized. (3 theory + 6 lab hours a week) Course fee: $15

ARDR 213 CAD Analysis **4 credit hours**

(Corequisite: ARDR 214L) Beginning to advanced CAD concepts and commands are applied to the production and coordination of A/E construction drawings. (4 theory + 1 lab hour a week)

ARDR 214L Architectural CAD Drafting II **7 credit hours**

(Prerequisite: ARDR 107L. Corequisite: ARDR 213) The student develops representative construction drawings using CAD software commonly employed in the A/E industry. (3 theory + 12 lab hours a week) Course fee: $15

ARDR 215 M/E Systems Analysis **4 credit hours**

(Prerequisites: ARDR 113, ARDR 201, ARDR 203L, COMM 232, MATH 120. Corequisite: ARDR 212L) General theory and layout information and code requirements for non-residential systems are studied. Topics include lighting, plumbing and air conditioning. (4 theory + 1 lab hour a week)

ARDR 221 Architectural/Engineering Drafting Seminar **1 credit hour**

(Pre- or corequisites: ARDR 209L, ARDR 212L, ARDR 215 and PSY 105 or PHIL 245T) The student develops a resume and presents a cumulative portfolio to a review committee. Needs, requirements, personnel procedures, expectations of employers and trends of the professional community are examined. (1 theory + 1 lab hour a week)

ARDR 261L Construction Surveying **3 credit hours**

(Pre- or corequisite: permission of program advisor) The student is introduced to the basic techniques and equipment used in surveying including tape, level and theodolite. Note-keeping methods are emphasized. Field work and related computations cover leveling, distance and angle measurement and traversing related to mapping. (1 theory + 6 lab hours a week)

ARDR 296 Topics **Variable credit hours**

(Prerequisite: permission of the program advisor) Topics offered depend on requests from the community and available instructors.

ARDR 297 Special Problems **Variable credit hours**

(Prerequisite: permission of the program advisor) The student and instructor define a specific problem in the area of the student's interest and directly related to the program. The student then develops and executes a solution using analytical and drafting techniques appropriate to the problem. An oral presentation may be required.

ARDR 298 Internship **3 credit hours**

(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate, defined training program. The position held by the student is not a paid position.

ARDR 299 Cooperative Education 3 credit hours
(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate, defined training program. The position held by the student is a paid position.

Business Computer Programming Technology

Associate in Applied Science Degree/
Certificate Program
Main and Montoya Campuses

In this program, students acquire the skills to solve information and management problems using computer hardware and software. Students have the choice of two concentrations: Business Computer Programming or Computer Animation/Graphics. Graduates are prepared for jobs as entry-level business applications programmers, or as computer animation and graphics technicians, which can be the first steps to a career in the computer field.

Computers currently used at TVI are the IBM ES-9000, IBM AS400, IBM microcomputers and compatibles and Silicon Graphics workstations. Mainframe, mini- and microcomputers and local area networks are used in Business Computer Programming courses.

Courses numbered below 200 give students a sound background in fundamental skills used on a wide variety of computers and computer-related equipment. Courses numbered above 200 continue to build computer application skills with emphasis on problem solving techniques and the interaction between people and machines/computers/technology. A mainframe environment is used to teach three widely used business programming languages while three additional languages are taught on microcomputers. Optional courses are available.

Students entering Business Computer Programming Technology courses must satisfy the prerequisites of MATH 100B, reading at a minimum of eighth grade level and CP176L. If a student takes MATH 099 or MATH 100B, it is recommended that the student also take the computer programming course from the Adult & Developmental Education Department and CP176L before taking courses within the major.

A grade of C or better in each Business Computer Programming course is required for a certificate or associate degree.

Some courses require payment of a fee at the beginning of the term, and students purchase their own textbooks.

Optional courses and courses numbered 200 or above may not be offered every term and are subject to cancellation before classes start due to insufficient enrollment. Some advanced courses may be offered at only the Main Campus or at the Montoya Campus but not both. Optional courses may not be used to replace technical electives.

Entry into a course without prerequisite classes may be allowed with the permission of the program advisor.

Business Computer Programming Technology

Certificate and Degree Requirements

Credit Hours

Required Business Computer Programming Concentration Courses

ACCT	101A	Accounting Principles I	3
CP	103	Mathematics for Computer Programmers	4
CP	105	Fundamentals of Computer Programming	6
+CP	101A	ANSI COBOL	3
	and		
+CP	101B	ANSI COBOL	3
	or		
+CP	101L	ANSI COBOL	6
CP	115	Internal Storage and File Structure	3
CP	116	Systems Analysis	3
CP	213	Database Concepts	3
CP	214L	RPG III/400 Programming	3
CP	175L	Introduction to C Language Programming	3
CP	283	Introduction to Computer Networks	3
	or		
ELEC	218	Computer Networking	3
CP	284L	Introduction to Visual Basic	3

Required 18 Credits Selected from Courses Below

+CP	111A	Advanced ANSI COBOL	3
	and		
+CP	111B	Advanced ANSI COBOL	3
	or		
+CP	111L	Advanced ANSI COBOL	6
CP	201L	Interactive Programming Techniques	3
CP	202L	Assembler Language Programming	6
CP	216L	Computer Operating Systems	3
CP	217L	Personal Computer Assembler Language	3
CP	218	Introduction to Client/Server Technology	3
CP	274L	Introduction to the UNIX Operating System	3
CP	278	Advanced C Language Programming	3
CP	280L	Advanced RPG III/400	3

Additional Certificate Requirements

BA	111	Communications (7.5 weeks)	2
	or		
ENG	101	College Writing	3
	or		
COMM	110	Mass Media and Society	3

BA	131	Human Relations (7.5 weeks)	2
	or		
PSY	105	Introduction to Psychology	3
	or		
COMM	232	Business and Professional Communication Studies	3
		Total Credits for Certificate	**62–64**

+Students may take either the A and B courses or the L course. To be given credit for the entire course, both the A and B courses must be passed with a C or better.

Additional Associate of Applied Science Degree Requirements

ENG	101	College Writing	3
ENG	119	Technical Communications	3
MATH	145	Fundamentals of Probability and Statistics	3
MATH	150	Advanced Algebra	3
	or		
MATH	180	Elements of Calculus I	3
Humanities Elective			3
Social Science Elective			3
		Total Credits for Degree	**76**

Computer Animation/Graphics Concentration Courses

Certificate and Degree Requirements

ACCT	101A	Accounting Principles I	3
CP	103	Mathematics for Computer Programmers	4
CP	105	Fundamentals of Computer Programming	6
CP	175L	Introduction to C Language Programming	3
CP	213	Database Concepts	3
CP	283	Introduction to Computer Networks	3
	or		
ELEC	218	Computer Networking	3
CP	284L	Introduction to Visual Basic	3
ELEC	217L	Computer Repair	3

Required 31 Credits Selected from Courses Below

ART	106	Drawing I	3
ART	121	Two-Dimensional Design	3
ART	122	Three-Dimensional Design	3
CP	177L	Introduction to Computer Graphics	3
CP	178L	Computer Animation	3
CP	274L	Introduction to the UNIX Operating System	3
CP	260L	Open GL/Open Inventor	3
CP	261L	Image Processing (Khoros)	3

CP	262L	Video Editing/Post Production	3
ELEC	276L	Soldering Techniques (7.5 weeks)	2
MMS	270	Interactive Multimedia I	3
MMS	280	Postscript Illustration	3
MMS	281	Image Manipulation/Painting	3
MMS	282	Digital Prepress	3

Additional Certificate Requirements

BA	111	Communications (7.5 weeks)	2
	or		
ENG	101	College Writing	3
	or		
COMM	110	Mass Media and Society	3
BA	131	Human Relations (7.5 weeks)	2
	or		
PSY	105	Introduction to Psychology	3
	or		
COMM	232	Business and Professional Communication Studies	3
		Total Credits for Certificate	**63–65**

Associate of Applied Science Degree Requirements

ENG	101	College Writing	3
ENG	119	Technical Communications	3
MATH	145	Fundamentals of Probability and Statistics	3
MATH	150	Advanced Algebra	3
	or		
MATH	180	Elements of Calculus I	3
Humanities Elective			3
Social Science Elective			3
		Total Credits for Degree	**77**

Recommended Arts & Sciences Electives

COMM	221	Interpersonal Communication Studies	3
MATH	180	Elements of Calculus I	3
PHIL	156	Logic and Critical Thinking	3
PSY	105	Introduction to Psychology	3

Optional Courses#

ARDR	180	Fundamentals of Computer-Assisted Drafting	3
CP	174L	BASIC Language Programming	3
CP	176L	Introduction to Microcomputers	
CP	177L	Introduction to Computer Graphics	3
CP	178L	Computer Animation	3

CP	279L	Advanced BASIC Language Programming	3
CP	281L	C++ Language Programming	3
CP	296	Topics	Variable
CP	297	Special Problems	Variable
CP	298	Internship	3
CP	299	Cooperative Education	3
DDET	286	Technical Modeling and Simulation	3
ELEC	217L	Computer Repair	3
ELEC	218	Computer Networking	3
ELEC	278	Modern Technological Advances	3
GIS	201	Introduction to Geographic Information Systems	3
GIS	202	Geographic Information Systems Software Applications I	3
GIS	203	Geographic Information Systems Software Applications II	3

#Optional courses are used to enhance the education of the student. These courses may be taken at any time when prerequisites are met.

Course Descriptions

CP 101A ANSI COBOL 3 credit hours

(Prerequisite: CP 105 or permission of program advisor) Elementary structured programming projects directly related to business and accounting applications are designed, coded, debugged and executed. (2 theory + 3 lab hours a week) Course fee: $10

CP 101B ANSI COBOL 3 credit hours

(Prerequisite: CP 101A) This course is a continuation of CP 101A. More advanced, structured programming projects are designed, coded, debugged and executed. (2 theory + 3 lab hours a week)

CP 101L ANSI COBOL 6 credit hours

(Prerequisite: CP 105) Students are required to write structured programming projects directly related to business and accounting applications. The projects are designed, coded, debugged and executed using a mainframe computer system. (4 theory + 6 lab hours a week) Course fee: $10

CP 103 Mathematics for Computer Programmers 4 credit hours

(Prerequisite: MATH 100B) Algebra fundamentals are covered in this course along with selected applications in business and management math. BASIC language programming is used to program some of the applications. (4 theory hours + 1 lab hour a week)

CP 105 Fundamentals of Computer Programming 6 credit hours

(Prerequisites: RDG 99 or equivalent, CP176L) This course includes computer vocabulary, operating system concepts, structured programming techniques, programming logic and control using BASIC. (4 theory + 6 lab hours a week) Course fee: $10

CP 111A **Advanced ANSI COBOL** **3 credit hours**
(Prerequisite: CP 101L) This course continues the development of structured programming skills developed in CP 101L with emphasis on indexed file processing. (2 theory + 3 lab hours a week) Course fee: $10

CP 111B **Advanced ANSI COBOL** **3 credit hours**
(Prerequisite: CP 111A) This course continues the development of structured programming skills developed in CP 111A with emphasis on file update and subprogram concepts. (2 theory + 3 lab hours a week)

CP 111L **Advanced ANSI COBOL** **6 credit hours**
(Prerequisite: CP 101L) Students continue the development of programming skills using the ANSI COBOL language. Emphasis is on sequential and indexed file processing, file maintenance, multi-dimensional table processing, sorts and interactive programming. (4 theory + 6 lab hours a week) Course fee: $10

CP 115 **Internal Storage/File Structure** **3 credit hours**
(Prerequisite: CP 105. Corequisite: CP 101L or permission of program advisor) Students study several common number systems, internal storage interpretation, control statements, utilities and file structures such as indexed files, linked lists, stacks and queues. (2 theory + 3 lab hours a week)

CP 116 **Systems Analysis** **3 credit hours**
(Prerequisites: CP 101L, ACCT 101A) This course teaches structured techniques of systems analysis and design. The systems life cycle is presented and several methods of analyzing existing systems are covered. (2 theory + 3 lab hours a week)

CP 174L **BASIC Language Programming** **3 credit hours**
(For non-Business Computer Programming students) This introduction to BASIC includes use of input and output statements, arithmetic operations, comparison and branching commands, use of subroutines and the library functions. Algorithms associated with technological computations are developed. (2 theory + 3 lab hours a week) Course fee: $10

CP 175L **Introduction to C Language Programming** **3 credit hours**
(Prerequisite: CP 105 or a programming language or permission of program advisor) This course is an introduction to C programming language using microcomputers. (2 theory + 3 lab hours a week) Course fee: $10

CP 176L **Introduction to Microcomputers** **3 credit hours**
Instruction is provided in computer vocabulary and students are introduced to MS-DOS, Windows, word processing and spreadsheets. (2 theory + 3 lab hours a week) Course fee: $10

CP 177L **Introduction to Computer Graphics** **3 credit hours**
(Prerequisite: CP176L, ART 106 or permission of program advisor) Various topical areas desirable in industry are explored. Training centers around X-Windows, Alias software

modeling and other bundled tools on the Silicon Graphics workstation. Additional lab participation hours outside of the class meeting time are required. (2 theory + 3 lab hours a week) Course fee: $15

CP 178L Computer Animation **3 credit hours**
(Prerequisite: CP 177L) Extensive instruction in the use of sophisticated computer graphics software involving modeling, rendering, morphing, animation, texture mapping and image processing leads to production of a VHS taped final project. Certification as an Alias Level I software user is awarded. Additional lab participation hours outside of the class meeting time are required. (2 theory + 3 lab hours a week)

CP 201L Interactive Programming Technique **3 credit hours**
(Prerequisites: CP 111L, CP 115) Students develop interactive business applications on the IBM mainframe in the VSE environment. Command level CICS and VSAM file structures are used in teaching the special requirements of interactive processing. (2 theory + 3 lab hours a week)

CP 202L Assembler Language Programming **6 credit hours**
(Prerequisites: CP 105, CP 115) Techniques necessary to write Assembler language programs are introduced on an IBM mainframe. (4 theory + 6 lab hours a week)

CP 213 Database Concepts **3 credit hours**
(Prerequisite: CP 105 or permission of program advisor) General concepts and organization of database systems are included along with practical application of database management systems through the use of networks, telecommunication lines, hardware and a database programming language. Microcomputers are used. (2 theory + 3 lab hours a week) Course fee: $10

CP 214L Report Program Generator III/400 **3 credit hours**
(Prerequisites: CP 105, ACCT101A) Students are introduced to the RPG III/400 programming language used in business organizations. Students become familiar with the basic coding parameters and code a variety of business functions. (2 theory + 3 lab hours a week)

CP 216L Computer Operating Systems **3 credit hours**
(Prerequisite: CP 115) This course covers topics designed to increase understanding of the use of microcomputers. It includes the study of operating systems and macro assembler programming. (2 theory + 3 lab hours a week) Course fee: $10

CP 217L Personal Computer Assembler Language **3 credit hours**
(Prerequisite: CP 202L) This course introduces the student to Assembler language programming using the microcomputer. (2 theory + 3 lab hours a week) Course fee: $10

CP 218 Introduction to Client/Server Technology 3 credit hours
(Prerequisite: CP 116 or permission of program advisor) The student is introduced to the concepts of client/server technology. (2 theory + 3 lab hours a week)

CP 260L Open GL/Open Inventor 3 credit hours
(Prerequisite: CP 284 or permission of program advisor) Training is provided in the use of this graphics library interface that runs on a wide variety of platforms. Students learn to write graphics applications using this object- oriented 3D graphics developer's toolkit. (2 theory + 3 lab hours a week)

CP 261L Image Processing 3 credit hours
(Prerequisite: CP 284 or permission from the program advisor) Instruction is provided in the use and applications of Khoros development environment. Applications include image processing, data manipulation and scientific visualization. (2 theory + 3 lab hours a week).

CP 262 Video Editing/Post Production 3 credit hours
(Prerequisite: CP 177L or permission of the program advisor) Training in nonlinear video editing techniques resulting in high quality post production output. Applications include video and audio editing skills, compositing, special effects and broadcast quality production procedures. (2 theory + 3 lab hours a week).

CP 274L Introduction to the Unix Operating System 3 credit hours
(Prerequisite: CP 115 or permission from the program advisor) Basic commands, mail, inter-terminal communication, the file system, redirected I/O, pipes and shell programming are covered. (2 theory + 3 lab hours a week) Course fee: $10

CP 278 Advanced C Language Programming 3 credit hours
(Prerequisite: CP 175L or permission of the program advisor) This class assumes considerable programming experience. Students write programs working with data structures such as stacks, linked lists, binary search trees and self-balancing trees. (2 theory + 3 lab hours a week) Course fee: $10

CP 279L Advanced BASIC Language Programming 3 credit hours
(Prerequisite: CP 105) Emphasis is on interactive programming, menu selection, search and retrieval routines, binary functions and graphics. (2 theory + 3 lab hours a week) Course fee: $10

CP 280L Advanced RPG III/400 3 credit hours
(Prerequisite: CP 214L) This course is a continuation of CP 214L with emphasis on file processing and interactive techniques. (2 theory + 3 lab hours a week) Course fee: $10

CP 281L C++ Language Programming 3 credit hours
(Prerequisite: CP 175 or permission of the program advisor) Programming principles of the computer language C++ are covered. This is an advanced programming class. (2 theory + 3 lab hours a week) Course fee: $10

CP 283 **Introduction to Computer Networks** **3 credit hours**

(Prerequisite: CP176L or permission of the program advisor) This course covers hardware, software and the concepts used in various networking schemes including token ring, Novell, Starlan and others. (2 theory + 3 lab hours a week)

CP 284 **Introduction to Visual Basic** **3 credit hours**

(Prerequisite: CP 105 or permission of program advisor) Students are introduced to the capabilities of the development environment and common programming techniques required to create simple, useful applications. (2 theory + 3 lab hours a week)

CP 296 **Topics** **Variable credit hours**

(Prerequisite: programming experience) The topic depends on the requests from the community. The offerings depend on the available software, hardware and instructors.

CP 297 **Special Problems** **Variable credit hours**

(Prerequisite: enrolled only in Business Computer Programming courses numbered 200 or higher and/or permission of the program advisor) The student and instructor define a specific problem in the area of the student's interest and directly related to the program. The student then develops and executes a solution using analytical techniques appropriate to the problem. An oral presentation may be required.

CP 298 **Internship** **3 credit hours**

(Prerequisite: permission of program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position is not paid.

CP 299 **Cooperative Education** **3 credit hours**

(Prerequisite: permission of program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position is a paid position.

GIS 201 **Introduction to Geographic Information Systems** **3 credit hours**

(Prerequisite: MATH 123, CP176L, GEOG 101, ARDR 180) This course will introduce the concepts of Geographic Information Systems including applications, components, mapping, topology, data and data capture.

GIS 202 **Geographic Information Systems Software with Application I** **3 credit hours**

(Prerequisite: GIS 201) The concepts of Geographic Information Systems with computer applications are introduced. Actual projects are developed using the computer and related hardware. (2 theory + 3 lab hours a week)

GIS 203 **Geographic Information Systems Software with Application II** **3 credit hours**

(Prerequisite: GIS 202, Programming Language or permission of program advisor) In this course students develop individual projects. (1 theory + 5 lab hours a week)

Design Drafting Engineering Technology

Associate of Applied Science Degree
Main Campus

Design Drafting Engineering Technology is a complex field for persons with a strong interest in electronics and/or mechanical design. The program places a heavy emphasis on mechanical design.

The program integrates the concepts of mathematics and science into the technical courses. The use of computer assisted design drafting (CADD) is emphasized and applied throughout the program.

A well-rounded curriculum enables graduates to seek employment with engineering and scientific research or manufacturing organizations. Modern drafting stations, drafting machines and other typical drafting equipment are used along with microcomputers. Students are encouraged to join the TVI chapter of the Society of Manufacturing Engineers (SME) and attend local SME seminars.

A grade of C or better in each design drafting course is required for a degree. Students must buy their own textbooks, drafting tools and a full function scientific calculator.

It is strongly recommended that all beginning students meet with the program advisor to plan an individual course of study. Optional courses and courses numbered 200 or above may not be offered every term and are subject to cancellation before classes start due to insufficient enrollment. Entry into a course without the necessary prerequisites may be allowed with the permission of the program advisor.

The Design Drafting Engineering Technology associate degree program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET).

Design Drafting Engineering Technology Program

			Credit Hours
DDET	101	Introduction to Engineering Technology	1
DDET	102L	Manufacturing Methods	3
MATT	173	Machine Tool Technology Skills	3
DDET	106L	Basic CADD	3
DDET	111L	Mechanical Detailing	3
DDET	114L	Structured Computer Programming	3
DDET	115L	Intermediate CADD	3

DDET	116L	Basic Electronic Drafting	3
DDET	201L	Descriptive Geometry	3
DDET	205L	Machine Design	4
DDET	206L	Jig and Fixture Design	4
DDET	211L	Electromechanical Drafting	3
DDET	212	Applied Engineering Mechanics	3
DDET	214L	Materials Science	4
DDET	215L	Technical Computer Applications	3
DDET	216L	Dimensional Metrology	4

Required Arts & Sciences Courses

ENG	101	College Writing	3
ENG	119	Technical Communications	3
Humanities/Social Science Elective			3
MATH	121	College Algebra	3
	or		
MATH	150	Advanced Algebra	4
MATH	162	Calculus I	4
	or		
MATH	180	Elements of Calculus	3
MATH	123	Trigonometry	2
PHYS	151/153L	General Physics I/Lab	4
PHYS	152/154L	Physics II/Lab	4
	or		
CHEM	121/121L	General Chemistry I/Lab	4

Total Credits for Degree 75–77

Optional Courses*

CP	177L	Introduction to Computer Graphics	3
CP	178L	Computer Animation	3
DDET	104L	Introduction to Technical Drafting	4
DDET	280	Introduction to Quality Assurance	3
DDET	281	Statistical Controls	3
DDET	283	Coordinate Measurement Machines	3
DDET	284	Geometric Dimensioning and Tolerancing	3
DDET	285	ASQC Certification Preparation	3
DDET	286	Technical Modeling and Simulation	3
DDET	291	Special Projects in CADD	3
DDET	296	Topics	Variable
DDET	297	Special Problems	Variable
DDET	298	Internship	3
DDET	299	Cooperative Education	3

ELEC	278L	Modern Technological Advances	3
WELD	170	Welding Skills Improvement	3

*Optional courses are used to enhance the education of the student. These courses may be taken at any time when prerequisites are met.

Course Descriptions

DDET 101 Introduction to Engineering Technology 1 credit hour
This is a required course for all Design Drafting Engineering Technology students and should be completed in the first term. This exploratory course exposes students to the field of engineering technology and introduces elementary concepts of product design and development, project management, quality control and team work in industry.

DDET 102L Manufacturing Methods 3 credit hours
(Pre- or corequisite: ENG 101) The student is introduced to manufacturing methods unique to modern industrial technology including machining, fabrication, hot and cold metal working processes, assembly operations and quality assurance. Properties of materials as affected by various manufacturing processes are introduced. (3 theory hours + 1 lab hour a week)

DDET 104L Introduction to Technical Drafting 4 credit hours
(Prerequisite: MATH 120 or ACT math score of 26 or equivalent) This is an introduction to fundamental drafting techniques including care and use of drafting equipment, lettering, sketching, linework, scaling and geometric construction. (3 theory + 3 lab hours a week)

DDET 106L Basic CADD 3 credit hours
(Corequisite: DDET 104L or permission of program advisor) Microcomputer CADD hardware and software are introduced including format and execution of basic command verbs, creation, editing and saving of drawing files, and generation of hard-copy output. (2 theory + 3 lab hours a week) Course fee: $15

DDET 111L Mechanical Detailing 3 credit hours
(Prerequisite: DDET 104L) This course introduces the student to the development of detail drawings including layout, view selection, notation, dimensioning, Y-14.5 tolerancing and revisions of mechanical parts. (2 theory + 3 lab hours a week)

DDET 114L Structured Computer Programming 3 credit hours
(Prerequisite: MATH 120) Beginning computer programming using engineering applications is the focus of this course. (2 theory + 3 lab hours a week) Course fee: $15

DDET 115L Intermediate CADD 3 credit hours
(Prerequisite: DDET 106L. Corequisite: DDET 111L) The student continues use of CADD software in an applied situation. Advanced drawings include insertions, layering, auto-dimensioning and constructing library files. (2 theory + 3 lab hours a week) Course fee: $15

DDET 116L Basic Electronic Drafting **3 credit hours**

(Prerequisite: DDET 104L) This course presents electronic drafting fundamentals including symbolic representation of electronic components and devices, block and connection diagramming, cable drawings and circuit schematics. Basic electronics theory and mathematics applications are included. (2 theory + 3 lab hours a week)

DDET 201L Descriptive Geometry **3 credit hours**

(Prerequisite: MATH 121 or MATH 150) A graphical analysis of the relationships among points, lines and planes in space is presented. Advanced applications of trigonometry to dynamic mechanisms and point locations are covered. (2 theory + 3 lab hours a week)

DDET 205L Machine Design Layout **4 credit hours**

(Prerequisites: MATT 173, DDET 111L, DDET 115L Corequisite: DDET 201L or MATH 123) Students apply machine design principles including fixed and removable fastening techniques, dimensioning and tolerancing for assembly; relational functions of bearings, gears, cams, belts, pulleys and shafts; and parts list development. Force vectors and stress and strain are introduced. Layout formats, part searches and material specifications are made for each design. (3 theory + 3 lab hours a week)

DDET 206L Jig and Fixture Design **4 credit hours**

(Prerequisite: DDET 205L) This design course centers around the science of three-dimensional location, clamping and holding of work for machining and assembly. Cams, levers, screwlocks, air and hydraulic devices are covered. Time evaluation and accuracy are included; time and motion considerations and datum planes are taught. (3 theory + 3 lab hours a week)

DDET 211L Electromechanical Drafting **3 credit hours**

(Prerequisite: DDET 205L) This course involves the study, experimentation, design and drafting of electromechanical devices and systems. Principal components of hydraulic, pneumatic drive systems and control devices are covered in a hands-on laboratory. A major design project is required. (1 theory + 5 lab hours a week)

DDET 212 Applied Engineering Mechanics **3 credit hours**

(Prerequisites: MATH 123, DDET 201L) Analyzing the forces on mechanical elements at rest and in motion is the focus of this course. The study of statics and complex forces on materials is included. (3 theory hours + 1 lab hour a week)

DDET 214L Materials Science **4 credit hours**

(Prerequisites: DDET 201L or MATH 123 and ENG 119) Students analyze and evaluate the engineering characteristics of materials used in modern manufacturing technology in typical applications. Mechanical, physical and chemical properties are included. A comprehensive research paper is required. (3 theory + 3 lab hours a week)

DDET 215L Technical Computer Applications 3 credit hours
(Prerequisite: DDET 115L) Students use the computer to solve engineering and related problems. (2 theory + 3 lab hours a week)

DDET 216L Dimensional Metrology 4 credit hours
(Prerequisite: DDET 111L or MATT 112) This laboratory and lecture course introduces students to the science of precision measure. Using a well equipped laboratory, students make direct and indirect measurements to 50 millionths of an inch. Measurements concentrate on linear and angular units. Students are introduced to equipment used in electrical, decibel and PPM measurements. Lab work includes SPC and CMM practicums. (3 theory + 3 lab hours a week)

DDET 280 Introduction to Quality Assurance 3 credit hours
(Permission of program advisor) This course examines the philosophies of Deming, Juran and Taguchi as they apply to quality in the workplace. Total Quality Management (TQM), self-directed teams and teamwork also are studied.

DDET 281 Statistical Controls 3 credit hours
(Prerequisite: any college algebra) The uses of hardware and software as they apply to quality assurance are featured in this course. Students study design of experiments, sampling techniques, SPC, control chart application and development and process reliability.

DDET 283 Coordinate Measurement Machines 3 credit hours
(Prerequisite: DDET 216L or permission of program advisor) This is an introductory course in the theory and operation of CMM equipment. Geometric dimensioning and tolerancing are applied to CMM inspection.

DDET 284 Geometric Dimensioning and Tolerancing 3 credit hours
(Prerequisite: DDET 111L or any training in ASME-Y14.5) This course covers the design and use of gauges, fixtures and tools for inspection using GD&T specifications to meet ASME-Y14.5 standards.

DDET 285 ASQC Certification Preparation 3 credit hours
(Prerequisite: must meet ASQC certification requirements) Students prepare for the ASQC certification examination.

DDET 286 Technical Modeling and Simulation 3 credit hours
(Prerequisite: CP176L or DDET 115) Students use 3DStudio software to create architectural walk-throughs, mechanical simulations and simple character animation. Concepts of lighting, material mapping and camera manipulation are explored. Additional lab hours outside of class time may be required. (2 theory + 3 lab hours a week)

DDET 291 Special Projects in CADD 3 credit hours
(Prerequisite: DDET 115L) This course involves project work in electromechanical drafting using advanced CADD concepts.

DDET 296 Topics **Variable credit hours**
(Prerequisite: permission of the program advisor) Topics offered depend on requests from the community and available instructors.

DDET 297 Special Problems **Variable credit hours**
(Prerequisite: permission of the program advisor) The student and instructor define a specific problem in the area of the student's interest and directly related to the program. The student then develops and executes a solution using analytical and drafting techniques appropriate to the problem. An oral presentation may be required.

DDET 298 Internship **3 credit hours**
(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position is not paid.

DDET 299 Cooperative Education **3 credit hours**
(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position is paid.

Electronics Engineering Technology

Associate of Applied Science Degree
Montoya Campus

The Electronics Engineering Technology program emphasizes the application of scientific and engineering methods along with related technical skills necessary to support engineering activity in research, development, production, maintenance and operation.

This program represents a rigorous, engineering-type course of study. Lectures, laboratory work and considerable homework provide the basis for developing the skills necessary for employment in a broad occupational area at levels between the electronics technician and the electrical engineer.

TVI laboratory facilities contain modern equipment for testing, troubleshooting, calibrating, analyzing and designing electronic circuits. Such circuits may be found in communications equipment, computers, electronic instruments and many other electronic devices.

Students applying for this program should be seriously interested in the study of electronics with emphasis on mathematics and science and should have high standards of excellence.

It is strongly recommended that all beginning students meet with the program advisor to plan an individual course of study. Technical elective courses and courses numbered 200 or above may not be offered every term and are subject to cancellation before classes start due to insufficient enrollment.

Pre- or corequisites for Electronics Engineering Technology courses may be waived by the program advisor for a student who has related experience and/or course work. Credit for an EET course may be given if an official transcript from another institution indicating an equivalent course is approved by the program advisor and department dean. Credit for an EET course may be given by passing a challenge exam. A grade of C or better in each EET course is required for a degree.

Students in this program are required to purchase all textbooks, laboratory manuals, calculator and drafting tool kit.

The Electronics Engineering Technology associate degree program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET).

Electronics Engineering Technology Course Offerings by Term

EET	107L	109L	113L	117L	119L	207L	208L	209L	218L	219L
Fall	E	A				A	E	A	A	E
Spring	A	E	A	A	A				E	A
Summer			A	E	E	E	A	E		

E = Evening Hours A = Afternoon Hours

Electronics Engineering Technology Program

			Credit Hours
EET	107L	Graphics and Analytical Methods	3
EET	109L	Circuit Analysis I	5
EET	113L	Structured Computer Programming	3
EET	117L	Digital Electronics I	3
EET	119L	Circuit Analysis II	5
EET	207L	Digital Electronics II	3
EET	208L	Microprocessors	4
EET	209L	Electronic Devices	5
EET	218L	Microprocessor Interfacing	3
EET	219L	Electronic Systems	5
Technical Elective			3

Required Arts & Sciences Courses

CHEM	111/112L	Introduction to Chemistry/Lab	4
	or		
CHEM	121/121L	General Chemistry/Lab	4
ENG	101	College Writing	3
ENG	119	Technical Communications	3
Humanities/Social Science Elective			3

* MATH	121	College Algebra	3
	or		
* MATH	150	Advanced Algebra	4
*MATH	123	Trigonometry or Trigonometry Proficiency Test	2
*MATH	162	Calculus I	4
	or		
*MATH	180	Elements of Calculus I	3
PHYS	151/153L	Physics I/Lab	4
	or		
PHYS	160/163L	General Physics I/Lab	5
		Total Credits for Degree	**67–70**

* A minimum of eight credit hours in math above MATH 120 are required for graduation.

Technical Electives

EET	296	Topics	Variable
EET	297	Special Problems	Variable
EET	298	Internship	3
EET	299	Cooperative Education	3
PC	201	Electromechanical Systems	3

Any advanced course offered by the Technologies Department or any physical science or computer science course or mathematics course above that which is required.

Course Descriptions

EET 107L Graphics and Analytical Methods 3 credit hours
(Pre- or corequisite: MATH 150 or MATH 121) Mechanical and electronic drafting methods, including schematic preparation, printed circuit layout, chassis definition and wiring, are studied. Lab time is devoted to the development of skills and techniques required to prepare drawings. In addition, students gain experience in word processing, spreadsheet preparation, graphics, data base preparation and CAD. (2 theory + 3 lab hours a week) Course fee: $15

EET 109L Circuit Analysis I 5 credit hours
(Pre- or corequisites: ENG 101, EET 107L, MATH 150 or MATH 121) Passive DC circuits are analyzed using Ohm's Law, Kirchhoff's Laws, source conversions, network theorems and branch/mesh/nodal analysis. Transient analysis of R-C and R-L circuits is presented along with concepts of energy, power and efficiency. Computers are used for spreadsheet preparation, graphics and word processing. (3 theory + 5 lab hours a week)

EET 113L Structured Computer Programming 3 credit hours
(Prerequisite: MATH 121 or MATH 150) This is a course in beginning computer programming using engineering applications. (2 theory + 2 lab hours a week) Course fee: $15

EET 117L **Digital Electronics I** **3 credit hours**
(Prerequisite: EET 109L) Combinational logic and integrated circuits are analyzed and designed using Boolean algebra, Karnaugh maps and logic diagrams. Number systems, binary codes and code conversions are studied along with flip flops, multivibrators and circuit applications. Lab work emphasizes wiring and troubleshooting skill development while confirming circuit design objectives. (3 theory + 1 lab hours a week)

EET 119L **Circuit Analysis II** **5 credit hours**
(Prerequisite: EET 109L. Pre- or corequisites: ENG 119, MATH 123, MATH 162 or MATH 180) Passive AC circuits with dependent and independent sources are studied along with network theorems, phasor analysis, AC measurements, power factor analysis/correction, sweep generation usage and Fourier series. Computers are used for complex mathematical problem solving, spreadsheet preparation, graphics, word processing and CAD. (3 theory + 5 lab hours a week)

EET 207L **Digital Electronics II** **3 credit hours**
(Prerequisite: EET 117L) Logic circuit decoders, encoders, multiplexers, counters and registers are studied along with ADCs, DACs, RAM, ROM and applications.
(3 theory + 1 lab hours a week)

EET 208L **Microprocessors** **4 credit hours**
(Prerequisite: EET 113L. Pre- or corequisite: EET 207L) Microprocessors and microcomputers are studied in depth with emphasis on machine and assembly language programming. Interrupts and DOS entry points are introduced. (3 theory + 3 lab hours a week)

EET 209L **Electronic Devices** **5 credit hours**
(Pre- or corequisite: EET 119L) Diodes, bipolar transistors, FETs and circuits including rectifiers, zener diode regulators, clippers, clampers and amplifiers are studied. Transistor modeling and circuit analysis/design are stressed along with computer use for circuit analysis, spreadsheet preparation, graphics and word processing. (3 theory + 5 lab hours a week)

EET 218L **Microprocessor Interfacing** **3 credit hours**
(Prerequisites: EET 208L, EET 209L) I/O devices including printers, terminals and proto board circuits are interfaced to a microcomputer. Each student makes an oral presentation and prepares documentation describing system operation and organization along with block diagrams, schematics and structured software. (2 theory + 2 lab hours a week)

EET 219L **Electronic Systems** **5 credit hours**
(Prerequisite: EET 209L) Electronic system schematics are studied along with frequency considerations, decibel usage, differential and operational amplifiers, power supplies, thyristors, PLLs, oscillators and feedback concepts. Each student prepares a technical manual for a computer-controlled system. Video monitor basics and introductory transmission line theory are presented. Computers are used for advanced circuit analysis, instrument control, data logging and word processing. (3 theory + 5 lab hours a week)

EET 296 Topics **Variable credit hours**
(Prerequisite: Open to advanced Electronics students) The topics depend on the requests from the community.

EET 297 Problems **Variable credit hours**
(Prerequisite: enrolled only in 200-level technical courses and/or permission of the program advisor) The student and instructor define a specific problem in the area of the student's interest and directly related to the program. The student then develops and executes a solution using analytical and computer-aided techniques appropriate to the problem. An oral presentation may be required.

EET 298 Internship **3 credit hours**
(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position the student holds is not a paid position.

EET 299 Cooperative Education **3 credit hours**
(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position is paid.

Electronics Technology

Associate of Applied Science Degree/
Certificate Program
Main Campus

The Electronics Technology program, offering both certificate and associate degree options, provides the student with a broad base of skills in analog and digital electronics with electro-mechanical and computer applications. To receive a certificate in Electronics Technology, the student must complete the occupational core program and a concentration in one of four areas—Digital Computer Networking, Laser Electro-Optics, Process Control or Consumer Electronics/Communication—plus additional requirements. An associate of applied science degree in electronics technology will be awarded upon completion of the occupational core program, a concentration in one of the four areas and the Arts & Sciences component.

Training is provided in the fundamental concepts of electronics with emphasis on digital equipment such as computers and electronic control devices. Circuits which have application in the semiconductor, digital equipment manufacturing, measurement and control, communications and display industries are studied.

Laboratory facilities contain modern equipment for testing, troubleshooting, calibrating, analyzing and designing electronic systems. Such systems include communications equipment, computers, electronic instruments and electro-mechanical equipment.

Students entering Electronics Technology courses must meet the prerequisites of MATH 100B and reading at a minimum of eighth-grade level. **CP176L or equivalent is also required before taking 200-level courses.** If a student takes MATH 099 or MATH 100B, it is recommended that he or she also take ELEC 100 from the Adult & Developmental Education Department, CP176L and ENG 100 before taking courses within the major.

A grade of C or better in each electronics course is required for a degree or certificate. Optional courses and courses numbered 200 or above may not be offered every term and are subject to cancellation before classes start due to insufficient enrollment. Entry into a course without the prerequisite may be allowed with the permission of the program advisor.

Electronics Technology

Certificate and Degree Core Requirements

			Credit Hours
†ELEC	103A	DC Electronics	4
	and		
†ELEC	103B	AC Electronics	4
	or		
ELEC	103L	Electronics Fundamentals	8
ELEC	104	Technical Mathematics	5
ELEC	105L	Digital Circuits	4
ELEC	111L	Introduction to Photonics	4
†ELEC	114A	Semiconductor Devices	3
	and		
†ELEC	114B	Semiconductor Devices	4
	or		
ELEC	114L	Semiconductor Devices	7
†ELEC	118A	Electromechanical Devices	3
	and		
†ELEC	118B	Electromechanical Devices	3
	or		
ELEC	118L	Electromechanical Devices	6
†ELEC	203A	Introduction to Microprocessors	3
	and		
†ELEC	203B	Introduction to Microprocessors	3
	or		
ELEC	203L	Introduction to Microprocessors	6
ELEC	205L	Analog Circuits	6
ELEC	214L	Troubleshooting Techniques	3

†The student must pass both the A and B courses with a C or better in order to be given credit for the entire course.

Concentration Options for Certificate or Degree

Consumer Electronics/Communication

CEC	201	RF/Modulation	3
ELEC	216	Consumer Electronics	6
ELEC	217	Computer Repair and Fabrication	3
ELEC	218	Computer Networking	3
Technical Elective			3

Digital Computer Networking

CEC	201	RF/Modulation	3
DIG	211	System Fabrication	3
DIG	212	Electronic System Applications	6
DIG	215	Advanced Digital Processes	6

Laser Electro-Optics

LEOT	205L	Introduction to Laser Systems	4
LEOT	206	Optics	6
LEOT	217L	Advanced Laser Systems with Applications	6
PC	212L	Vacuum Systems	2

Process Control

PC	201	Electromechanical Systems	3
PC	211	Power RF	2
PC	212L	Vacuum Systems	2
PC	203	PLC Theory and Applications	2
PC	204	Feedback Theory and Applications	2
PC	205	Sensor Theory and Applications	2
Five additional credits from among these courses:			
PC	206	CIM Theory and Applications	2
PC	207	Mobile Robot Design and Construction	2
PC	208	Industrial Robot Theory and Applications	2
SMT	201/201L	Semiconductor Manufacturing Technology I Theory/Lab	3
SMT	211/211L	Semiconductor Manufacturing Technology II Theory/Lab	3

Additional Certificate Requirements

BA	111	Communications (7.5 weeks)	2
	or		
ENG	101	College Writing	3
BA	131	Human Relations (7.5 weeks)	2
	or		
PSY	105	Introduction to Psychology	3

Total Credits for Certificate 71–73

Additional Degree Requirements

ENG	119	Technical Communications	3
CHEM	111/112L	Introduction to Chemistry/Lab	4
	or		
CHEM	121/121L	General Chemistry/Lab	4
Humanities/Social Science Elective			3
MATH	162	Calculus I	4
	or		
MATH	180	Elements of Calculus	3
	or		
MATH	150	Advanced Algebra	4
	or		
MATH	145	Introduction to Probability and Statistics	3
PHYS	151/153L	Physics I/Lab	4
	or		
PHYS	160	General Physics	4
	Total Credits for Degree		**84–85**

Optional Courses#

CP	175L	C Language Programming	3
CP	176L	Introduction to Microcomputers	3
CP	177L	Introduction to Computer Graphics	3
CP	178L	Computer Animation	3
CP	274L	Introduction to the Unix Operating System	3
ELEC	276L	Soldering Techniques (7.5 weeks)	2
ELEC	278	Modern Technological Advances	3
ELEC	279	Electronics Refresher	3
ELEC	282	Pulse Power	3
ELEC	296	Topics	Variable
ELEC	297	Special Problems	Variable
ELEC	298	Internship	3
ELEC	299	Cooperative Education	3
FS	203	Hazardous Materials	3

#Optional courses are used to enhance the education of the student. These courses may be taken at any time when prerequisites are met.

Course Descriptions

CEC 201 RF/Modulation 3 credit hours

(Corequisite: ELEC 205L) This is an introduction to radio frequency communication theory, circuits and problems. Topics include electromagnetic interference, analog modulation/demodulation techniques, transmission lines and antennas. (2 theory + 3 lab hours a week)

DIG 211 System Fabrication **3 credit hours**

(Recommended corequisite: ELEC 203L) Students study microcomputer architecture from a systems approach. They assemble and troubleshoot their own microcontroller, modem and Ethernet interface. This course is offered in the summer and fall terms only. (2 theory + 3 lab hours a week) Course fee: $30

DIG 212 Electronic System Applications **6 credit hours**

(Prerequisite: ELEC 203L, ELEC 205L) This course covers op amp theory, applications and limitations, analog circuit analysis and filtering techniques, including passive, active and digital filters. Interfacing methods between analog signals and digital computers are presented. Topics include address decoding, DAC and ADC applications, parallel and serial interfaces and transmission line theory. Offered fall and spring terms only. (4 theory and 6 lab hours a week)

DIG 215L Advanced Digital Processes **6 credit hours**

(Prerequisite: ELEC 203L, DIG 211) This is a systems approach to PC architecture, custom configuration and I/O. Students configure, construct, maintain and troubleshoot networks in Unix and MS-DOS environments. The students use the network for data acquisition, remote I/O and PLC programming. This course will be offered in the fall and winter terms only. (4 theory + 6 lab hours a week)

ELEC 103A DC Electronics **4 credit hours**

(Recommended corequisite: ELEC 104 or strong mathematics background or permission of program advisor) The basic concepts of DC electronics with emphasis on Ohm's Law, Kirchhoff's Law, circuit analysis and component application with troubleshooting are covered. Through laboratory exercises students obtain skills in constructing circuits from schematic diagrams and in the use of multimeters. (3 theory + 3 lab hours a week) Course fee: $15

ELEC 103B AC Electronics **4 credit hours**

(Prerequisite: ELEC 103A) This course covers the basic concepts of AC electronics with emphasis on Ohm's Law, Kirchhoff's Law, circuit analysis and component application. Through laboratory exercises students obtain skills in constructing, analyzing and troubleshooting AC circuits with the use of multimeters, oscilloscopes and function generators. (3 theory + 3 lab hours a week)

ELEC 103L Electronics Fundamentals **8 credit hours**

(Recommended corequisite: ELEC 104 or strong mathematics background) The basic concepts of DC and AC electronics with emphasis on Kirchhoff's Law, circuit analysis and component application with troubleshooting are covered. Students obtain skills in the use of oscilloscopes, function generators and multimeters in laboratory exercises and in constructing circuits from schematic diagrams. ELEC 103L = ELEC 103A + ELEC 103B (5 theory + 9 lab hours a week) Course fee: $15

ELEC 104 Technical Mathematics **5 credit hours**
(Prerequisite: MATH 100B) This course covers algebra and trigonometry and their application to various technologies.

ELEC 105L Digital Circuits **4 credit hours**
(Recommended corequisite: ELEC 104 or strong mathematics background) The fundamental concepts and applications of digital logic circuits are covered along with number systems and Boolean algebra. The basic logic gates and MSI, LSI circuits are used to develop operational digital circuits. (4 theory + 1 lab hours a week)

ELEC 111L Introduction to Photonics **4 credit hours**
(Prerequisite: ELEC 103L. Corequisite: ELEC 105L) Fiber optics and optical transducer theory are studied including the basics of laser safety and operation. Laboratory experiments in all three areas strengthen concepts. (3 theory + 3 lab hours a week)

ELEC 114A Semiconductor Devices **3 credit hours**
(Prerequisites: ELEC 103L, ELEC 104) The basic concepts and applications of semiconductors, rectifier circuits, transistor biasing techniques, AC circuits and transistor regulated power supplies are covered. (2 theory + 3 lab hours a week)

ELEC 114B Semiconductor Devices **4 credit hours**
(Prerequisite: ELEC 114A) This course covers field effect transistor circuits, op-amp theory, linear and non-linear op-amp circuits and frequency effects.
(3 theory + 3 lab hours a week)

ELEC 114L Semiconductor Devices **7 credit hours**
(Prerequisites: ELEC 103L, ELEC 104) Semiconductor devices, diodes, transistors, op-amps and JFETS, and their application in simple power supplies and amplifiers are introduced. Students obtain skills in constructing, analyzing and troubleshooting semiconductor circuits. (5 theory + 5 lab hours a week)

ELEC 118A Electromechanical Devices **3 credit hours**
(Prerequisites: ELEC 103L, ELEC 104) The basic principles and components of hydraulic and pneumatic systems are introduced. In laboratory experiments students study component operation and principle application. (2 theory + 3 lab hours a week)

ELEC 118B Electromechanical Devices **3 credit hours**
(Prerequisites: ELEC 118A, ELEC 105L) This course covers various control circuits for DC and AC motors and stepper motors. In laboratory experiments students analyze and troubleshoot servosystems for motor speed and positioning control. (2 theory + 3 lab hours a week)

ELEC 118L Electromechanical Devices **6 credit hours**
(Prerequisites: ELEC 103L, ELEC 104, ELEC 105L) Theory and application of mechanical devices and their control circuits are presented. Topics include hydraulics, pneumatics,

vacuum, AC and DC motors, stepper motors and servomechanisms. Students obtain skills in the assembly, operation and troubleshooting of small-scale electromechanical systems. (4 theory + 6 lab hours a week)

ELEC 203A Introduction to Microprocessors 3 credit hours
(Prerequisites: ELEC 118L, CP176L) This course covers the organization of a microcomputer using the 8088 CPU, memory and I/O devices. Programs are written in Assembler language and in a higher level language to drive the PC's serial I/O, parallel printer port and disk drives. (2 theory + 3 lab hours a week)

ELEC 203B Introduction to Microprocessors 3 credit hours
(Prerequisite: ELEC 203A) The students build individual buffered interfaces that connect with the PC's I/O backplane for their custom I/O applications. (2 theory + 3 lab hours a week)

ELEC 203L Introduction to Microprocessors 6 credit hours
(Prerequisites: ELEC 118L, CP176L) The course centers on the 8088 microprocessor in an MS-DOS environment. Programs are written in Assembly language and in a higher level language to drive the PC's serial, I/O, parallel printer port and disk drives. The students build individual buffered interfaces that connect with the PC's I/O backplane for their custom I/O applications. (4 theory + 6 lab hours a week)

ELEC 205L Analog Circuits 6 credit hours
(Prerequisite: ELEC 114L) Circuitry involved in an analog system is covered. Discrete transistor circuits and classes of operation are studied. Signal generation and active filters using operational amplifiers are presented. Fundamentals of modulation and demodulation are also covered. (4 theory + 6 lab hours a week)

ELEC 214L Troubleshooting Techniques 3 credit hours
(Prerequisite: ELEC 205L or equivalent) Students apply troubleshooting techniques to a complete electronic system. Emphasis is on systematic analysis to locate problems. (2 theory + 3 lab hours a week)

ELEC 216 Consumer Electronics 6 credit hours
(Prerequisite: ELEC 205L or permission of program advisor) This is a study of televisions, video camcorders and video recording methods and equipment with an emphasis on alignment, troubleshooting and repair. This course is offered every other term. (4 theory + 6 lab hours a week)

ELEC 217 Computer Repair and Fabrication 3 credit hours
(Prerequisite: CP176L or permission of program advisor) Basic aspects of computer repair, troubleshooting techniques with and without software, modifications and replacement are covered. The emphasis is on microcomputers and related hardware. This course is offered every other term. (2 theory + 3 lab hours a week) Course fee: $15

ELEC 218 Computer Networking 3 credit hours
(Prerequisites: ELEC 203L, CP176L) A study of encoding schemes and protocols involved in networking microcomputers is presented. Students are exposed to various networking schemes but concentrate on Ethernet. Lab consists of constructing an Ethernet LAN, writing drivers in a high-level computer language and studying data transfers with diagnostic equipment. (2 theory + 3 lab hours a week)

ELEC 276L Soldering Techniques (7.5 weeks) 2 credit hours
Students use a modern repair center to learn high-reliability soldering and desoldering techniques. Non-destructive printed circuit board repairs and component replacement techniques also are used. (1 theory + 4 lab hours a week) Course fee: $15

ELEC 278 Modern Technological Advances 3 credit hours
Various topics on the forefront of today's technology are explored. Subjects include superconductivity, cryogenics, fiber optics applications, microelectronics, photonics, material interactions, holography, non-destructive testing, optical computing, chaos and computer graphics.

ELEC 279 Electronics Refresher 3 credit hours
(Prerequisite: graduate of an electronics program or equivalent) This is a review of electronics, including basics, semiconductors, op-amps, digital electronics and microprocessors.

ELEC 282 Pulsed Power 3 credit hours
(Prerequisite: ELEC 114L or permission of advisor) The generation, transmission and measurement of high-voltage, pulsed power systems are studied.

ELEC 296 Topics Variable credit hours
(Prerequisite: advanced Electronics student) The topics depend on the requests from the community.

ELEC 297 Special Problems Variable credit hours
(Corequisites: ELEC 203L and permission of program advisor) The student is given a problem to investigate and solve. The student then designs the solution using a combination of techniques.

ELEC 298 Internship 3 credit hours
(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position held by the student is not a paid position.

ELEC 299 Cooperative Education 3 credit hours
(Prerequisite: permission of the program advisor) In cooperation with local industry, the student works for one term on a cooperative basis in an appropriate training program. The position held by the student is a paid position.

LEOT 205L Introduction to Laser Systems 4 credit hours
(Prerequisite: ELEC 111L) The theory and operation of solid-state and gas lasers are studied. Continuous wave and pulsed systems are discussed. Laboratory exercises provide hands-on operation of various types of lasers. This course is offered in the fall term. (4 theory + 1 lab hours a week)

LEOT 206 Optics 6 credit hours
(Prerequisite: ELEC 111L) Lenses and optical systems are studied from the standpoints of geometric and wave optics. Laboratory experiments are performed. This course is offered in the fall term. (4 theory + 6 lab hours a week)

LEOT 217L Advanced Laser Systems with Applications 6 credit hours
(Prerequisite: LEOT 205L) The applications of laser systems to industry are covered. Students write a technical paper on their area of interest. Calibration techniques, interferometery and Q-switching are examples of laboratory exercises performed. This course is offered in the spring term. (4 theory + 6 lab hours a week)

PC 201 Electromechanical Systems 3 credit hours
(Prerequisites: ELEC 114L, ELEC 118L) This course uses electromechanical systems donated by local industries to expose students to equipment schematics, maintenance procedures and troubleshooting techniques. Students practice preventive and corrective maintenance procedures. (2 theory + 3 lab hours a week)

PC 203 PLC Theory and Applications 2 credit hours
(Prerequisites: ELEC 203L, ELEC 205L or permission of program advisor or instructor) Topics emphasized include ladder logic diagrams, PLC hardware, software, and applications of PLC's. A series of PLC lab exercises and a PLC project are required. This is a 7.5 week course. (2 theory hours and 3 lab hours per week) Course fee: $25

PC 204 Feedback Theory and Applications 2 credit hours
(Prerequisites: ELEC 203L, ELEC 205L) Topics include various types of feedback systems, components and operation. The applications of such systems are studied. This is a 7.5-week course. (2 theory hours and 3 lab hours per week)
Course fee: $25

PC 205 Sensor Theory and Applications 2 credit hours
(Prerequisites: ELEC 203L, ELEC 205L) Topics emphasized include force, photonic and temperature sensors. A project designed and constructed by students is required. This is a 7.5-week course. (2 theory and 3 lab hours per week) Course fee: $25

PC 206 CIM Theory and Applications 2 credit hours
(Prerequisites: ELEC 203L, ELEC 205L) Topics emphasized include the theory of computer integrated manufacturing (CIM), CIM systems used in industry, and the programming and operation of such systems. This is a 7.5-week course. (2 theory and 3 lab hours per week) Course fee: $25

PC 207 Mobile Robot Design and Construction 2 credit hours

(Prerequisites: ELEC 203L, ELEC 205L) Topics include microcontrollers, dc motors, motor drive circuitry and communications technology. A project designed and constructed by students is required. This is a 7.5-week course. (2 theory and 3 lab hours per week) Course fee: $25

PC 208 Industrial Robot Theory and Applications 2 credit hours

(Prerequisites: ELEC 203L, ELEC 205L) The theory, operation and maintenance procedures of industrial robots are included along with a project (utilizing an industrial robot system) designed and constructed by students. This is a 7.5-week course. (2 theory and 3 lab hours per week) Course fee: $25

PC 211 Power RF 2 credit hours

(Prerequisite: ELEC 114L) RF energy and its applications in manufacturing industries are presented. Topics include plasma physics, RF applications, safety, RF generators, transmission lines and RF interference. This is a 7.5-week course. (2 theory + 3 lab hours a week)

PC 212L Vacuum Systems 2 credit hours

(Prerequisite: ELEC 118L) This is a study of vacuum technology and vacuum systems. Topics include gas laws and properties, operation and applications of vacuum pumps, gauges and valves and systems leak detection. This is a 7.5-week course. (2 theory + 3 lab hours a week)

SMT 201 Semiconductor Manufacturing Technology I Theory 2 credit hours

(Prerequisites: ELEC 103L and ELEC 105L. Recommended prerequisite: CHEM 111/112L or CHEM 121/121L. Corequisite: SMT 201L) Students are introduced to processes, materials and equipment used in integrated circuit manufacturing. The areas of study include the basics of semiconductor materials, semiconductor devices, integrated circuits, clean-room technology, contamination control, chemical safety, crystal growing and wafer preparation, thermal oxidation, doping (diffusion and ion implantation), lithography (mask and etch), thin films deposition (chemical vapor, evaporation and sputter), metrology and testing, as well as packaging. Laboratory exercises include clean room safety and protocol, silicon oxidation, implant annealing, photomasking, wet etch, aluminum evaporation and metrology. (2 theory hours per week)

SMT 201L Semiconductor Manufacturing Technology I Lab 1 credit hour

(Pre- or corequisite: SMT 201) This is the lab course that supports the theory from SMT 201. Students meet once per week. (3 lab hours per week) Course fee: $25

SMT 211 **Semiconductor Manufacturing Technology II Theory** **2 credit hours**

(Prerequisites: SMT 201, SMT 201L. Corequisite: SMT 211L) Students continue to study the topics presented in SMT 201 with greater detail. Laboratory experiments include the process steps necessary to construct and test simple PMOS and/or NMOS field effect transistor devices. (2 theory hours per week)

SMT 211L **Semiconductor Manufacturing Technology II Lab** **1 credit hour**

(Pre- or corequisite: SMT 211) This is the lab course that supports the theory from SMT 201. Students meet once per week for a 3 hour lab. Course fee: $25

Manufacturing Skills

Certificate Program
Main Campus

The Manufacturing Skills Program prepares students for entry-level positions in the manufacturing and production industry by presenting the philosophy, knowledge and skills required. This program also prepares persons needing to upgrade their present skills for better job opportunities.

The Manufacturing Skills Program is designed as an open-entry, open-exit program that requires approximately two terms of instruction. Laboratory hours are arranged to provide flexible scheduling for employed and unemployed students.

This eight-credit program allows students to work at their own pace with the assistance of a qualified instructor. The program consists of 20 modules, each with criteria for successful completion. The curriculum is divided into three parts: general skills, mechanical skills and electronic skills.

Upon completion of this program, the graduate has the skills necessary for electronic and mechanical assembly, problem solving and preventive maintenance procedures. In addition, the graduate is able to inspect work for quality and to work safely in an effort to prevent damage to self and product.

For successful completion of this program, a demonstrated 80% competency or B is required for each module. Students demonstrating a competency of 98% on any module will receive a grade of A on the module. Letter grades will be given on the proficiency certificate issued upon completion of the defined program for the student by the Technologies Department.

Students register for this program using the grading system of open entry/open exit.

In order to graduate from the program, the student must complete all 20 modules. Students are encouraged to make arrangements to complete the required modules when they accept a training-related position prior to completion of the program. This program requires an average of 400 hours for completion. Any student requiring more than 400 hours will be evaluated for progress at 350 hours. The student is required to work on the

modules in and out of class. At the end of each term, the student will be given a grade of PR to indicate progress and will be required to register for the course a second time.

Students must demonstrate a math skill equivalent to or exceeding MATH 099 offered in the Department of Adult & Developmental Education as a prerequisite for the program. If a student takes MATH 099, it is recommended that he or she also take the Adult & Developmental Education electronics course.

Students pay a one-time $25 course fee.

Students enrolled in this program may not be eligible to receive financial aid or Veterans Administration benefits.

MSP 101L **Manufacturing Skills Program** **8 credit hours**

(Prerequisite: MATH 099 or equivalent) This is a self-paced laboratory course covering each topic listed below. (2 theory + 18 lab hours a week) Supply fee: $25

Manufacturing Skills Modules

General Skills

Industrial Safety
Hazardous Materials
Quality Assurance
Computer Literacy
Problem Solving

Mechanical Skills

Hand and Power Tools
Mechanical Components
Torque
Tap and Die
Measurement Devices
Blueprint Reading
Fluid Systems Components
Mechanical Project

Electronic Skills

Electronic Components and
Basic Electronic Theory
Basic Electricity
ESD Hardware Handling
Soldering Fabrication and Inspection
Cable and Harness Assembly
Wire Wrap
Electronic Project

Manufacturing Technology

Associate of Applied Science Degree/
Certificate Program
Main Campus

The Manufacturing Technology program, offering both certificate and associate degree options, provides students with a broad base of skills in analog and digital electronics along with a good communication and science background. The program offers concentrations in Semiconductor Manufacturing, Ceramics Manufacturing, Plastics Manufacturing and General Manufacturing, one of which a student must complete along with core courses for an associate degree.

To receive a certificate in Manufacturing Technology with a Semiconductor concentration, the student must complete defined courses. An associate of applied science degree in Manufacturing Technology is awarded upon completion of the core program and a concentration in one of the four areas.

Training is provided in the fundamental concepts of electronics and mechanical components. Circuits which have application in the semiconductor, digital equipment manufacturing, measurement and control are covered.

Laboratory facilities containing modern equipment for testing, troubleshooting, calibrating, analyzing and designing electronic systems are used in the Semiconductor concentration. Such systems include computers, electronic instruments and electro-mechanical equipment. Other laboratory facilities provide the ability to analyze and test various materials and components.

Students entering Manufacturing Technology courses must meet the program prerequisites. If a student takes MATH 100B, it is recommended that he or she also take ELEC 100 from the Adult & Developmental Education Department, CP 176L and ENG 100 before taking courses within the major.

A grade of C or better in each course is required for a degree or certificate. Optional courses and courses numbered 200 or above may not be offered every term and are subject to cancellation before classes start due to insufficient enrollment. Entry into a course without the prerequisite may be allowed with the permission of the program advisor.

Manufacturing Technology Program

Prerequisites to the Program

			Credit Hours
CP	176L	Introduction to Microcomputers	4
ELEC	104	Electronics Math	5
Reading 8th Grade Level			

Degree Core Requirements

CHEM	121/121L	General Chemistry I	4
*CHEM	122/122L	General Chemistry II	4
DDET	281	Statistical Controls	3
ELEC	103L	Electronics Fundamentals	8
ELEC	105L	Digital Circuits	4
*ELEC	114L	Semiconductor Devices	7
ELEC	118L	Electromechanical Devices	6
ENG	101	College Writing	3
ENG	119	Technical Communications	3
MATH	121	College Algebra	3
*PC	201	Electromechanical Systems	3
PC	212L	Vacuum Systems	2
PHYS	151/153L	Physics I with Lab	4
Technical Elective			3
Communication Electives (see list below)			6
Humanities and Social Sciences Elective			3

*Courses are not required for the Facilities Maintenance and General Manufacturing Concentrations.

Facilities Maintenance Concentration

ACHR	118/118L	Electromechanical Principles Theory/Lab	4
ACHR	119/119L	Intermediate Service Procedures Theory/Lab	4
ACHR	207/207L	Advanced Service Procedures	4
ACHR	208/208L	Advanced Applications Lab	4
ELTR	212/213L	PLC Theory & Installation	6
ELTR	202	Commercial Blue Print Reading II	3
PLMB	102/102L	Plumbing Theory/Lab	3
		Total Credit Hours	**28**

Semiconductor Manufacturing Concentration

PC	211	Power RF	2
SMT	201/201L	Semiconductor Manufacturing Technology I Theory/Lab	3
SMT	211/211L	Semiconductor Manufacturing Technology II Theory/Lab	3
		Total Credit Hours	**8**

Plastics Manufacturing Concentration

MTMS	201	Introduction to Materials Science	3
MTMS	203	Introduction to Polymeric Materials	3
MTMS	211	Introduction to Composite Materials	3
		Total Credit Hours	**9**

Ceramic Manufacturing Concentration

MTMS	201	Introduction to Materials Science	3
MTMS	202	Introduction to Ceramic Materials	3
MTMS	212	Introduction to Electronic Materials	3
		Total Credit Hours	**9**

General Manufacturing Concentration

PC	203	PLC Theory and Applications	2
MATT	102	MATT Blueprint Reading I	2
MATT	103L	Basic Lathe Principles	2
MATT	104L	Basic Milling Machine Principles	2
MATT	117L	Intermediate Lathe Principles	2
MATT	120L	Intermediate Milling Machine Principles	2
MATT	122L	Computer Numerical Control I	2
MATT	218L	Computer Numerical Control II	2
WELD	106L	Introduction to SMAW	2
DDET	106L	Basic CADD	3
		Total Credit Hours	**21**
		Associate Degree Requirements	**73–80**

Certificate in Semiconductor Manufacturing

Required Courses

CHEM	121/121L	General Chemistry I	4
DDET	281	Statistical Controls	3
ELEC	103L	Electronics Fundamentals	8
ELEC	105L	Digital Circuits	4
ELEC	118L	Electromechanical Devices	6
ENG	101	College Writing	3
ELEC	104	Technical Mathematics	5
SMT	201/201L	Semiconductor Manufacturing Technology I Theory/Lab	3
Communication Elective (see list below)			3
		Total Credit Hours	**39**

Communication Electives

COMM	221	Interpersonal Communication Studies	3
COMM	223	Introduction to Nonverbal Communication Studies	3
COMM	225	Small-Group Communication Studies	3
COMM	232	Business and Professional Communication Studies	3
COMM	240	Organizational Communication Studies	3
COMM	290	Gender Communication Studies	3
COMM	291	Intercultural Communication Studies	3

Technologies Electives

CP	175L	C Language Programming	3
DDET	280	Introduction to Quality Assurance	3
ELEC	111L	Introduction to Photonics	4
ELEC	203L	Introduction to Microprocessors	6
ELEC	205L	Analog Circuits	6
ELEC	214L	Troubleshooting Techniques	3
ELEC	276L	Soldering Techniques (7.5 weeks)	2
ELEC	296	Topics	Variable
ELEC	297	Special Problems	Variable
ELEC	298	Internship	3
ELEC	299	Cooperative Education	3
PC	202	Process Control	6
Materials Courses			3
Vendor Specific Courses			Variable

Course Descriptions

For course description for ELEC courses see Electronics Technology.
For course descriptions for DDET courses see Design Drafting Engineering Technology.
For course descriptions for CP courses see Business Computer Programming Technology.
For course descriptions for PC and SMT courses see Electronics Technology.
For the remaining courses see Arts & Sciences.

MTMS 201 Introduction to Materials Science 3 credit hours
(Prerequisite: CHEM 121/121L) The structure and properties of solid materials are introduced. Mechanical, chemical and thermal properties are emphasized along with microstructure, and the methods of processing (manufacture) are examined. Metallic materials are studied in some detail with a brief introduction to ceramic, polymeric and composite materials.

MTMS 202 Introduction to Ceramic Materials 3 credit hours
(Prerequisite: MTMS 201) The basic concepts of ceramic science including ceramic classification and structures, processing from raw materials to finished products, analysis and testing of physical, mechanical and chemical properties and the commercial applications of ceramics such as porcelain, glass and refractories are covered.

MTMS 203 Introduction to Polymeric Materials 3 credit hours
(Prerequisite: MTMS 201) The basic concepts of polymer science are covered, including polymer classification and structures, polymerization reactions, processing of polymers and fabrication of polymeric products, analysis and testing of physical, mechanical and chemical properties and applications of commercial polymers such as plastics, elastomers, fibers and adhesives.

MTMS 211 Introduction to Composite Materials 3 credit hours

(Prerequisite: MTMS 201) The basic concepts of composite materials are covered, including material classification and structures, reinforcing and matrix materials, mechanisms of strengthening, fabrication of composite materials including laminated materials, analysis and testing of physical, mechanical and chemical properties and applications of commercial composites such as fiberglass, concrete, wood, carbon fiber composites, kevlar.

MTMS 212 Introduction to Electronic Materials 3 credit hours

(Prerequisite: MTMS 201) The electrical, magnetic and optical properties of conductor, semiconductor and dielectric (insulating) materials are covered including atomic phenomena which govern electronic properties, structure and processing of discrete passive devices such as resistors, capacitors, inductor and transformers, theory of semiconductors with emphasis on structure and processing of active devices. A brief introduction to superconducting materials is given.

Trades & Service Occupations

The Trades & Service Occupations Department prepares individuals for a variety of technical and service jobs. The department offers certificates and degrees that prepare individuals for entry-level positions, for job advancement and for skill upgrading. Training includes classroom and hands-on training in technical, industrial and service occupations. Most classes meet on the Main Campus in classrooms and indoor and outdoor lab spaces.

Students are encouraged to participate in Vocational Industrial Clubs of America (VICA), the student organization. VICA activities and programs are an integral part of the curriculum.

Cooperative education allows qualified students the option to complete course work via a related entry-level-wage job. A written agreement with specific objectives is signed by the student, TVI and the employer. The cooperative education option may not qualify students for financial aid. The pre- or corequisite for co-op is SSKL 211, 212 or 213.

Students must provide their own personal protective equipment (hard hat and safety glasses or goggles) and lab clothes which are appropriate and comply with Trades & Service Occupations Department and/or Occupational Safety and Health Act (OSHA) standards. Hard hats must meet ANSI Standard Z89.1-1969. Safety glasses or goggles must meet ANSI Standard Z87.1-1979. Students are trained to OSHA safety standards for their respective area. Any students who habitually endanger themselves or others may be suspended from TVI.

Most Trades & Service Occupations programs require that students be in good physical condition and be free of allergies or health conditions that could endanger themselves or others. A valid driver's license and drug screening are required by most employers.

Students enrolled in Trades certificate programs who wish to enroll in courses offered by other departments must take the TVI placement test and meet pre- and corequisites.

All occupational courses must be passed with a minimum grade of C to qualify for graduation.

Apprenticeship Programs

Note: Students enrolled in these programs may not qualify for financial aid or Veterans Administration benefits.

Commercial Carpentry Apprenticeship

Main Campus

The Commercial Carpentry Apprenticeship for persons currently employed in the industry is offered in conjunction with the Rio Grande Chapter of Associated Builders and Contractors Inc. (ABC).

The program provides related classroom instruction.

There is a TVI registration fee each term. Students must purchase textbooks and instructional materials through the local ABC chapter.

CCAP 198 Commercial Carpentry Apprenticeship 40 credit hours
(Prerequisite: current full-time employment in the carpentry industry or department approval) This course consists of 600 hours of related classroom instruction covering orientation, safety, shop and trade math, commercial carpentry process for shop tools and equipment, supplies and materials, building systems, blueprint reading, concrete, specifications and code interpretation.

Culinary Apprenticeship

Main Campus

The Culinary Apprenticeship is offered for persons currently employed full-time in the food service industry.

The three-year program stresses safety, sanitation and work ethics. Classroom instruction results in certified cook skill levels. Beginning students are admitted each term as space permits.

There is a TVI registration fee each term. Students must purchase a textbook and instructional materials through the American Culinary Federation Rio Grande Valley Chapter.

CUAP 198 Culinary Apprenticeship 36 credit hours
(Prerequisite: current full-time employment in the food service industry or department approval) This course includes 584 hours of theory taught at TVI. Theory covers culinary history, food decorating, food management and front-of-the-house techniques. A comprehensive written and practical final exam is administered in conjunction with the American Culinary Federation.

Electrical Trades Apprenticeship

Main Campus

The Electrical Trades Apprenticeship, for persons currently employed full-time in the electrical industry, is offered in conjunction with the Independent Electrical Contractors (IEC).

The program provides related classroom instruction.

There is a TVI registration fee each term. Students must purchase books and instructional materials through the IEC office.

ETAP 198 Electrical Trades Apprenticeship 40 credit hours
(Prerequisite: current full-time employment in the electrical trades industry or department approval) This course consists of 600 hours of related classroom instruction covering safety, electrical theory, blueprint reading and layout, National Electrical Code interpretation, tool usage and motor controls.

Plumbing Apprenticeship

Main Campus

The Plumbing Apprenticeship, for persons currently employed full-time in the mechanical trades (plumbing) industry, is offered in conjunction with the Rio Grande Chapter of Associated Builders and Contractors Inc. (ABC).

The four-year program combines on-the-job experience with classroom instruction and provides the opportunity for qualified participants to become journeymen.

There is a TVI registration fee each term. Students must purchase textbooks and instructional materials through the local ABC chapter.

PLAP 198 Plumbing Apprenticeship 40 credit hours
(Prerequisite: current full-time employment in the plumbing industry) This course consists of 600 hours of classroom instruction covering safety, shop and trade math, plumbing processes, blueprint reading and mechanical code (plumbing) interpretation.

Sheet Metal Apprenticeship

Main Campus

The Sheet Metal Apprenticeship, for persons currently employed full-time in the sheet metal industry, is offered in conjunction with the Rio Grande Chapter of Associated Builders and Contractors Inc. (ABC).

The program provides related classroom instruction.

There is a TVI registration fee each term. Students must purchase textbooks and instructional materials through the local ABC chapter.

SMAP 198 Sheet Metal Apprenticeship 40 credit hours

(Prerequisite: current full-time employment in the sheet metal industry or department approval) This course consists of 600 hours of related classroom instruction. Instruction covers safety, shop and trade math, sheet metal processes for shop machinery, triangulation lay-out, radial line layout, parallel line layout, blueprint reading and Sheet Metal and Air Conditioning National Assn. (SMACNA) manuals.

Elective Courses

At least 15 students must sign up and instructional space and budget must be available before an elective course can be offered. As a result, elective courses may be canceled because of budget or low enrollment. Most are offered only at the Main Campus. Descriptions for most elective courses are included in their respective programs.

			Credit Hours
ACHR	171L	Basic Refrigeration Maintenance	3
ACHR	172L	Basic Air Conditioning, Heating and Refrigeration	3
ACHR	173L	Commercial Refrigeration	3
AUTC	170	Transportation Trades Machining	3
AUTC	172	Air Care Inspector	1
AUTC	173	Air Care Mechanic	2
#BA	256	Job Search Skills	2
*BT	177L	Metal Framing	3
*BT	178	Remodeling	3
*BT	179	Advanced Remodeling	3
CARP	170	Carpentry Fundamentals and Cabinetmaking	3
CARP	171	Construction Trades Blueprint/Math	3
FITT	170	Physical Fitness I	1
FITT	171	Physical Fitness II	1
CMPR	170	Basic Commercial Printing Skills Improvement	3
CMPR	171	Desktop Publishing on the Mac	3
ELTR	170	Electrical Wiring Circuitry	2
ELTR	171L	Conduit Hand Bending Fundamentals	1
ELTR	173	Industrial Motor Control Circuitry	2
ELTR	174L	Industrial PC Motor Control	3
ELTR	175	Fiber Optical Cable Installation	2
ELTR	176	Electrical Journeyman Preparation	3
EPT	170	Introduction to OSHA Compliance	3
EPT	171	Introduction to Safety Management	3
EPT	172	Introduction to Soil Science	3
EPT	174	Basic Site Remediation Technology	3
EPT	175	Pest Management	3

EPT	176	Food Resources and the Environment	3
EPT	177	Business Aspects of Environmental Technology	3
EPT	178	Industrial Hygiene for Environmental Technicians	3
EPT	179	Sampling Design	3
EPT	270	Air Pollution Meteorology	3
EPT	271	Ambient Air Monitoring and the Clean Air Act	3
FSMG	170L	Computers in Food Service	3
MATT	171	Precision Measurement	3
MATT	173	Machine Tool Technology Skills	3
MATT	174	Advanced Machine Tool Technology Skills	3
PLMB	170	Mechanical Trades Math	1
PLMB	171	Journeyman Preparation	3
PLMB	173L	Orbital Automated Welding Systems	4
PLMB	174L	Polyvinlediene Fluoride (PVDF) Welding Systems	4
SCSE	170L	Small Engine Skills Improvement I	3
SCSE	171L	Small Engine Skills Improvement II	3
SCSE	296	Special Topics	1–6
SSKL	211	Employment Skills—General	1
SSKL	212	Employment Skills for Public Safety	1
SSKL	213	Employment Skills for High-Tech Industry	1
TRDR	171	Material Handling	2
VICA	174	Introduction to Professional Development	1
VICA	175	Leadership	1
VICA	176	Career Planning	1
VICA	178	Civic Responsibility	1
WELD	170	Welding Skills	3
WELD	171	Advanced Welding Skills	3

*Business Occupations course

* Students must supply personal safety equipment and hand tools.

Course Descriptions

BT 177L **Metal Framing** **3 credit hours**

(Prerequisite: CARP 103 or department approval) Commercial and residential construction design, Uniform Building Code requirements and erection of metal buildings are studied and applied. Job-site and tool safety are stressed. (1 theory + 5 lab hours a week)

BT 178 **Remodeling** **3 credit hours**

Students are introduced to hand and power tools and the safety measures associated with their use. OSHA regulations and job safety are emphasized. Basic structural, electrical, plumbing and other typical remodeling repair principles and techniques are provided. (1 theory + 5 lab hours a week)

BT 179 Advanced Remodeling **3 credit hours**
(Prerequisite: BT 178 or department approval) Instruction in job site safety, OSHA regulations, design and construction techniques for remodeling and additions to existing buildings is provided. (1 theory + 5 lab hours a week)

SCSE 170L Small Engine Skills Improvement I **3 credit hours**
This basic theory/lab course offers instruction in the diagnosis and repair of small four-stroke air-cooled engines. The issues of safety, engine identification, special tools, ignition, cooling, lubrication, engine rebuilding and fuel systems are studied. (1 theory + 5 lab hours a week)

SCSE 171L Small Engine Skills Improvement II **3 credit hours**
(Prerequisite: SCSE 170L or department approval) This intermediate theory/lab course offers instruction and practice in the diagnosis and repair of small two-stroke powered equipment. Chain saw service and chain sharpening, blower and line trimmer service are addressed. Continued safety instruction is integral to the course. (1 theory + 5 lab hours a week)

SCSE 296 Special Topics **1–6 credit hours**
(Prerequisite: department approval) This is an in-depth study of problems and the advanced techniques used by mechanics.

SSKL 211 Employment Skills—General **1 credit hour**
The requisite skills for success in obtaining employment are presented. Students prepare a job portfolio that includes a cover letter, resumé and follow-up letter. Employer expectations, interview techniques and communicating with business and industry are also covered. Employability and job retention skills are stressed.

SSKL 212 Employment Skills for Public Safety **1 credit hour**
(Prerequisite: Student must be in final term of degree program.) The course helps the student develop skills for employment with a public safety agency, including creating a job portfolio and enhancing interviewing skills. Emphasis is on jobs in police and fire departments.

SSKL 213 Employment Skills for High-Tech Industry **1 credit hour**
Instruction includes techniques for drafting computer-readable resumés and applications, composing letters and interview scripts which magnify technical skills and knowledge, and creating a portfolio. Communication, job retention skills and interaction with modern industry are stressed.

VICA 174 Introduction to Professional Development **1 credit hour**
This course is designed to assist students in developing goals and commitments. Skills include personal awareness, goal setting, time management, organization and communication.

VICA 175 Leadership **1 credit hour**

This course prepares students for committee work by covering agendas, parliamentary procedures and team building. Students also participate in community service projects and improve communication skills.

VICA 176 Career Planning **1 credit hour**

The skills taught include career information, report writing, conducting interviews, communication improvement and interaction with business and industry.

VICA 178 Civic Responsibility **1 credit hour**

This course allows students to become involved in various community services as volunteers. Local government and community leaders' roles in the operation of the city are covered. Planning and carrying out a community project are included.

Air Conditioning, Heating and Refrigeration

Certificate Program
Main Campus

The Air Conditioning, Heating and Refrigeration program prepares students for entry into the installation, maintenance and service field. With on-the-job experience and field training, the graduate of this program should be able to advance quickly.

Training includes safety, installing mechanical equipment, piping and elctrical controls, servicing various air conditioning, heating and refrigeration components, troubleshooting systems and performing required preventive maintenance.

Most activities take place on campus, but some take place at off-campus building sites and are an integral part of the curriculum.

Students must be free of chronic respiratory diseases and allergies to sheet metal fluxes and metals and must have normal color differentiation.

There is an EPA required certification fee for all refrigeration and air conditioning technicians. The certification is required before graduates enter the work force.

This program requires basic hand tools. Tool lists with approximate costs and purchase deadline are provided by instructors at the beginning of each term.

A suggested schedule includes:

Term 1: ACHR 104, 107, 107L, 108, 108L, 109, 109L, computer elective
Term 2: ACHR 114, 118, 118L, 119, 119L, 120, 120L, SSKL 211 or SSKL 213
Term 3: ACHR 204L, 206, 206L, 207, 207L, 208, 208L

Air Conditioning, Heating and Refrigeration Program

			Credit Hours
ACHR	104	Basic Refrigeration Math	1
ACHR	107	Basic Electromechanical Principles	2
ACHR	107L	Basic Electromechanical Principles Lab	2
ACHR	108	Basic Service Procedures	2
ACHR	108L	Basic Service Procedures Lab	2
ACHR	109	Basic Applications	2
ACHR	109L	Basic Applications Lab	2
ACHR	114	Math for Systems Design	2
ACHR	118	Intermediate Electromechanical Principles	2
ACHR	118L	Intermediate Electromechanical Principles Lab	2
ACHR	119	Intermediate Service Procedures	2
ACHR	119L	Intermediate Service Procedures Lab	2
ACHR	120	Intermediate Applications	2
ACHR	120L	Intermediate Applications Lab	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
ACHR	206	Advanced Electromechanical Principles	2
ACHR	206L	Advanced Electromechanical Principles Lab	2
ACHR	207	Advanced Service Procedures	2
ACHR	207L	Advanced Service Procedures Lab	2
ACHR	208	Advanced Applications	2
ACHR	208L	Advanced Applications Lab	2
Computer Elective (any department)			3–4
		Total	**43–44**

Course Descriptions

ACHR 104 Basic Refrigeration Math **1 credit hour**

This course reviews basic arithmetic operations, fractions and decimals with applications to refrigeration. Ohm's Law calculations in series, parallel and combination circuits are covered also.

ACHR 107 Basic Electromechanical Principles **2 credit hours**

This course provides students with a broad technical foundation including basic electromagnetic principles and electrical safety. Additionally, the basic compression refrigeration cycle and refrigeration system design characteristics together with a practical understanding of temperature and pressure laws as applied to refrigeration and heat transfer are discussed.

ACHR 107L Basic Electromechanical Principles Lab **2 credit hours**

Students work through a series of projects including brazing, wiring circuit trainers and refrigeration simulators, analyzing domestic refrigerators, temperature and pressure ex-

periments, window air conditioner, light commercial refrigeration diagnosis and breakdown and assembly.

ACHR 108 Basic Service Procedures 2 credit hours
Technical knowledge of the basic competencies required in refrigeration and air conditioning is provided within a multi-media setting. Students become acquainted with the requirements of EPA to be certified to handle refrigerants, including all aspects of maintenance procedures, troubleshooting, repair and service procedures.

ACHR 108L Basic Service Procedures Lab 2 credit hours
This lab provides students with training, practice and individualized instruction in the basic service procedures or competencies of the refrigeration and air conditioning field. Servicing, maintaining, repairing and troubleshooting light refrigeration and air conditioning systems are included.

ACHR 109 Basic Applications 2 credit hours
This course examines the many applications of compression refrigeration systems. It provides the student with a detailed technical knowledge of system design and operating characteristics in applications ranging from domestic to light commercial and room air conditioners.

ACHR 109L Basic Applications Lab 2 credit hours
Students work through a series of individual and team projects to gain hands-on experience with various representative systems. Evaluating the system, conducting experiments, assembling and disassembling them, tracing circuits, rewiring and restoring them to optimal function are covered.

ACHR 114 Math for Systems Design 2 credit hours
(Prerequisite: ACHR 104 or department approval) This course covers calculations required for residential heating and cooling system design including computer-aided heat load calculations and equipment sizing and layout. The course also provides applied math problems with refrigeration systems.

ACHR 118 Intermediate Electromechanical Principles 2 credit hours
(Prerequisite: ACHR 107, 108, 109 or department approval) This course provides students with a broad technical foundation including electromechanical components utilized on residential and light commercial heating and air conditioning systems. Gas, electric and heat pump theories and components are covered. Electrical test instruments are presented.

ACHR 118L Intermediate Electromechanical Principles Lab 2 credit hours
(Pre- or corequisite: ACHR 118 or department approval) Students work through a series of projects including piping and electrical wiring for heating and air conditioning units. Projects include packaged, split systems and combination units. Refrigerant recovery and recycling are stressed.

ACHR 119 Intermediate Service Procedures 2 credit hours
(Prerequisite: ACHR 107,108,109 or department approval) The maintenance, service, repair and troubleshooting of typical heating and air conditioning units are covered. Procedures for providing the customer with quality work in a timely manner are stressed. Installation of systems according to code is reviewed.

ACHR 119L Intermediate Service Procedures Lab 2 credit hours
(Pre- or corequisite: ACHR 119 or department approval) This lab provides individualized instruction in basic competencies of the residential and light commercial heating and air conditioning field. It includes the practice of maintenance, service, repair and troubleshooting of systems including a review of refrigeration procedures.

ACHR 120 Intermediate Applications 2 credit hours
(Prerequisite: ACHR 109 or department approval) This course covers the applications of various heating and air conditioning systems and provides information on typical system design and operating conditions of heating and air conditioning systems including packaged, split systems, combination units and heat pumps.

ACHR 120L Intermediate Applications Lab 2 credit hours
(Pre- or corequisite: ACHR 120 or department approval) Students work on individual and team projects to gain hand-on experience with various heating and air conditioning systems by evaluating, assembling and disassembling systems and converting regulated refrigerant systems to environmentally friendly alternatives.

ACHR 206 Advanced Electromechanical Principles 2 credit hours
(Prerequisite: ACHR 118, 119, 120 or department approval) This course provides information on electromechanical and pneumatic components used with commercial heating and air conditioning systems. VAV, multizone and building control systems are covered. Electric, refrigeration, pneumatic and electronic controls and combination controls are stressed.

ACHR 206L Advanced Electromechanical Principles Lab 2 credit hours
(Prerequisite: ACHR 118L or department approval; corequisite: ACHR 206) Students work through a series of projects including piping and electrical wiring for commercial heating and air conditioning systems. VAV, multizone and building control systems are covered. Included also are computer room air conditioners and pneumatic air supply systems and components.

ACHR 207 Advanced Service Procedures 2 credit hours
(Prerequisite: ACHR 118, 119, 120 or department approval) The maintenance, service, repair and troubleshooting of building controls are covered. Timely and accurate diagnosis of systems, material utilization, invoicing and record keeping are stressed. Successful completion of EPA's certification exam for refrigerant usage is required for credit.

ACHR 207L Advanced Service Procedures Lab 2 credit hours
(Prerequisite: ACHR 119L or department approval; corequisite: ACHR 207) This lab provides students with examples of typical customer complaints and requires that students implement the appropriate procedures and document the outcomes. Individual and team efforts that encourage ingenuity are desirable. Recommendations for providing positive customer service are discussed.

ACHR 208 Advanced Applications 2 credit hours
(Prerequisite: ACHR 118, 119, 120 or department approval) This course covers the application of commercial refrigeration, hydronics, heating and air conditioning to commercial buildings. Controls powered by electricity, pneumatics, electronics and combinations of sources are emphasized.

ACHR 208L Advanced Applications Lab 2 credit hours
(Prerequisite: ACHR 120L or department approval; corequisite: ACHR 208) Students work through a series of individual and team projects to gain hands-on experience with commercial refrigeration, heating and air conditioning. Tear-down and assembly of systems are reviewed. Compliance with EPA and OSHA regulations is stressed.

ACHR 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) This flexible course enables students to pursue studies in specialized areas. This class also may be taken as an independent, guided study or as a refresher course to sharpen skills prior to licensing.

Automotive Body Repair*

Certificate Program
Main Campus

The Automotive Body Repair program prepares students for entry-level employment repairing collision damage on passenger and commercial vehicles. Safety procedures, work ethics and correct selection and use of tools and equipment are stressed.

A valid driver's license and a good driving record are required by most employers.

Students must be free of chronic respiratory diseases and allergies to solvents. Because of OSHA requirements students may not have facial hair and must be free of chronic respiratory problems. In addition, a physician's certificate must be presented to TVI before the start of classes stating that the student is free from any respiratory illness or problem.

This program requires basic hand tools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term.

*This program is no longer accepting new students.

A suggested schedule per term includes:

Term 1: AUBO 101, 102L, 103L, 104L, 105L, DETC 102

Term 2: AUBO 111, 112L, 113L, 114L, 115L, SSKL 211 or SSKL 213, computer elective

Term 3: AUBO 201, 202L, 203L, 204L, 206L, 208L

Automotive Body Repair Program

			Credit Hours
AUBO	101	Auto Body Theory I	3
AUBO	102L	Welding Plastics and Adhesives I	2
AUBO	103L	Metal Prep/Repair and Mechanical Systems	2
AUBO	104L	Metal Finishing/Body Filling	2
AUBO	105L	Basic Refinishing Systems	2
#DETC	102	Math/Basic Electricity	3
AUBO	111	Auto Body Theory II	3
AUBO	112L	Welding Plastics and Adhesives II	2
AUBO	113L	Suspension and Alignment	2
AUBO	114L	Frame and Unibody Repair	2
AUBO	115L	Mechanical Systems	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
AUBO	201	Auto Body Theory III	3
AUBO	202L	Welding Plastics and Adhesives III	2
AUBO	203L	Advanced Refinishing Systems/Techniques	2
AUBO	204L	Advanced Restraint/Electrical Systems	1
AUBO	206L	Air Conditioning	1
AUBO	208L	Advanced Frame & Unibody Repair	2
Computer Elective (any department)			3–4
		Total	**40–41**

#Diesel Equipment Technology course

Course Descriptions

AUBO 101 Auto Body Theory I **3 credit hours**

(Prerequisite: MATH 099 or appropriate arithmetic Accuplacer score and department approval) This theory course introduces students to all phases of damage analysis and collision damage repair. Basic information is presented on hand and power tools, safety, detailing, metal finishing, refinishing and welding.

AUBO 102L Welding Plastics and Adhesives I **2 credit hours**

(Pre- or corequisite: AUBO 101 or department approval) Basic safety and instruction in oxyacetylene welding, gas metal arc welding, plastics identification, welding and adhesive repairs are presented.

AUBO 103L Metal Prep/Repair and Mechanical Systems 2 credit hours
(Pre- or corequisite: AUBO 101 or department approval) This lab provides experience in analyzing damage, damage estimates, safety, detailing, panel removal, replacement and adjustment, mechanical system inspection and repair.

AUBO 104L Metal Finishing/Body Filling 2 credit hours
(Pre- or corequisite: AUBO 101 or department approval) Minor body dent repair, detailing, surface preparation, damage type, tool use and safety, metal finishing and body filler repair techniques are presented.

AUBO 105L Basic Refinishing Systems 2 credit hours
(Pre- or corequisite: AUBO 101 or department approval) Students practice paint safety, surface preparation, molding removal, surface cleaning, detailing, stripping, sanding materials and techniques, paint undercoats and applications, and spray gun operations.

AUBO 111 Auto Body Theory II 3 credit hours
(Prerequisite: DETC 102, AUBO 101, 102L, 103L, 104L, 105L or department approval) This theory course introduces students to all phases of structural analysis and collision damage repair. Basic information includes damage diagnosis, body measurements, welding, mechanical, glass systems and refinishing systems. Job seeking and retention skills are also stressed.

AUBO 112L Welding Plastics and Adhesives II 2 credit hours
(Prerequisite: AUBO 102L or department approval; corequisite: AUBO 111) This is an intermediate level course that builds on AUBO 102L. Additional practical skills are developed in gas metal acr welding, plastic welding and adhesives use.

AUBO 113L Suspension and Alignment 2 credit hours
(Pre- or corequisite: AUBO 111 or department approval) Students gain practical experience in diagnosis and repair of steering components and suspension systems.

AUBO 114L Frame and Unibody Repair 2 credit hours
(Pre- or corequisite: AUBO 111 or department approval) An introduction to the proper use of frame and unibody pulling equipment, body measuring systems, pulling techniques, structural panel sectioning and replacement, corrosion protection materials, glass replacement and top coat application.

AUBO 115L Mechanical Systems 2 credit hours
(Pre- or corequisite: AUBO 111 or department approval) This lab teaches students to safely remove, inspect and repair mechanical systems.

AUBO 201 Auto Body Theory III 3 credit hours
(Prerequisite: AUBO 111, 112L, 113L, 114L, 115L or department approval) This course introduces students to advanced repair techniques using industry standards in mig welding, plastics, finishing paint systems, paint application problems, color matching and ap-

plication, paint finish defects, passenger restraints, electrical components and air conditioning systems.

AUBO 202L Welding Plastics and Adhesives III 2 credit hours
(Prerequisite: AUBO 112L or department approval; corequisite: AUBO 201) In this lab course more advanced gas metal arc welding techniques and plastic repair are presented.

AUBO 203L Advanced Refinishing Systems/Techniques 2 credit hours
(Pre- or corequisite: AUBO 201 or department approval) Procedures for painting spot, panel and complete repairs are practiced. Students also solve paint application problems, including causes and corrections of finish defects. Personal safety equipment, detailing, environmental regulations and customer relations are taught.

AUBO 204L Advanced Restraint/Electrical Systems 1 credit hour
(Pre- or corequisite: AUBO 201 or department approval) This lab course covers the inspection and repair of active, passive and air bag restraint systems. Students also learn to diagnose and safely adjust and repair various electrical components.

AUBO 206L Air Conditioning 1 credit hour
(Pre- or corequisite: AUBO 201 or department approval) Instruction is provided in safety, environmental concerns, tools, equipment, servicing and repairing of automotive air conditioning systems.

AUBO 208L Advanced Frame & Unibody Repair 2 credit hours
(Pre- or corequisite: AUBO 201 or department approval) Advanced frame, structural, measuring and mechanical system repairs are stressed.

AUBO 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) This course is an in-depth study of problems and advanced techniques in automotive body repair.

Automotive Technology

Certificate Program
Main Campus

The Automotive Technology program is designed to prepare individuals to diagnose and repair problems on automobiles and light trucks. Safety procedures and work ethics along with the correct use and selection of hand tools and test equipment are stressed. The program is designed to qualify the successful student as an entry-level general automobile technician.

This program is certified by the National Automotive Technicians Education Foundation Inc. (NATEF) as a master certified program in all eight specialty areas: automotive

transmission/transaxle, brakes, electrical system, engine performance, engine repair, heating and air conditioning, manual drive train and axles, and suspension and alignment.

Students must be free of chronic respiratory diseases and allergies to fuels and solvents. A valid driver's license and a good driving record are required by most employers.

This program requires basic hand tools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term.

A suggested schedule per term includes:

Term 1: AUTC 101, 101L, 102, 102L, 103, 103L, AUTC 106, computer elective
Term 2: AUTC 111, 111L, 112, 112L, 113, 114, 114L, SSKL 211 or SSKL 213
Term 3: AUTC 201, 201L, 202, 202L, 203, 203L

Automotive Technology Program

			Credit Hours
AUTC	101	Braking Systems Theory	1
AUTC	101L	Braking Systems Lab	2
AUTC	102	Suspension and Alignment Theory	2
AUTC	102L	Suspension and Alignment Lab	2
AUTC	103	Manual Transmission and Axles Theory	2
AUTC	103L	Manual Transmission and Axles Lab	2
AUTC	106	Automotive Electricity	4
AUTC	111	Engine Overhaul Theory	2
AUTC	111L	Engine Overhaul Lab	2
AUTC	112	Automatic Transmissions and Transaxles Theory	2
AUTC	112L	Automatic Transmissions and Transaxles Lab	2
AUTC	113	Transportation Electronics	3
AUTC	114	Heating and Air Conditioning Theory	1
AUTC	114L	Heating and Air Conditioning Lab	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
AUTC	201	Automotive Ignition Systems Theory	2
AUTC	201L	Automotive Ignition Systems Lab	3
AUTC	202	Automotive Fuel Systems Theory	2
AUTC	202L	Automotive Fuel Systems Lab	2
AUTC	203	Automotive Computer Systems Theory	2
AUTC	203L	Automotive Computer Systems Lab	2
Computer Elective (any department)			3–4
		Total	**45–46**

Course Descriptions

AUTC 101 Braking Systems Theory 1 credit hour

Students are able to identify mechanical, hydraulic, electrical and brake systems and equipment.

AUTC 101L Braking Systems Lab **2 credit hours**
(Corequisite: AUTC 101 or department approval) Students repair, replace and adjust automotive brake systems and components. Personal safety is stressed.

AUTC 102 Suspension and Alignment Theory **2 credit hours**
Students study suspension systems and determine repairs needed. Two and four-wheel alignment methods and procedures are instructed.

AUTC 102L Suspension and Alignment Lab **2 credit hours**
(Corequisite: AUTC 102 or department approval) Students acquire the skills to use tools and equipment needed for repairs of suspension systems and perform front-end and four-wheel alignments.

AUTC 103 Manual Transmissions and Axles Theory **2 credit hours**
Students study the design and operation of front and rear drive manual transmissions, differentials and drive lines. Maintenance, service procedures and troubleshooting methods are emphasized.

AUTC 103L Manual Transmissions and Axles Lab **2 credit hours**
(Corequisite: AUBO 103 or department approval) Skills required to service, repair or overhaul automotive manual transmissions and clutches on front and rear drive vehicles are developed. Differential assemblies, drive lines and diagnostic procedures used in solving vibration and harshness problems are also addressed. Safety is emphasized.

AUTC 106 Automotive Electricity **3 credit hours**
(Prerequisite: MATH 099 or appropriate arithmetic Accuplacer score) Basic fundamentals of electricity and its application to the automobile are covered. Ohm's Law and circuit rules begin this course, which also addresses meter use, starting and charging circuits, electical schematics and diagnostic routines.

AUTC 111 Engine Overhaul Theory **2 credit hours**
This course presents the theory of engine systems and the use of measuring tools to determine necessary repairs and services. The operation of the internal combustion engine and the basic principles of engine overhaul are studied.

AUTC 111L Engine Overhaul Lab **2 credit hours**
(Corequisite: AUTC 111 or department approval) Students acquire skills needed to perform normal engine maintenance, including fluid changes, adjustments and minor repairs. Also included are the correct use of precision measuring tools and the testing, removal, replacement and overhauling of engines.

AUTC 112 Automatic Transmissions and Transaxles Theory **2 credit hours**
This course covers design and operating theory of automotive transmissions and transaxles. Servicing and troubleshooting procedures are covered.

AUTC 112L Automatic Transmissions and Transaxles Lab 2 credit hours
(Corequisite: AUTC 112 or department approval) This course provides hands-on experience in servicing, overhaul and troubleshooting of automatic transmissions and transaxles.

AUTC 113 Transportation Electronics 3 credit hours
(Prerequisite: AUTC 106 or department approval) Information required to test and replace malfunctioning electronic components is provided. The theory of solid-state devices and basic principles of electronics are included. Bench top experiments are conducted using full wave rectifiers, voltage rectifiers, transistors and other electronic components.

AUTC 114 Heating and Air Conditioning Theory 1 credit hour
This theory course provides instruction in safety, environmental concerns, tools, equipment, operation of parts and servicing and repair of automotive air conditioning systems.

AUTC 114L Heating and Air Conditioning Lab 2 credit hours
(Corequisite: AUTC 114 or department approval) This course is designed to teach safety, servicing and repair of automotive heating and air conditioning systems.

AUTC 170 Transportation Trades Machining 3 credit hours
This theory/lab course includes basic machine shop repair practices as they relate to gasoline and diesel engine repairs. Instruction is provided in safety, hand tools, lathe, mill and drill press. (1 theory + 5 lab hours a week)

AUTC 172 Air Care Inspector 1 credit hour
This theory/lab course provides the training required for mechanics to become certified air care inspectors for the City of Albuquerque's Vehicle Pollution Management program. The course covers the city and federal regulations governing air pollution and emissions inspections. (.5 theory + 2.5 lab hours a week)

AUTC 201 Automotive Ignition Systems Theory 2 credit hours
(Prerequisite: AUTC 113 or department approval) The focus is on the design, operation and troubleshooting of standard, electronic and distributor-less ignition systems.

AUTC 201L Automotive Ignition Systems Lab 3 credit hours
(Corequisite: AUTC 201 or department approval) This laboratory course presents the use of diagnostic equipment and troubleshooting techniques for various types of ignition systems.

AUTC 202 Automotive Fuel Systems Theory 2 credit hours
(Corequisite: AUTC 113 or department approval) This is a theory course covering the design, operation, diagnosis and repair of fuel systems.

AUTC 202L Automotive Fuel Systems Lab 2 credit hours
(Corequisite: AUTC 202 or department approval) Students diagnose, test and repair fuel systems.

AUTC 203 Automotive Computer Systems Theory 2 credit hours
(Prerequisite: AUTC 113 or department approval) Students analyze the design, operation and repair of various automotive computer systems.

AUTC 203L Automotive Computer Systems Lab 2 credit hours
(Corequisite: AUTC 203 or department approval) The focus is on troubleshooting, operation and repair of automotive computer systems.

AUTC 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) This course includes an in-depth study of problems and the advanced techniques automotive technicians use in responding to them.

Baking

Certificate Program
Main Campus

This food service specialty prepares students for jobs as bakers in restaurants, bake shops and institutional kitchens. Students learn safety and hands-on skills in a lab furnished with commercial equipment.

Students must be free of chronic allergies. In addition, a physician's certificate must be presented to TVI before the start of classes stating that the student is free from tuberculosis in a transmissible form.

This program requires basic hand tools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term.

A suggested schedule per term includes:

Term 1: BKNG 101, 102, 103L, 104L, 105L, 106L, SSKL 211 or SSKL 213, computer elective

Term 2: BKNG 111, 112L, 113L, 114L, 115L, 116L

Baking Program

			Credit Hours
BKNG	101	Baking Theory I	2
BKNG	102	Food Service Math	3
BKNG	103L	Breads	2
BKNG	104L	Sweet Yeast Goods	2
BKNG	105L	Cake Batters	2
BKNG	106L	Pies and Pastries	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
BKNG	111	Baking Theory II	3

BKNG	112L	Yeast Doughs	2
BKNG	113L	Batters	2
BKNG	114L	Pastries and Cookies	2
BKNG	115L	Icings and Fillings	2
BKNG	116L	Cake Decorating	1
Computer Elective (any department)			3–4
		Total	**29–30**

Course Descriptions

BKNG 101 Baking Theory I **2 credit hours**
This course introduces students to baking fundamentals through the scratch production of breads, sweet yeast goods and assorted pastries. The course includes ingredient function, storage, sanitation, safety, formulation and continuous quality improvement (CQI) principles.

BKNG 102 Food Service Math **3 credit hours**
Applied math skills for sales, portioning and pricing of food products are analyzed. Cash register fundamentals are stressed.

BKNG 103L Breads **2 credit hours**
This course provides basic instruction in fundamentals of mixing and processing ingredients in a variety of pan, Pullman and hearth breads. Rolls and buns are also included with safety related activities highly emphasized. Personal safety is stressed.

BKNG 104L Sweet Yeast Goods **2 credit hours**
This course covers basic instruction in retail production of donuts, sweet rolls, cinnamon rolls, coffee cake and danish. Sanitation techniques, portion control, safety techniques and costing skills are included.

BKNG 105L Cake Batters **2 credit hours**
Instruction in the fundamentals of processing ingredients in a variety of cake batters, icings and fillings is provided. Special emphasis is placed on basic cake decorating skills, ingredient storage, proper formulation, and care and use of bakery equipment.

BKNG 106L Pies and Pastries **2 credit hours**
This course covers a variety of specialized pastries with emphasis on roll-in doughs and leavening agents. Safety and sanitation are stressed.

BKNG 111 Baking Theory II **3 credit hours**
(Prerequisite: BKNG 101, 102, 103L, 104L, 105L, 106L or department approval) This course continues the principles of Baking I with emphasis on baking chemistry and advanced production procedures. More study of international pastries and desserts is provided with advanced decorating techniques. Safety and sanitation are stressed.

BKNG 112L Yeast Doughs **2 credit hours**
(Pre- or corequisite: BKNG 111 or department approval) Supervision, safety techniques and advanced production procedures of a variety of breads, sweet doughs and croissants are covered in this course.

BKNG 113L Batters **2 credit hours**
(Pre- or corequisite: BKNG 111 or department approval) Advanced production procedures of a variety of international cakes and tortes with emphasis on baking chemistry and safety are promoted.

BKNG 114L Pastries and Cookies **2 credit hours**
(Pre- or corequisite: BKNG 111 or department approval) Advanced production techniques of international pastries, pies and petit fours are presented. The seven different methods of cookie production are emphasized. International roux products are introduced with advanced safety procedures utilized.

BKNG 115L Icings and Fillings **2 credit hours**
(Pre- or corequisite: BKNG 111 or department approval) Advanced production techniques of international buttercreams, fondants, ganache and marzipan are presented; safety and sanitation requirements are stressed.

BKNG 116L Cake Decorating **1 credit hour**
(Pre- or corequisite: BKNG 111 or department approval) In this course fundamental knowledge of the production of tiered, special occasion and sculpted cakes is stressed.

BKNG 296 Special Topics **1–6 credit hours**
(Prerequisite: department approval) This course helps students enrolled in Food Service Management and Quantity Foods pursue specialized needs. The class may be taken as independent or directed study.

Carpentry

Certificate Program
Main Campus

The Carpentry program provides students with entry-level job skills for the construction industry. Tool safety and job-site safety training in compliance with OSHA standards are stressed. Classes meet on- and off-campus in labs designed for residential and commercial construction.

Lab classes teach the fundamentals of site layout, foundations, framing, roof systems, exterior coverings, installation of doors and windows, interior finish, cabinet construction and installation, remodeling and tools. Theory classes present technical information, Uniform Building Code (UBC) regulations, blueprint reading and material analysis.

Students must be free of chronic respiratory disease and allergies or reactions to wood or wood products, construction adhesives, paints and solvents. Students must be able to lift 50 pounds. A valid driver's license and a good driving record are required by most employers. Students purchase all textbooks for this program.

This program requires basic hand tools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term.

A suggested schedule per term includes:

Term 1: CARP 101, 102, 102L, 103, 103L, 104, 104L, SSKL 211 or SSKL 213, computer elective

Term 2: CARP 111, 112, 112L, 113, 113L, 114, 114L

Carpentry Program

			Credit Hours
CARP	101	Carpentry Math/Blueprint Reading I	3
CARP	102	Foundations Theory	1
CARP	102L	Foundations Lab	2
CARP	103	Framing Theory	1
CARP	103L	Framing Lab	2
CARP	104	Exteriors Theory	1
CARP	104L	Exteriors Lab	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
CARP	111	Carpentry Math/Blueprint Reading II	3
CARP	112	Interior Finish Theory	1
CARP	112L	Interior Finish Lab	2
CARP	113	Cabinet-making and Millwork Theory	1
CARP	113L	Cabinet-making and Millwork Lab	2
CARP	114	Carpentry Remodel Theory	1
CARP	114L	Carpentry Remodel Lab	2
Computer Elective (any department)			3–4
		Total	**28–29**

Course Descriptions

CARP 101 Carpentry Math/Blueprint Reading I 3 credit hours
Topics include whole numbers, combining numbers, lumber sizing, scaling, centering and triangle theory. Instruction in the interpretation of elevation drawings, floor plans, symbols, notations, dimensions and structural information is included. Students are introduced to material estimation.

CARP 102 Foundations Theory 1 credit hour
This course provides instruction in the safety and use of hand and power tools, site layout and various methods of concrete foundation construction.

CARP 102L Foundations Lab 2 credit hours
(Pre- or corequisite: CARP 101, 102 or department approval) This course provides hands-on training in the safety and use of hand and power tools. Site layout, footing, stemwall and concrete slab construction are taught.

CARP 103 Framing Theory 1 credit hour
(Prerequisite: CARP 101, 102 or department approval) This course provides instruction in the layout of floor, wall, ceiling and roof structural members. The students read blueprints and calculate the type of structural materials to be used in accordance with the Uniform Building Code (UBC).

CARP 103L Framing Lab 2 credit hours
(Pre- or corequisite: CARP 103 or department approval) This course meets on- and off-campus on job sites where students cut and assemble the structural material to construct floor, wall, ceiling and roof systems in accordance with the Uniform Building Code (UBC). Safety is stressed.

CARP 104 Exteriors Theory 1 credit hour
(Pre- or corequisite: CARP 101, 102, 103 or department approval) This course provides instruction in the installation of exterior wall and roof finishes, windows and exterior doors in accordance with the Uniform Building Code (UBC).

CARP 104L Exteriors Lab 2 credit hours
(Pre- or corequisite: CARP 104 or department approval) This course provides experience in installing exterior wall and roof finishes, windows and exterior doors in accordance with the Uniform Building Code (UBC).

CARP 111 Carpentry Mathematics/Blueprint Reading II 3 credit hours
(Prerequisite: CARP 101, 102, 102L, 103, 103L, 104, 104L or department approval) Blueprint applications for residential homes, multiple family dwellings and commercial buildings are introduced. Instruction also is provided in the use of rules and formulas for material estimating, volume measure, ratio and proportion.

CARP 112 Interior Finish Theory 1 credit hour
(Pre- or corequisite: CARP 111 or department approval) The focus is on the UBC requirements for the installation of various types of thermal insulation and drywall. Methods involved in painting, trimming and finishing interiors are covered. Calculations for quantities of materials are determined.

CARP 112L Interior Finish Lab 2 credit hours
(Pre- or corequisite: CARP 112 or department approval) This course offers hands-on activities in insulation techniques, drywall installation, taping and texture of drywall, painting, trimwork and finishing of the interiors of residential and commercial buildings. Safety is stressed.

CARP 113 Cabinet-making and Millwork Theory 1 credit hour
(Pre- or corequisite: CARP 111 or department approval) This course provides instruction in the design, layout and construction of wood cabinets.

CARP 113L Cabinet-making and Millwork Lab 2 credit hours
(Pre- or corequisite: CARP 113 or department approval) This course offers hands-on experiences in the safe use of equipment and power tools used in the construction and finish of wooden cabinets.

CARP 114 Carpentry Remodel Theory 1 credit hour
(Pre- or corequisite: CARP 111 or department approval) This course covers the various types of construction found in residential and commercial buildings. Emphasis is placed on the Uniform Building Code requirements for remodeling an existing structure.

CARP 114L Carpentry Remodel Lab 2 credit hours
(Pre- or corequisite: CARP 114 or department approval) This course offers hands-on experiences in the safe use of power equipment and problem solving in remodeling.

CARP 170 Carpentry Fundamentals and Cabinet-making 3 credit hours
This course introduces the student to the carpentry and cabinet-making field. Job, shop and hand/power tool safety is stressed. Students are required to construct and finish a project out of materials and hardware. (1 theory + 5 lab hours a week)

CARP 171 Construction Trades Blueprint/Math 3 credit hours
Instruction is provided in reading and interpreting residential blueprints. Emphasis is on terminology, symbols, notations, scaling, dimensioning and drawing techniques. Construction methods and materials are studied. Calculations for material take-off and estimates are determined for materials.

CARP 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) This course includes an in-depth study of methods and advanced techniques.

Commercial Printing

Associate of Applied Science Degree/
Certificate Program
Main Campus

This program provides students with safety training and entry-level skills for jobs in the offset printing industry or in-plant print and duplication shops.

The commercial printing lab contains paste-up and stripping tables, process cameras, platemakers, offset duplicators, paper cutters, folders, bindery machines and other equipment used in the industry.

Students must be free of chronic allergies to lubricants, solvents, inks and photographic chemicals, and must have normal color differentiation with near- and far-point depth perception.

This program requires basic hand tools. Tool lists with appropriate costs and purchase deadlines are provided by the instructor at the beginning of each term.

A suggested schedule for the certificate includes:

Term 1: CMPR 101, 102, 104L, 105L, 108L and 109L

Term 2: SSKL 211 or 213, CMPR 114L, 117L, 205L, 206L and BA 150

Commercial Printing Program

			Credit Hours
CMPR	101	Commercial Printing Math I	1
CMPR	102	Offset Theory I	3
CMPR	104L	Pre-press Lab	2
CMPR	105L	Press and Bindery Lab	2
CMPR	108L	Basic Press Work	2
CMPR	109L	Intermediate Press Work	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
CMPR	114L	Estimating	2
CMPR	117L	Advanced Pre-press Lab	2
CMPR	205L	Advanced Press Work	2
CMPR	206L	Process Press Work	2
BA	150	Introduction to Computer Processing	3
		Total	**24**

Additional Degree Requirements

Business Occupation Courses

MMS	255	Desktop Publishing	3
MMS	256	Advanced Page Layout	3
MMS	280	Postscript Illustration	3
MMS	281	Image Manipulation/Painting	3
MMS	282	Digital Pre-press	3
AA	101	Beginning Keyboarding	3
AA	102	Intermediate Keyboard Applications	3

Arts & Sciences Courses

ENG	101	College Writing	3
ENG	102	Analytic and Argumentative Writing	3
ENG	219	Technical Writing	3
Communication Elective			3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3

Trades & Service Occupations Courses

CM	132	Construction Graphics	3
EPT	213	Occupational Safety	3
		Total	**69**

Course Descriptions

CMPR 101 Commercial Printing Math I 1 credit hour

Instruction is offered in math as it applies to commercial printing for measurements, pica/point rulers, proportions, sizing of camera shots, exposures, ink formulas and paper.

CMPR 102 Offset Theory I 3 credit hours

This course covers the entire process of offset lithography. Basic composition, layout and paste-up techniques, film processing on the process camera, film assembly, platemaking, press and bindery are major areas of discussion.

CMPR 104L Pre-press Lab 2 credit hours

This lab covers the printing process, including paste-up techniques, process camera, film assembly and platemaking. Students learn to shoot halftones and lineshots, strip for single color jobs to multi-color jobs. Personal safety is stressed.

CMPR 105L Press and Bindery Lab 2 credit hours

In this lab students learn the procedures for set-up, operation, clean-up and maintenance of offset lithography presses. Students get initial training in custom ink mixing and basic bindery and finishing, including the operation of the folder and the power cutter. Safety is stressed.

CMPR 108L Basic Press Work **2 credit hours**

Students learn press adjustments, roller pressure adjustments, cylinder pressure (plate to blanket) and packing cylinders. Changing blankets is required. Mechanical types and weights of paper stock that affect offset running ability are also covered.

CMPR 109L Intermediate Press Work **2 credit hours**

This course simulates working conditions. Time is spent to improve competencies and increase skill level and speed. A final project is taken from design to bindery.

CMPR 114L Estimating **2 credit hours**

(Prerequisites: CMPR 101, 102, 104L, 105L, 108L and 109L or department approval) The basics of handling customer jobs, estimating cost and labor for a variety of printing jobs are covered. Students learn how to make up work orders and charge jobs in a simulated business environment using both catalog and computer methods.

CMPR 117L Advanced Pre-press Lab **2 credit hours**

(Prerequisites: CMPR 101, 102, 104L, 105L, 108L and 109L or department approval) Students are trained in hairline, multiple burn stripping using chokes and spreads, create camera ready art, flow graphic from an existing file into a publication and print finished document. Basic entry-level electronic pre-press techniques are stressed.

CMPR 170 Commercial Printing Skills Improvement: Basic **3 credit hours**

This theory/lab course is designed for individuals with industry experience who need to update their knowledge. The entire range of offset experience is covered with emphasis on improving quality. (1 theory + 5 lab hours a week)

CMPR 205L Advanced Press Work **2 credit hours**

(Prerequisites: CMPR 101, 102, 104L, 105L, 108L and 109L or department approval) This course offers advanced training in press work with emphasis on efficiency and quality, including reducing make-ready and wash-up time

CMPR 206L Process Press Work **2 credit hours**

(Prerequisites: CMPR 101, 102, 104L, 105L, 108L and 109L or department approval) Students learn to produce process color on the press, including control densities and fit.

CMPR 296 Special Topics **1–6 credit hours**

(Prerequisite: department approval) This course includes an in-depth study of problems and the advanced techniques that commercial printing experts use in responding to them.

Construction Technology

Associate of Applied Science Degree
Main Campus

The Construction Technology associate of applied science degree has options in construction management, general construction and electrical. Required courses are designed to develop professionalism, leadership and technical skills necessary for students to gain employment in the construction industry or a related field.

The program provides instruction in safety, graphics, materials, computer estimating, statistics, management, equipment, blueprint reading, drafting, business law, accounting, economics, communications, math and technical skills related to the residential and commercial construction industry.

Construction Technology Program

Credit Hours

Option 1: Construction Management

Required Trades & Service Occupations Courses

CM	130	Construction Detailing	3
CM	132	Construction Graphics	3
CM	171	Construction Materials and Techniques	3
CM	175	Contractor Preparation	3
CM	201	Commercial Construction Theory	2
CM	201L	Commercial Construction Lab	
	or		3
CM	299	Cooperative Education	
CM	256	Statics	3
CM	257	Computer Estimating	3
CM	258	Construction Management	2
CM	260	Construction Job Costing	3
CM	263	Construction Equipment and Methods	3
CM	278	Mechanical and Electrical Blueprint Reading	2
EPT	213	Occupational Safety	3
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
Computer Elective (any department)			3–4

Required Business Occupations Course

BA	211	Business Law	3

Required Technologies Course

ARDR	261L	Construction Surveying	3

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social and Behavioral Science Elective			3
MATH	120	Intermediate Algebra	4
MATH	121	College Algebra	3
Physics Elective			3
		Total	**68–69**

Option 2: General Construction

Required Trades & Service Occupations Courses

CARP	101	Carpentry Math/Blueprint Reading I	3
CARP	102	Foundations Theory	1
CARP	102L	Foundations Lab	2
CARP	103	Framing Theory	1
CARP	103L	Framing Lab	2
CARP	104	Exteriors Theory	1
CARP	104L	Exteriors Lab	2
CARP	111	Carpentry Math/Blueprint Reading II	3
CARP	112	Interior Finish Theory	1
CARP	112L	Interior Finish Lab	2
CARP	113	Cabinet-making and Millwork Theory	1
CARP	113L	Cabinet-making and Millwork Lab	2
CARP	114	Carpentry Remodel Theory	1
CARP	114L	Carpentry Remodel Lab	2
CM	132	Construction Graphics	3
CM	171	Construction Materials and Techniques	3
CM	175	General Contractor Preparation	3
CM	201	Commercial Construction Theory	2
CM	201L	Commercial Construction Lab	3
CM	257	Computer Estimating	3
CM	260	Construction Job Costing	3
CM	263	Construction Equipments and Methods	3
CM	278	Mechanical and Electrical Blueprint Reading	2
EPT	213	Occupational Safety	3
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
Computer Elective (any department)			3–4

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3–4
Physics Elective			3
		Total	**74–76**

Option 3: Electrical

Required Trades & Service Occupations Courses

ELTR	101	Electrical Theory I	3
ELTR	102	Electrical Math I	3
ELTR	103L	Electrical DC/AC Lab	3
ELTR	104L	AC Circuitry, Motors, Generators	3
ELTR	111	Electrical Algebra	3
ELTR	112	Residential Blueprint Reading I	3
ELTR	113	Electrical Theory II	3
ELTR	114L	Residential Wiring Lab	3
ELTR	115L	Residential Services	3
ELTR	201	Electrical Theory III	3
ELTR	202	Commercial Blueprint Reading II	3
ELTR	203	Electrical Motor Control Theory	3
ELTR	204L	Industrial Motor Control Lab	3
ELTR	205L	Industrial Power Distribution	3
ELTR	211	Industrial Electrical Circuitry and Safety	3
ELTR	212	Programmable Logic Controller Theory	3
ELTR	213L	PLC Installation and Operation	3
ELTR	214L	PLC Systems Operation and Troubleshooting	3
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
Computer Elective (any department)			3–4

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3–4
Physics Elective			3
		Total	**76–78**

CM 130 Construction Detailing **3 credit hours**
This course covers the basics of construction detailing and working drawing sets. (2 theory + 2.5 lab hours a week)

CM 132 Construction Graphics **3 credit hours**
(Prerequisite: CM 130 or department approval) Emphasis is on principles and techniques of graphics used in the construction industry. Topics include geometry, multi-view projects and visualization with applications in structural and presentation problems. (1 theory + 5 lab hours a week)

CM 171 Construction Materials and Techniques **3 credit hours**
This course covers plan reading, elementary construction techniques, materials and construction documents. Microcomputers are used for word processing, graphics, spreadsheets and data bases. Assignments include written reports and oral presentations.

CM 175 General Contractor Preparation **3 credit hours**
The class is designed for people interested in becoming general contractors in New Mexico. Licensing requirements, rules and regulations, business law, the Uniform Building Code, construction methods and contract management are covered.

CM 201 Commercial Construction Theory **2 credit hours**
This course serves as an introduction to commercial drawing sets. Buildings are analyzed for code compliance and cost per square foot. Commercial and residential buildings are contrasted, and the Uniform Building Code is covered.

CM 201L Commercial Construction Lab **3 credit hours**
(Corequisite: CM 201 or department approval) Students analyze costs, specifications and codes in order to learn the responsibilities of a construction supervisor. Personal safety is stressed.

CM 256 Statics **3 credit hours**
(Prerequisite: MATH 120 or department approval) Through the use of graphic and algebraic formulas, students are introduced to static forces, equilibrium, moments, stress and stain. Beams and columns in wood, steel and concrete are covered in reference to the Uniform Building Code and institutional manuals.

CM 257 Computer Estimating **3 credit hours**
(Prerequisite: CM 201, 201L or department approval) This course includes a survey of contemporary software. Students complete cost estimates on buildings, using the Construction Specifications Institute formatted budgets and take-off techniques. (1 theory + 5 lab hours per week)

CM 258 Construction Management 2 credit hours
(Prerequisite: CM 257 or department approval) State-of-the-art scheduling techniques are surveyed, including computer-assisted packages. Students break down a job into its basic tasks and reassemble it in a framework that controls time, work, materials and related activities.

CM 260 Construction Job Costing 3 credit hours
(Prerequisite: CM 257 or department approval) The process of setting up an accounting system for construction firms is reviewed. Bookkeeping organization to track cash flow and manage finances is covered.

CM 263 Construction Equipment and Methods 3 credit hours
(Prerequisite: CM 258 or department approval) Large equipment used to move, lift and assemble components of commercial buildings is presented. Earth work, concrete forms and construction are covered, along with steel, wood and masonry methods, productivity, licenses and contract options.

CM 278 Mechanical and Electrical Blueprint Reading 2 credit hours
This course focuses on materials and equipment used in the electrical and mechanical systems of commercial buildings. The associated codes and costs of these systems are introduced.

CM 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) This course includes an in-depth study of topics related to construction management.

CM 299 Cooperative Education 3 credit hours
(Prerequisite: SSKL 211 or SSKL 213) The student is employed at an approved course-related work site and applies learned theory based on goals and objectives.

Criminal Justice

Associate of Applied Science Degree
Main Campus

This program provides comprehensive instruction in criminal justice for students who plan careers in criminal justice agencies (such as law enforcement, courts and corrections) or in the private sector (security, investigations). Students who have already received a certificate from an approved New Mexico criminal justice academy may be granted credit if their academy experience coincides with a model academy curriculum and they have successfully passed a final examination with a grade of C or better.

Some employers may require a high school diploma, two years of college, an associate or bachelor's degree or in some instances a law degree.

Criminal Justice Program

Credit Hours

Required Core Courses

CJ	101	Criminal Law	3
CJ	102	Juvenile Law and Procedure	3
CJ	103	Probation and Parole	
	or		3
CJ	104	Patrol Procedures*	
CJ	107	Criminal Procedure	3
CJ	108	Community-Oriented Policing	3
*CJ	111	Traffic Investigation and Enforcement	
	or		3
CJ	116	Correctional Services	
CJ	112	Criminal Investigation	3
CJ	113	Organized and White Collar Crime	
	or		3
CJ	109	Introduction to Security Services	
CJ	115	Report Writing Change to 110	3
CJ	117	Public Policies and Strategies	3
FITT	170	Physical Fitness I	1
SSKL	212	Employment Skills for Public Safety	1
Computer Elective (any department)			3-4

*CJ 299 may be substituted for CJ 111.

Required Arts & Sciences Courses

ENG	101	College Writing	3
COMM	221	Interpersonal Communication Studies	3
ENG	119	Technical Communications	3
MATH	120	Intermediate Algebra or higher	3-4

PSY	105	Introduction to Psychology	3
SOC	101	Introduction to Sociology	3
SOC	111	Criminal Justice System	3
SOC	211	Social Problems	3
SOC	212	Juvenile Delinquency	3
SOC	214	Sociology of Corrections	
	or		3
PSY	271	Social Psychology	
SOC	215	Criminology	3
SOC	216	Ethnic and Minority Groups	3
		Total	**71–73**

Course Descriptions

CJ 101 Criminal Law **3 credit hours**

(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
Studies include the historical development, purposes and goals of common and statutory criminal laws which control actions in the criminal justice system.

CJ 102 Juvenile Law and Procedure **3 credit hours**

(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
The juvenile court and justice system including the Children's Code and the Rules of Procedure are covered.

CJ 103 Probation and Parole **3 credit hours**

(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
The history, philosophy and legal basis governing investigation and supervision of juvenile offenders and adult violators placed on probation and parole are presented.

CJ 104 Patrol Procedures **3 credit hours**

(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
Basic patrol function and the problems faced by law enforcement officers are introduced.

CJ 107 Criminal Procedure **3 credit hours**

(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
This course examines the method of enforcing the substantive criminal law. It includes the process of applying the established law, constitutional law, rules of evidence, case law and an understanding of the logic used by the courts.

CJ 108 Community-Oriented Policing **3 credit hours**

(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
This course examines the history of policing, problems with some of the earlier methods, a re-thinking of the basic role of police and using police for problem solving, improving relations with the public and crime prevention with the public.

CJ 109 Introduction to Security Services 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) Topics covered include the history and development of security services, relationships to the legal process, career roles and operational processes in security operations. The course also helps homeowners make living quarters more secure and covers personal defense, report writing, emergency procedures and defensive driving.

CJ 111 Traffic Investigation and Enforcement 3 credit hours
(Prerequisite: CJ 105, CJ 104, CJ 115 or department approval) Included in this course is the study of traffic law enforcement and basic wreck checking. The course progresses to the complete investigation of major accidents.

CJ 112 Criminal Investigation 3 credit hours
(Prerequisite: CJ 105, CJ 107, CJ 115 or department approval) Basic criminal investigation is studied from the preliminary investigation to final preparation and presentation in court.

CJ 113 Organized and White Collar Crime 3 credit hours
(Prerequisites: CJ 105 and CJ 107 or department approval) Illegal activities of people and institutions whose purpose is profit through legitimate gain through illegal enterprise are studied in this course.

CJ 116 Correctional Services 3 credit hours
(Prerequisite: CJ 105, CJ 104, CJ 115 or department approval) The duties and authorities of correctional officers, admission procedures, cell searches, lockdown, penal terminology, key control measures and operations are covered. The course also includes the study of court decisions dealing with corrections.

CJ 117 Public Policies and Strategies 3 credit hours
(Prerequisite: CJ 108 or department approval) This course examines the issues and strategies involved in implementing community-oriented policing. It includes problems in standard operating procedures, police discretion, cadet training and in-service training. In addition, community input strategies, civilian review boards and problem solving are examined.

CJ 118 Report Writing 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) This course introduces the use of police reports. It includes the writing of reports, use of forms and various styles of writing required by criminal justice agencies.

CJ 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) The in-depth study of problems and the advanced techniques that criminal justice experts use in responding to them are included in this course.

CJ 299 **Cooperative Education** **3 credit hours**

(Prerequisite: SSKL 212) The student is employed at an approved course-related work site and applies learned theory based on goals and objectives.

Culinary Arts

Associate of Applied Science Degree
Main Campus

Food service is an excellent field for students seeking a challenging career in a rapidly growing industry. The Culinary Arts program provides comprehensive training in safety, sanitation, quantity food preparation, food service nutrition, equipment use, human relations, supervisory skills and business practices. This program is certified by the American Culinary Federation.

An associate of applied science degree in Culinary Arts is awarded to students who complete the required occupational and Arts & Sciences courses.

Students must be free of chronic allergies. Each student must present a physician's certificate to TVI before the start of classes stating that the student is free from tuberculosis in a transmissible form. There is a TVI registration fee each term and students are required to purchase textbooks. Students in the lab classes are required to purchase uniforms and hand tools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term. Students in Arts & Sciences courses pay tuition and, in some cases, lab fees.

Culinary Arts Program

			Credit Hours
QUFD	101	Quantity Food Theory I	2
QUFD	103L	Buffet Procedures	2
QUFD	104L	Salad and Pantry	2
QUFD	105L	Breakfast/Lunch	2
QUFD	106L	Fry	2
QUFD	111	Quantity Food Theory II	3
QUFD	112L	Dining Room Skills	1
QUFD	113L	Cold Preparation	2
QUFD	114L	Stocks and Sauces—Sous Chef	2
QUFD	115L	Entree (Meat and Fish Preparation)	3
QUFD	102	Food Service Math	
	or		3
BKNG	102	Food Service Math	
BKNG	101	Baking Theory I	2
BKNG	103L	Breads	2
BKNG	104L	Sweet Yeast Goods	2

BKNG	105L	Cake Batters	2
BKNG	106L	Pies and Pastries	2
BKNG	111	Baking Theory II	3
BKNG	112L	Yeast Doughs	2
BKNG	113L	Batters	2
BKNG	114L	Pastries and Cookies	2
BKNG	115L	Icings and Fillings	2
BKNG	116L	Cake Decorating	1
FSMG	101	Operations Management	3
FSMG	102	Human Resource Management	3
FSMG	103	Product Management	3
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
Computer Elective (any department)			3–4

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3–4
NUTR	120	Personal and Practical Nutrition	3
		Total	**77–78**

Course descriptions are found under Baking, Food Service Management and Quantity Foods.

Diesel Equipment Technology

Certificate Program
Main Campus

This program prepares students to work on a variety of diesel-powered equipment used in the trucking, heavy equipment and extraction industries.

The program meets in labs where students are introduced to safety and a variety of diesel engines, electrical and hydraulic test equipment, air conditioning equipment, drive train components, fuel injection test and calibration devices and related equipment.

The lab classes in this program consist of disassembly, evaluation, precision measurement, reassembly and testing of the following major components: engines, transmissions, drive units, electrical components, brake systems, hydraulic systems, air conditioning, trans-

port refrigeration systems and fuel systems. The theory classes present operating principles and troubleshooting techniques.

Students must be free of chronic respiratory diseases and allergies to fuels and solvents. A valid driver's license and a good driving record are required by most employers.

This program requires basic hand bools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term.

A suggested schedule per term includes:

Term 1: DETC 101, 102, 103L, 104L, 105L, computer elective
Term 2: AUTC 113, DETC 111, 111L, 112L, 113L, SSKL 211 or SSKL 213
Term 3: DETC 201, 201L, 202, 202L, 203, 203L

Diesel Equipment Technology Program

			Credit Hours
DETC	101	Diesel Drive Train Theory	3
DETC	102	Math/Basic Electricity	3
DETC	103L	Manual Shift Transmissions Lab	2
DETC	104L	Drive Axles, Brakes and Automatic Transmissions Lab	3
DETC	105L	Hydraulic Systems	2
#AUTC	113	Transportation Electronics	3
DETC	111	Diesel Engine Theory	3
DETC	111L	Diesel Engine Overhaul	3
DETC	112L	Precision Measurement and Component Repair Lab	2
DETC	113L	Engine Tune-up and Testing Lab	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
DETC	201	Diesel Electrical Theory	1
DETC	201L	Diesel Electrical Lab	3
DETC	202	Diesel Fuel Injection Theory	1
DETC	202L	Diesel Fuel Injection Lab	3
DETC	203	Transport Refrigeration/Air Conditioning Theory	1
DETC	203L	Transport Refrigeration/Air Conditioning Lab	2
Computer Elective (any department)			3–4
		Total	**41–42**

#Automotive Technology course

Course Descriptions

DETC 101 Diesel Drive Train Theory 3 credit hours

Emphasis is on safety, disassembly, evaluation, reassembly, adjustment, troubleshooting and testing of drive train components. Lessons are presented on air brake troubleshooting and repair, final drive units, hydraulic system components and circuits.

DETC 102 Math/Basic Electricity **3 credit hours**

Review and application of basic math skills, such as fractions, decimals, percentages, ratios, proportions, areas, volumes, and basic electricity principles and electrical circuits are presented.

DETC 103L Manual Shift Transmissions Lab **2 credit hours**

(Pre- or corequisite: DETC 101 or department approval) Shop safety, disassembly, evaluation, assembly and adjustment of manual shift transmissions used in trucks are included in this course. Also covered are single and twin countershaft transmissions, auxiliary transmissions and transfer gear cases.

DETC 104L Drive Axles, Brakes and Automatic Transmissions Lab **3 credit hours**

(Pre- or corequisite: DETC 101 or department approval) Shop safety and disassembly, evaluation, assembly and adjustment of automatic transmissions, drive axles, clutches and other drive train components are presented. Air and hydraulic brake system components are disassembled, evaluated and reassembled.

DETC 105L Hydraulic Systems **2 credit hours**

(Pre- or corequisite: DETC 101 or department approval) Shop safety, disassembly, evaluation and assembly of hydraulic pumps, valves, actuators and hydraulic circuits used in the heavy-equipment industry are presented. Hydrostatic transmissions and in-line circuit testers are covered.

DETC 111 Diesel Engine Theory **3 credit hours**

Emphasis is placed on two- and four-stroke cycle diesel engine operating principles. Operation, troubleshooting and repair procedures are covered for blocks, crankshafts, camshafts, rods, bearings, pistons, cylinder heads, lubrication systems, cooling systems, fuel systems, air induction and exhaust systems. Job seeking and retention skills are stressed.

DETC 111L Diesel Engine Overhaul **3 credit hours**

(Pre- or corequisite: DETC 111 or department approval) Engine disassembly, evaluation and reassembly techniques are covered in this course. Engines are assembled to manufacturer's recommended specifications then operated and adjusted on a test stand.

DETC 112L Precision Measurement and Component Repair Lab **2 credit hours**

(Prerequisite: DETC 102 or department approval; pre- or corequisite: DETC 111) The uses of micrometers and dial indicators are presented. Measurements are done on engines then compared to manufacturer's specifications. Component repair involves disassembly, evaluation and reassembly of units such as blowers, turbochargers, oil pumps, water pumps and fuel transfer pumps.

DETC 113L **Engine Tune-Up and Testing Lab** **2 credit hours**
(Pre- or corequisite: DETC 111) Engine adjustments and tune-ups are performed on major brands of engines. Troubleshooting skills are practiced on engines in operating condition.

DETC 201 **Diesel Electrical Theory** **1 credit hour**
(Prerequisite: AUTC 113 or department approval) Students study shop safety and diagnosis and troubleshooting procedures of electrical systems and diesel components.

DETC 201L **Diesel Electrical Lab** **3 credit hours**
(Pre- or corequisite: DETC 201 or department approval) Students practice shop safety and diagnostic and troubleshooting procedures of electrical components and diesel systems.

DETC 202 **Diesel Fuel Injection Theory** **1 credit hour**
(Pre- or corequisite: DETC 201 or department approval) Students study safety, diagnosis, troubleshooting and repair of fuel injection systems and diesel components.

DETC 202L **Diesel Fuel Injection Lab** **3 credit hours**
(Pre- or corequisite: DETC 201, 202 or department approval) Safety and diagnosis, troubleshooting and repair procedures on fuel injection systems and diesel components are practiced.

DETC 203 **Transport Refrigeration/Air Conditioning Theory** **1 credit hour**
(Pre- or corequisite: DETC 201 or department approval) Students study shop safety and diagnostic, troubleshooting and repair procedures of transport refrigeration and air conditioning systems.

DETC 203L **Transport Refrigeration/Air Conditioning Lab** **2 credit hours**
(Pre- or corequisite: DETC 201, 203 or department approval) Students practice shop safety while learning diagnostic, troubleshooting and repair procedures on transport refrigeration and air conditioning systems.

DETC 296 **Special Topics** **1–6 credit hours**
(Prerequisite: department approval) This course includes an in-depth study of problems and the advanced techniques diesel technicians use in responding to them.

Electrical Trades

Certificate Program
Main Campus

The Electrical Trades program provides the student with job-site safety training, OSHA compliance and entry-level skills for employment in electrical construction, maintenance or related fields.

Lab instruction is conducted on- and off-campus, enabling students to gain on-the-job experience in electrical installation. Electrical safety, circuitry, residential electrical materials, residential wiring, residential services, commercial/industrial materials, industrial power distribution, motor control and PLC (programmable logic controller) installation, operation and troubleshooting are covered in the lab activities. Theory instruction includes NEC (National Electrical Code) compliance, technical information, math, residential and commercial blueprint reading, and material analysis.

Students must have normal color differentiation, be free from chronic respiratory diseases and allergies and be able to lift 50 pounds. A valid drivers's license and a good driving record are required by most employers. Students purchase all textbooks for this program. This program requires basic hand tools. Tool lists with approximate cost and purchase deadlines are provided by instructors at the beginning of each term.

A suggested schedule per term includes;

Term 1: BA111, 131, ELTR 101, 102, 103L, 104L, computer elective
Term 2: ELTR 111, 112, 113, 114L, 115L, EPT 213
Term 3: ELT 201, 202, 203, 204L, 205L, SSKL 211 or SSKL 213
Term 4: ELTR 211, 212, 213L, 214L

Electrical Trades Program

			Credit Hours
#BA	131	Human Relations (7.5 weeks)	2
	or		
*PSY	105	Introduction to Psychology	
	or		3
*SOC	101	Introduction to Sociology	
#BA	111	Communications (7.5 weeks)	2
	or		
*ENG	101	College Writing	3
ELTR	101	Electrical Theory I	3
ELTR	102	Electrical Math I	3
ELTR	103L	Electrical DC/AC Lab	3
ELTR	104L	AC Circuitry, Motors, Generators	3
ELTR	111	Electrical Algebra	3
ELTR	112	Residential Blueprint Reading I	3
ELTR	113	Electrical Theory II	3
ELTR	114L	Residential Wiring Lab	3
ELTR	115L	Residential Services	3

EPT	213	Occupational Safety	3
ELTR	201	Electrical Theory III	3
ELTR	202	Commercial Blueprint Reading II	3
ELTR	203	Electrical Motor Control Theory	3
ELTR	204L	Industrial Motor Control Lab	3
ELTR	205L	Industrial Power Distribution	3
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
ELTR	211	Industrial Electrical Circuitry and Safety	3
ELTR	212	Programmable Logic Controller Theory	3
ELTR	213L	PLC Installation and Operation	3
ELTR	214L	PLC Systems Operation and Troubleshooting	3
Computer Elective (any department)			3–4
		Total	**65–68**

#Business Occupations course
*Arts & Sciences course

Course Descriptions

ELTR 101 Electrical Theory I **3 credit hours**
(Pre- or corequisite: ELTR 102) This course covers the basic concepts of DC and AC electricity with emphasis on Ohm's Law, Kirchoff's Law, circuit analysis and troubleshooting. Subject areas include DC and AC theory, symbol identification, schematic reading, circuit application, magnetism, basic transformers, single-phase motors and application of the National Electrical Code.

ELTR 102 Electrical Math I **3 credit hours**
The student reviews basic arithmetic functions and is introduced to electrical formulas which include Ohm's and Kirchhoff's laws. Calculations of material and circuit load requirements, rules for series, parallel and combination circuits and mechanical work and power are covered.

ELTR 103L Electrical DC/AC Lab **3 credit hours**
(Pre- or corequisite: ELTR 101, 102 or department approval) This course covers the basic fundamentals of electricity. Emphasis is placed on safety. Topics include electrical circuitry, meters, power sources, conductors, insulators, reactive circuits and application of the National Electrical Code.

ELTR 104L AC Circuitry, Motors, Generators **3 credit hours**
(Pre- or corequisite: ELTR 101, 102 or department approval) This course provides advanced instruction in electrical alternating current concepts. Subjects include combination circuit analysis, RLC circuitry, DC/AC motors, generators, solid-state components, wiring methods for single pole and three-way switches and application of the National Electrical Code. Safety is stressed.

ELTR 111 Electrical Algebra **3 credit hours**

(Prerequisite: ELTR 101, 102, 103L, 104L or department approval) This course advances the student's knowledge of electrical formulas into algebraic concepts and trigonometric functions as they apply to power production, magnetic circuitry, generators and three-phase motors in the electrical trade.

ELTR 112 Residential Blueprint Reading I **3 credit hours**

(Pre- or corequisite: ELTR 111 or department approval) Basic instruction is provided in reading and interpreting blueprints and specifications. Emphasis is on terminology, symbols, notations, scaling, dimensioning and basic blueprint drawing techniques. Construction methods, materials and structural support of residential, commercial and industrial buildings also are covered.

ELTR 113 Electrical Theory II **3 credit hours**

(Pre- or corequisite: ELTR 111, 112 or department approval) This course covers the application of the National Electrical Code, local codes and regulations for installation of branch circuits, services, feeders, temporary services and associated materials and equipment for residential and light commercial applications.

ELTR 114L Residential Wiring Lab **3 credit hours**

(Pre- or corequisite: ELTR 111, 112, 113 or department approval) This course covers safety, tools, materials, single pole switches, receptacles, overcurrent protection, three- and four-way switches, pilot switches, door chimes, dryer and range receptacles and swamp coolers, as well as NEC requirements for residential and light commercial applications.

ELTR 115L Residential Services **3 credit hours**

(Pre- or corequisite: ELTR 111, 112, 113 or department approval) This course allows students to study and build residential services, install circuit panels, cut and thread rigid conduit, hand bend and install EMT conduit in adherence to the National Electrical Code.

ELTR 170 Electrical Wiring Circuitry **2 credit hours**

This course provides instruction in the interpretation, design and wiring of common switch, receptacle and related circuitry in accordance with the NEC and state and local codes.

ELTR 171L Conduit Hand Bending Fundamentals **1 credit hour**

This theory/lab course provides instruction in the computation and placement of conduit hand benders to bend and install conduit systems in accordance with the NEC and state and local codes. (.5 theory + 2.5 lab hours a week)

ELTR 173 Industrial Motor Control Circuitry **2 credit hours**

This theory course provides instruction in the design, interpretation, drawing and installation of electromechanical relay type motor controls in accordance with the National Electrical Code.

ELTR 174L Industrial PC Motor Control 3 credit hours
This theory/lab course provides instruction in the operation of programmable logic controllers, interpretation of PLC logic diagrams and the installation of programming of PLC systems in accordance with the National Electrical Code. (1 theory + 5 lab hours a week)

ELTR 175 Fiber Optical Cable Installation 2 credit hours
This theory course introduces the installation of fiber optical cable in various systems. Emphasis is placed on proper installation and termination.

ELTR 176 Electrical Journeyman Preparation 3 credit hours
Instruction is provided in the use and application of the National Electrical Code. Students learn the responsibilities and duties encountered by journeymen on typical job sites. This course prepares students for the New Mexico journeyman's electrical exam.

ELTR 201 Electrical Theory III 3 credit hours
(Prerequisite: ELTR 111, 112, 113, 114L or 115L or department approval) This course introduces students to the commercial/industrial aspects of electrical safety, tools, materials, power distribution systems, services, hazardous locations and intrusion/fire alarm systems in accordance with the National Electrical Code.

ELTR 202 Commercial Blueprint Reading II 3 credit hours
(Pre- or corequisite: ELTR 112, 201 or ELEC 118L or department approval) Advanced instruction in reading blueprints and specifications is provided. The blueprints include transformers, feeders, distribution panels, sub-feeder panels, lighting circuits, motors and controllers, signal systems and power requirements.

ELTR 203 Electrical Motor Control Theory 3 credit hours
(Prerequisite: ELTR 112 or department approval; pre- or corequisite: ELTR 201) This course introduces students to the symbology and method of interpreting and drawing electromechanical motor control circuitry. NEMA standards are studied in detail.

ELTR 204L Industrial Motor Control Lab 3 credit hours
(Pre- or corequisite: ELTR 203, 205L or department approval) Topics include safety, electromechanical relay-type motor control, momentary push button switches, limit switches, proximity switches, pneumatic timers, forward/reverse starters, three-phase motors and National Electrical Code requirements.

ELTR 205L Industrial Power Distribution 3 credit hours
(Pre- or corequisite: ELTR 201, 204L or department approval) This lab covers safety, use of mechanical and hydraulic benders, use of power threaders, knock-out punches, hammer drills and powder actuated fasteners, drop-in anchors, cable installation, cutting, splicing and termination, wire pulling and the application of the NEC.

ELTR 211 Industrial Electrical Circuitry and Safety 3 credit hours
(Prerequisite: ELTR 201, 202, 203, 204L, 205L or department approval) This course provides instruction in safety principles and standards used in the electrical field. Techniques used for electrical troubleshooting are emphasized.

ELTR 212 Programmable Logic Controller Theory 3 credit hours
(Pre- or corequisite: ELTR 211 or ELEC 103L, 105L, 118L or department approval) Students are introduced to programmable logic motor controllers. Topics include the principles of operation of a programmable controller, the numbering systems used by controllers, logic fundamentals and basics of programming.

ELTR 213L PLC Installation and Operation 3 credit hours
(Pre- or corequisite: ELTR 211, 212 or ELEC 103L, 105L, 118L or department approval) This course enables a student to install and program programmable logic controllers in accordance with manufacturer's specifications and NEC requirements. Simulating fundamental industrial control processes with various input and output devices is also covered.

ELTR 214L PLC Systems Operation and Troubleshooting 3 credit hours
(Pre- or corequisite: ELTR 211, 212 or department approval) This course enables the student to learn intricate industrial wiring, motor controls and motor troubleshooting, programmable controller timer, counter and sequence program operations and the troubleshooting techniques involved.

ELTR 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) This course provides advanced, in-depth study and research into methods and current technological equipment used in the electrical trades.

Environmental Technology

Associate of Applied Science Degree
Main Campus

The Environmental Technology program provides basic classroom instruction in the diverse field of environmental and occupational safety from a health and safety perspective. The curriculum also provides coursework designed to upgrade skills of individuals already employed in the field.

The student receives a broad, general understanding of environmental problems, as well as physical science instruction, in preparation for entry-level jobs. Instruction is provided in biology, chemistry, physics, ecology, environmental legislation, regulation compliance and abatement. The program addresses key areas of environmental protection including biological and hazardous waste, water quality protection, air quality protection, soil, domestic and industrial waste control, workplace safety, energy management and recycling.

Environmental Technology Program

			Credit Hours
EPT	102	Emergency Response	3
EPT	111	Environmental Technology I	4
EPT	112	Hazards and Protection Training	3
EPT	173	Water Quality Protection	3
EPT	299	Cooperative Education	3
Approved Elective			3
EPT	211L	Environmental Technology II/Lab	4
EPT	212	Energy and Waste Management	3
EPT	213	Occupational Safety	3
EPT	215	Environmental Instrumentation and Analysis	3
EPT	232	Air Quality Protection	1
SSKL	212	Employment Skills for Public Safety	1
Computer Elective (any department)			3–4

Required Arts & Sciences Courses

BIO	111	Environmental Science	3
BIO	123	Biology for Health Sciences	3
BIO	124L	Biology Lab for Health Sciences	1
BIO	231L	Applied Environmental Microbiology	
	or		4
EPT	233	Environmental Bioremediation	
CHEM	111	Introduction to Chemistry	3
CHEM	112L	Introduction to Chemistry Lab	1
CHEM	130L	Environmental Chemistry	
	or		4
EPT	131	Materials Categorization and Analysis	
CHEM	212L	Integrated Organic Chemistry and Biochemistry	4
Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Math Electives (MATH 120 and/or higher)			6–7
PHYS	102 or higher		3
Humanities/ Social or Behavioral Science Elective			3
Total			~~81-83~~ 78-80

Course Descriptions

EPT 102 **Emergency Response** **3 credit hours**

Instruction includes standard first aid and cardiopulmonary resuscitation. Red Cross certification is issued. Other topics are emergency management, hazardous materials, DOT labeling and placarding, decontamination protocols and personal safety.

EPT 111 Environmental Technology I **4 credit hours**
(Prerequisites: MATH 100, ENG 100 or department approval) This course is an introduction to environmental protection methods and their ecological basis. All major areas of environmental concern are covered including air, water, soils and food sanitation.

EPT 112 Hazards and Protection Training **3 credit hours**
(Prerequisite: EPT 101, EPT 213, CHEM 111, CHEM 112L, computer elective or department approval) Training is provided in safe work practices at hazardous waste sites. Students in this lab course learn those procedures specified by OSHA in the 29 CFR 1910.120 regulation concerning safety and health plans, site characterization and analysis, waste removal and remedial operations. (7.5 lab hours a week)

EPT 131 Materials Categorization and Analysis **4 credit hours**
(Prerequisite: CHEM 111/112L or department approval) This course introduces fundamentals of analysis of hazardous and non-hazardous materials. Emphasis is on the use of proper techniques and protocols.

EPT 170 Introduction to OSHA Compliance **3 credit hours**
Everyday application of Occupational Safety and Health Administration (OSHA) standards required in today's workplace is covered. Topics include hazardous communication, material safety data sheets, lockout/tagout, hazards assessment, personal protective equipment and fire extinguishers.

EPT 171 Introduction to Safety Management **3 credit hours**
Behavioral and management techniques for safety in today's demanding workplace are presented. Topics include planning, budgeting, communications, motivation, people skills, networking, management tools, computing and leadership.

EPT 172 Introductory Soil Science **3 credit hours**
This course provides information on elementary characteristics of soil. Soil profiles, standard soil classification systems, elementary soil biology and chemistry, root zone interactions, nutrient cycling and agricultural considerations are reviewed.

EPT 173 Water Quality Protection **3 credit hours**
(Prerequisite: EPT 111, CHEM 111, CHEM 112L, math elective, computer elective or department approval) This course provides training in the fundamentals of water quality preservation. Students study water supply system operations, distribution systems and basic hydraulics and become familiar with water quality protection and treatment techniques including backflow prevention and cross connection control. (1 theory plus 5 lab hours a week)

EPT 174 Basic Site Remediation Technology **3 credit hours**
Major remedial technologies employed for cleanup of contaminated sites under federal, state and local regulations are the emphasis of this course. Physical, biological, chemical and thermal treatments in common use are presented.

EPT 175 Pest Management 3 credit hours
Students develop an understanding of the principles of pest management. Multiple pest types—insects, weeds, rodents and fungal pests—are addressed, along with control techniques and impacts on the environment.

EPT 176 Food Resources and the Environment 3 credit hours
The impact of food resource choices on the quality of the environment and human health is presented. Economic, ecological and social aspects of food resource production and consumption are explored.

EPT 177 Business Aspects of Environmental Technology 3 credit hours
(Prerequisites: EPT 111, ENG 101 and ENG 119) Business aspects of environmental services and consulting are included in the course. The increasingly competitive nature of the environmental business arena is emphasized.

EPT 178 Industrial Hygiene for Environmental Technicians 3 credit hours
(Prerequisites: CHEM 111 and CHEM 112L) Recognition, evaluation and control of health hazards encountered during hazardous waste clean-up and emergency responses are presented. Personnel monitoring, chemistry, toxicology, pathology and air surveillance are covered.

EPT 179 Sampling Design and Polychlorinated Biphenyl 3 credit hours
(Prerequisite: EPT 111 or department approval) Practice sampling technique and statistically superior field environmental sampling designs are provided in the course. Designs used include EPA's Polychlorinated biphenyl (PCB) sampling grid design; regulations, spills and cleanups are covered.

EPT 211L Environmental Technology II/Lab 4 credit hours
(Prerequisite: EPT 111, BIO 231L, CHEM 212L, physics elective, math elective or department approval) This theory/lab course provides instruction in technical, operational and regulatory aspects of environmental technology. Students learn to identify and handle biological, chemical and nuclear wastes. Also covered are site sampling, characterization and assessment, waste removal and site remediation methods. (2 theory + 5 lab hours a week)

EPT 212 Energy and Waste Management 3 credit hours
(Prerequisite: EPT 111, CHEM 111, CHEM 112L, physics elective, math elective, computer elective or department approval) This course provides an orientation to energy and waste management in systems. Students learn to assess energy requirements through audits. Cost effective energy conservation techniques are emphasized. Instruction is provided in waste reduction and control.

EPT 213 Occupational Safety **3 credit hours**

Topics in current safety practices are introduced. Instruction in safety principles and standards is provided. Basic safety concepts and monitoring procedures are emphasized, culminating in inspections and projects that contribute to the TVI safety program. Occupational Safety and Health Act (OSHA) regulations are included.

EPT 215 Environmental Instrumentation and Analysis **3 credit hours**

(Prerequisite: EPT 111, math elective or department approval; corequisite: EPT 211L) Contemporary environmental instrumentation and analytical techniques are explored in this theory/lab hands-on introduction to the care and use of laboratory and field-portable instruments. Students learn maintenance, calibration and operation of instruments and meters. USEPA approved protocols are utilized. (1 theory + 5 lab hours a week)

EPT 232 Air Quality Protection **1 credit hour**

(Prerequisite: EPT 111, CHEM 111, CHEM 112L, math elective, computer elective or department approval) This course provides training in the fundamentals of vehicle pollution control. The course also covers city, state and federal rules and regulations governing air pollution, general and point-source emissions and standard air pollution control methods. (0.5 theory + 2.5 lab hours a week)

EPT 233 Environmental Bioremediation **4 credit hours**

(Prerequisite: BIOL 121/121L or department approval) This is a combined lecture and lab course designed to introduce the basic concepts of bioremediation to detoxify hazardous contaminants.

EPT 270 Air Pollution Meteorology **3 credit hours**

Basic meteorology and climatology, mainly in the Southwest United States, are presented. Applications to ambient air monitoring, dispersion modeling, air discharge permitting, air quality and hazardous waste transport and sampling considerations are emphasized.

EPT 271 Ambient Air Monitoring and Clean Air Act **3 credit hours**

The federal Clean Air Act (CAA) and the EPA's and NMED's regulations and enforcement actions are the focus of this course. Also covered are criteria for the location, construction, instrumentation and operation of meteorological and air chemistry monitoring stations operated for data collection and permit compliance.

EPT 296 Special Topics **1–6 credit hours**

(Prerequisite: department approval) This course includes an in-depth study of problems and advanced techniques.

EPT 299 Cooperative Education **3 credit hours**

(Prerequisite: SSKL 212) The student is employed at an approved course-related work site and applies learned environmental theory based on goals and objectives.

Fire Science

Associate of Applied Science Degree
Main Campus

The Fire Science program offers career preparation for students with a strong interest in the fields of fire protection and emergency response. With ever-increasing competition for fire and emergency response positions, many fire departments are establishing more strict requirements, including an associate degree in fire science for entry-level positions as well as advanced positions. Upon completion of the associate degree, graduates will be qualified for a variety of fire service and emergency response positions in the fields of fire protection services, industrial fire protection, hazardous materials, insurance services, fire protection systems service and fire prevention. In addition to the education requirements, students wishing to obtain fire service positions will usually undergo extensive academic testing, physical agility testing and a background examination conducted by the potential employer. This program maintains a close working relationship with area providers of fire protection and emergency response services.

Fire Science theory courses are designed to provide the student with the knowledge to perform at the firefighter and fire officer levels. The program consists of a comprehensive core courses supplemented by a wide range of electives. In addition, the student will complete Arts & Sciences courses in English, mathematics, chemistry, physics, psychology and sociology. It is recommended that entering students meet with the faculty to discuss their career and educational objectives.

Firefighters must pass basic employment drug screen and background check.

Fire Science Program

			Credit Hours
PE	170	Physical Fitness I	1
EPT	213	Occupational Safety	3
FS	102	Fire Service Organization	3
FS	103	Introduction to Fire Science	3
FS	111	Fire Prevention	3
FS	112	Building Construction	3
FS	201	Fire Protection Systems	3
FS	202	Managing Community Fire Protection	3
FS	203	Hazardous Material	3
FS	211	Incident Command and Control	3
SSKL	212	Employment Skills for Public Safety	1
*#EMS	160L	Basic Emergency Medical Technician Skills	6
*FS	212	Fire Investigation	3
*FS	213	Industrial Fire Protection	3
*FS	214	Facilities Inspection	3
*FS	215	Tactics I	3

*FS	216	Tactics II	3
*FS	299	Cooperative Education	3
		(FS 299 may be repeated for up to 9 credits.)	
Computer Elective (any department)			3-4

*Students have the option of any of these courses for a total of 15 credit hours.
#Health Occupations course

Required Arts & Sciences Courses

CHEM	111/112L	Introduction to Chemistry/Lab	4
Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
MATH	120	Intermediate Algebra	4
PHYS	102	Introduction to Physics	3
Psychology Elective			3
SOC	101	Introduction to Sociology	3
SOC	216	Ethnic and Minority Groups	3
		Total	**76–77**

Course Descriptions

FS 102 Fire Service Organization **3 credit hours**
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
This course presents an orientation to basic management principles used in modern fire protection organizations. Topics include the fire protection system, fire department organization and management, planning and evaluating fire protection systems, data collection, resource management and budgeting.

FS 103 Introduction to Fire Science **3 credit hours**
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
This course presents an overview of the fire protection system focusing on the history of the fire service, fire protection careers and employment requirements, fire service organizations, firefighting equipment and facilities, and chemistry and behavior of fire.

FS 111 Fire Prevention **3 credit hours**
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
A basic overview is presented of fire prevention programs and specific techniques used to reduce the occurrence of fire. This dual-focus course covers public fire safety education programs and basic concepts of installed fire protection and detection systems.

FS 112 Building Construction **3 credit hours**
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval)
The student is introduced to building construction with emphasis on structural elements,

construction materials, construction techniques, fire loading, fire resistance, fire spread and growth in buildings and fire department operations in various building types.

FS 201 Fire Protection Systems 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) This course presents an in-depth study of fire protection system design and operation. A variety of fire suppression systems are discussed including water, carbon dioxide, halon, dry chemical and foam. Principles of fire detection system design and operation are covered.

FS 202 Managing Community Fire Protection 3 credit hours
(Prerequisite: FS 102 or department approval) A variety of fire service management issues are presented. Topics include legal aspects, program and personnel management, emergency management, EMS and rescue services, code administration, alternative delivery systems, training and trends in the fire service.

FS 203 Hazardous Materials 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) (Note: Students are required to wear respiratory protection equipment and participate in simulated hazardous materials incidents. Students must complete a pulmonary function test and medical review at the student's expense. Documentation of the medical evaluation must be submitted prior to simulations.) Students develop the skills to recognize and identify hazardous materials and to take defensive actions to prevent additional injuries and property and/or environmental damage. This course meets selected NFPA and OSHA requirements at the Hazardous Materials Operations level.

FS 211 Incident Command and Control 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) Specific incident management techniques for a variety of emergency incidents are covered. The course includes basic fireground and emergency incident operations, incident management systems, effective communications and multi-agency/multi-jurisdiction response.

FS 212 Fire Investigation 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) The student is introduced to techniques of investigation used by fire investigators. The course focuses on investigative techniques to determine fire cause and origin for structural, vehicle, wildland and hazardous materials fires. Explosion investigation is covered.

FS 213 Industrial Fire Protection 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) In-depth information is presented regarding industrial loss control concepts focusing on industrial fire and safety hazards, hazardous materials, industrial fire brigades, fire department operations at industrial facilities, and NFPP, ISFSI and OSHA fire brigade standards.

FS 214 Facilities Inspection 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) This course introduces fire prevention inspection techniques. Emphasis is placed on inspections conforming to NFPA 101: Life Safety Code and applicable NFPA fire codes. General and occupancy-specific requirements are covered.

FS 215 Tactics I 3 credit hours
(Prerequisites: RDG 099 or equivalent, MATH 099 or equivalent or department approval) In-depth information is provided on strategy and tactics used by fire officers at emergency incidents. Topics include structural firefighting, rescue, apparatus placement, water supply, ventilation, fire suppression systems, forcible entry and making fireground decisions.

FS 216 Tactics II 3 credit hours
(Prerequisites: FS 215 or department approval) In-depth information is provided on strategy and tactics used by fire officers at emergency incidents. Topics covered include high-rise operations, urban search and rescue, wildland fires, aircraft emergencies, hazardous materials, mass casaulty incidents and firefighter safety.

FS 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) Current topics in fire protection and emergency services are presented.

FS 299 Cooperative Education 3 credit hours
(Prerequisite: SSKL 212) The student is employed at an approved course-related work site and applies learned theory based upon goals and objectives of the Fire Science program.

Fitness Technician

Certificate Program
Main Campus

The Fitness Technician (FITT) certificate program's intent is to increase the availability of qualified professionals to provide scientifically sound advice and supervision regarding appropriate physical activities for health maintenance in the apparently healthy adult population.

The three major goals of the FITT certificate program are:

1. To prepare individuals for employment in the health and fitness industry as personal fitness trainers. Upon successful completion of the program, an individual will possess the expertise and knowledge to assess an apparently healthy individual's present physical fitness level and health status as well as design and implement an appropriate exercise program.
2. To prepare individuals specifically to sit for the American College of Sports Medicine's Health/Fitness Instructor and the National Strength and Conditioning

Association's Certified Personal Trainer certification exams. Successful completion of the Fitness Technician program will also prepare the student for other personal fitness trainer certifications (e.g., American Council on Exercise, Aerobic and Fitness Association of America).

3. To provide course work for continuing education units (CEUs) required by certifying organizations to maintain certification as a personal fitness trainer.

In order to graduate from the Fitness Technician program, a student must have current American Red Cross or American Heart Association CPR certification.

The program begins a new class every fall term.

The program also offers fitness classes that are required for other programs and are open to all students.

Fitness Technician Program

			Credit Hours
FITT	209	Introduction to Exercise Physiology	3
FITT	211	The Business of Personal Training	3
FITT	225	Fitness and Weight Control.	3
FITT	277	Designing Resistance Training Programs	3
FITT	289	Fitness Assessment and Exercise Prescription	3
FITT	290	Exercise Prescription for Special Populations	3
FITT	298	Fitness Technician Field Experience	
	or		3
FITT	299	Cooperative Education	
SSKL	211	Employment Skills—General	1
Computer Elective (any department)			3–4
		Total	**25–26**

Course Descriptions

FITT 170 Physical Fitness I **1 credit hour**

(Prerequisite: Health history questionnaire signed by a physician documenting student's ability to participate in an exercise program) This course offers a fitness program which assesses muscular strength, muscular endurance, cardiorespiratory fitness, flexibility and body composition. Based on the assessments, the student designs and participates in an exercise program. The course is self paced. (.5 theory + 2.5 lab hours per week)

FITT 171 Physical Fitness II **1 credit hour**

(Prerequisite: Health history questionnaire signed by a physician documenting student's ability to participate in an exercise program) This advanced course offers a fitness program which assesses muscular strength, muscular endurance, cardiorespiratory fitness, flexibility and body composition. Based on the assessments, the student designs and participates in an exercise program. The course is self paced. (.5 theory + 2.5 lab hours per week)

FITT 173 Circuit Training **1 credit hour**

(Prerequisite: Health history questionnaire signed by a physician documenting student's ability to participate in an exercise program) This course combines structured strength training and aerobics to provide a total body workout within a single format. (.5 theory + 2.5 lab hours per week)

FITT 174 Weight Training for Women **1 credit hour**

(Prerequisite: Health history questionnaire signed by a physician documenting student's ability to participate in an exercise program) This introductory weight training course designed specifically for women focuses on the use of free weights and machine exercises to develop muscle endurance, hypertrophy and muscular strength. (.5 theory + 2.5 lab hours per week)

FITT 209 Introduction to Exercise Physiology **3 credit hours**

How the human body responds and adapts to exercise and physical training is introduced in the course. From this knowledge, the student develops scientifically based exercise programs. Applications are made to both individual and team sports. (2 theory + 2.5 lab hours per week) Fall term only.

FITT 211 The Business of Personal Training **3 credit hours**

This course focuses on the business of personal training, including marketing services and programs, day-to-day operations, documentation, financial considerations and trends and issues in the health/fitness industry. (2 theory + 2.5 lab hours per week) Fall term only.

FITT 225 Fitness and Weight Control **3 credit hours**

This course provides basic understanding of the interrelationship among exercise, weight control and nutrition. Applications are made to dietary analysis, energy balance, fat loss and weight gain programs. (2 theory + 2.5 hours lab hours per week) Spring term only.

FITT 277 Designing Resistance Training Programs **3 credit hours**

The physiological and kinesiological aspects of muscular fitness training are covered. Special emphasis is placed on designing strength, endurance, hypertrophy and power resistance/weight training programs. Applications are made to both individual and team sports. (2 theory + 2.5 lab hours per week) Spring term only.

FITT 289 Fitness Assessment and Exercise Prescription **3 credit hours**

(Prerequisites: FITT 209, 225, 277 and MATH 100, or departmental approval) This course covers the methods of assessing health status, cardiorespiratory and muscular fitness, flexibility and body composition in apparently healthy individuals. Based on these assessments, the student prescribes appropriate exercise programs. (2 theory + 2.5 lab hours per week) Summer term only.

FITT 290 **Exercise Prescription for Special Populations** **3 credit hours**

(Pre- or corequisite: FITT 289) The indications and contraindications are reviewed for assessing and prescribing exercise programs for special populations (elderly, prepubescent children, pregnancy, low back pain, diabetes, spinal cord injury, etc.). (2 theory + 2.5 lab hours per week) Summer term only.

FITT 296 **Special Topics** **1–6 credit hours**

(Prerequisite: department approval) This course includes an in-depth study of problems and the advanced techniques that fitness professionals use in responding to them.

FITT 298 **Fitness Technician Field Experience** **3 credit hours**

(Prerequisite: department approval) This course provides students with a supervised field experience (7.5 hours per week) in a fitness setting.

FITT 299 **Cooperative Education** **3 credit hours**

(Prerequisite: SSKL 211 or department approval) The student is employed at an approved course-related work site and applies learned theory based on goals and objectives.

Food Service Management

Certificate Program
Main Campus

This program is available to persons employed in the hospitality/food service field who want to learn the skills necessary to become entry-level supervisors or managers. Safety and sanitation procedures are stressed.

Classroom instruction includes theory in human relations, supervision and business practices. A cooperative education portion is available under the supervision of the instructor.

This program may not qualify students for Veterans Administration training benefits or other student financial aid.

Food Service Management Program

			Credit Hours
FSMG	101	Operations Management	3
FSMG	102	Human Resource Management	3
FSMG	103	Product Management	3
FSMG	170L	Computers in Food Service	3
FSMG	299	Cooperative Education	4
		Total	**16**

FSMG 101 Operations Management **3 credit hours**

This course introduces the student to basic functions of supervision, management, HACCP sanitation, quality control, purchasing, record keeping, inventory criteria, storing, issuing, safety and oral and written communication skills. Certifications are available in sanitation, CPR and standard first aid.

FSMG 102 Human Resource Management **3 credit hours**

This course introduces the student to skills in customer relations, interviewing and training, delegation, discipline, communications and human relations. Role playing and group participation are involved. Job seeking and retention skills are stressed.

FSMG 103 Product Management **3 credit hours**

This course introduces the student to food nutrition, menu planning, marketing, advertising and budgeting to advance into supervision and management. This course includes oral and written communication skills.

FSMG 170L Computers in Food Service **3 credit hours**

This combination lab/theory course emphasizes the use of computers, including WordPerfect and Lotus software, in the food service industry. (1 theory + 5 lab hours a week)

FSMG 296 Special Topics **1–6 credit hours**

This course enables Culinary Arts students to pursue expanded studies in management skills in the hospitality industry. It also may be taken as an independent or guided study or refresher course. Hours are by arrangement.

FSMG 299 Cooperative Education **4 credit hours**

The student is employed at an approved course-related work site and applies management theory learned in FSMG 102, 103 and 104 based on goals and objectives.

Machine Tool Technology

Certificate Program
Main Campus

The Machine Tool Technology program qualifies students for job entry as machine tool operators. All courses emphasize safe operations of various machine tools. Classes meet in well equipped labs where students are introduced to micrometers, gauges, drill presses, hand tools, engine lathes, milling machines, computer controlled machining centers and other equipment commonly used throughout the metal-working industry.

Students must be free of chronic respiratory diseases and allergies to oils, solvents and cutting fluids, must be able to stand on concrete floors for the length of a standard work shift and must have depth perception correctable in both eyes.

This program requires basic hand tools. Tool lists are provided by instructors at the beginning of each term.

A suggested schedule includes:

Term 1: MATT 101, 102, 103L, 104L, 105L, 108L, computer elective
Term 2: MATT 111, 113, 117L, 120L, 121L, 122L, SSKL 213
Term 3: MATT 201, 202, 208L, 214, 216L, 217L, 218L

Machine Tool Technology Program

			Credit Hours
MATT	101	Machine Tool Technology Math I	2
MATT	102	Machine Tool Technology Blueprint Reading I	2
MATT	103L	Basic Lathe Principles	2
MATT	104L	Basic Milling Machine Principles	2
MATT	105L	Basic Supporting Machine Tool Principles	2
MATT	108L	Basic Measurement and Inspection	2
MATT	111	Machine Tool Technology Math II	2
MATT	113	Machine Tool Technology Blueprint Reading II	2
MATT	117L	Intermediate Lathe Principles	2
MATT	120L	Intermediate Milling Machine Principles	2
MATT	121L	Intermediate Supporting Machine Tool Principles	2
MATT	122L	Computer Numerical Control I	2
SSKL	213	Employment Skills for High-Tech Industry	1
MATT	201	Geometric Dimensioning and Tolerancing	1
MATT	202	Metallurgy	1
MATT	208L	Advanced Lathe Principles	2
MATT	214	Machine Tool Technology CAD	2
MATT	216L	Advanced Milling Machine Principles	2
MATT	217L	Advanced Supporting Machine Tool Principles	2
MATT	218L	Computer Numerical Control II	2
Computer Elective (any department)			3–4
		Total	**40–41**

MATT 101 Machine Tool Technology Math I 2 credit hours
A review of basic shop math including whole numbers, fractions and decimals is presented. Concentrated instruction is provided in shop geometry and algebra, formula manipulation, Pythagorean theorem and triangulation, problem solving skills and calculator usage.

MATT 102 Machine Tool Technology Blueprint Reading I 2 credit hours
The course begins with an introduction to the interpretation of basic shop drawings. Concentrated instruction is provided in proper use of terminology and interpretation of linework, sketching, orthographic projection, notes, symbols, dimensions, tolerances and an overview of ANSI drawing standards.

MATT 103L Basic Lathe Principles 2 credit hours
Students are introduced to basic engine lathe principles and operations. Training is provided in safety, setup, speeds and feeds, basic workholding devices and tooling, facing, turning, chamfering, knurling, shouldering, grooving and tailstock operations.

MATT 104L Basic Milling Machine Principles 2 credit hours
This course introduces students to basic milling machine principles and operations. Training is provided in safety, basic setup and alignment, speeds and feeds, tooling, workholding devices, squaring, step milling, edge finding, drilling, reaming, countersinking, counterboring and tapping.

MATT 105L Basic Supporting Machine Tool Principles 2 credit hours
Drill press, bandsaw, pedestal grinder and handtool principles and operations are introduced. Training is provided in safety, speeds and feeds, care and use of hand tools, layout and drilling, toolbit grinding and machine care and maintenance.

MATT 108L Basic Measurement and Inspection 2 credit hours
This course provides practical exercises in basic metal shop measurement and inspection techniques, including use of rules, calipers, micrometers, protractors, gauges, comparison instruments and basic optics, and inspection reports.

MATT 111 Machine Tool Technology Math II 2 credit hours
(Prerequisite: MATT 101 or department approval) A review of basic shop algebra, formulas, geometry and triangulation is presented. Concentrated instruction is provided in applied trigonometry and advanced shop math applications.

MATT 113 Machine Tool Technology Blueprint Reading II 2 credit hours
(Prerequisite: MATT 102 or department approval) Basic shop blueprint interpretation is presented. Concentrated instruction is provided in interpretation of complex engineering drawings including sectional and auxiliary views, tolerances and allowances, surface texture and working shop drawings.

MATT 117L Intermediate Lathe Principles 2 credit hours

(Prerequisite: MATT 103L or department approval) Basic engine lathe principles and operations are reviewed. Training is offered in safety, precision turning and facing, production turning, form and offset turning, taper turning, carbide tooling applications, power cutoff, boring, single point threading and basic CNC turning set up and operation.

MATT 120L Intermediate Milling Machine Principles 2 credit hours

(Prerequisite: MATT 104L or department approval) This course begins with a review of basic milling principles and operations. Training is offered in safety, climb and conventional milling methods, hole production, gear machining, form milling, slotting, pocket milling, rotary table work, indexing and basic CNC milling set-up and operation.

MATT 121L Intermediate Supporting Machine Tool Principles 2 credit hours

(Prerequisite: MATT 105L or department approval) A review of basic support equipment principles and operations is presented. Concentrated training is offered in safety, surface grinding, tool reconditioning, heat treating, production support and advanced quality assurance methods.

MATT 122L Computer Numerical Control I 2 credit hours

(Prerequisite: MATT 101 and 102 or department approval) Basic computer skills necessary to program, set up and operate CNC milling and turning centers are presented. Word address format programming, CNC manuscript and tape preparation, program troubleshooting and editing, machine referencing, tooling and workholding and fundamentals of CNC operation are covered.

MATT 173 Machine Tool Technology Skills 3 credit hours

This theory/lab course is for students wishing to acquire basic knowledge or upgrade skills in the machine tool industry. Instruction is provided in safety, hand tools, lathe, mill, drill press, bench work, measurement, blueprint reading and shop math. (1 theory + 5 lab hours a week)

MATT 174 Advanced Machine Tool Technology Skills 3 credit hours

(Prerequisite: MATT 173 or department approval) This theory/lab course offers advanced instruction in safety, lathe, mill, surface grinder, precision measurement, blueprint reading and shop math. (1 theory + 5 lab hours a week)

MATT 201 Geometric Dimensioning and Tolerancing 1 credit hour

Interpretation of engineering drawings using the ANSI geometric dimensioning and tolerancing system is offered. Equipment and methods to inspect workpieces relating to the geometric dimensioning and tolerancing system are also studied.

MATT 202 Metallurgy **1 credit hour**
This course introduces students to the basic science of metals. Instruction is provided in the structure, properties, alloying, heat treatment and testing of ferrous and non-ferrous metals with emphasis on machining performance and applications.

MATT 208L Advanced Lathe Principles **2 credit hours**
(Prerequisite: MATT 117L or department approval) A review of carbide tooling applications, boring and threading is presented. Safety, pressure padding, trepanning, set up and use of soft jaws, internal threading and grooving and advanced production and CNC turning techniques are covered.

MATT 214 Machine Tool Technology CAD **2 credit hours**
The basics of computer-assisted drafting as applied in the machine tool technology area are presented. Instruction is provided on hardware and software typically found in the machine shop with specific instruction offered in CADKEY drafting software.

MATT 216L Advanced Milling Machine Principles **2 credit hours**
(Prerequisite: MATT 120L or department approval) Rotary table work, indexing and referencing, and locational operations are reviewed. Concentrated training is offered in safety, carbide shell mills, complex milling set-ups and advanced production and CNC milling techniques.

MATT 217L Advanced Supporting Machine Tool Principles **2 credit hours**
(Prerequisite: MATT 121L or department approval) Surface grinding, tool reconditioning and production support are presented. Safety, advanced surface grinding set ups and operations, assembly techniques, production inspection techniques to ANSI standards and CNC set-up and operation for production applications are covered.

MATT 218L Computer Numerical Control II **2 credit hours**
(Prerequisite: MATT 122L or department approval) Programming, manuscript and tape preparation, and editing are reviewed. Various programming languages, canned cycles, subroutines, loops and macros and menu and interactive graphic programming are presented.

MATT 296 Special Topics **1–6 credit hours**
(Prerequisite: department approval) This flexible course enables students to pursue studies in specialized areas. This class may also be taken as an independent or guided study, as a refresher course or to sharpen skills prior to employer exams.

Mechanical Technology

Associate of Applied Science Degree
Main Campus

The Mechanical Technology associate of applied science degree is available with two options: air conditioning and plumbing. Cross training in both programs is provided.

All courses must be passed with a minimum grade of C to qualify for graduation.

Mechanical Technology Program

Credit Hours

Option 1: Air Conditioning, Heating and Refrigeration

ACHR	104	Basic Refrigeration Math	1
ACHR	107	Basic Electromechanical Principles	2
ACHR	107L	Basic Electromechanical Principles Lab	2
ACHR	108	Basic Service Procedures	2
ACHR	108L	Basic Service Procedures Lab	2
ACHR	109	Basic Applications	2
ACHR	109L	Basic Applications Lab	1
ACHR	114	Math for Systems Design	2
ACHR	120L	Intermediate Applications Lab	2
ACHR	118	Intermediate Electromechanical Principles	2
ACHR	118L	Intermediate Electromechanical Principles Lab	2
ACHR	119	Intermediate Service Procedures	2
ACHR	119L	Intermediate Service Procedures Lab	2
ACHR	120	Intermediate Applications	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
ACHR	206	Advanced Electromechanical Principles	2
ACHR	206L	Advanced Electromechanical Principles Lab	2
ACHR	207	Advanced Service Procedures	2
ACHR	207L	Advanced Service Procedures lab	2
ACHR	208	Advanced Applications	2
ACHR	208L	Advanced Applications Lab	2

Additional Required Trades & Service Occupations Courses

EPT	213	Occupational Safety	3
PLMB	101	Basic Plumbing Theory	1
PLMB	101L	Basic Plumbing Lab	2
PLMB	102	Plumbing Systems Theory	1
PLMB	102L	Plumbing Systems Lab	2

PLMB	105	Plumbing Blueprint Reading I	1
PLMB	106L	Backflow Prevention	2
Computer Elective (any department)			3–4

Required Arts & Science Courses

Communications Elective (oral communications coursee)			3
ENG	101	College Writing	3
ENG	102 or ENG 119		3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3–4
Physics Elective			3
		Total	**72–74**

Option 2: Plumbing

PLMB	101	Basic Plumbing Theory	1
PLMB	101L	Basic Plumbing Lab	2
PLMB	102	Plumbing Systems Theory	1
PLMB	102L	Plumbing Systems Lab	2
PLMB	103	Heating Control Circuitry Theory	1
PLMB	103L	Heating Control Circuitry Lab	2
PLMB	104	Plumbing Mathematics	1
PLMB	105	Plumbing Blueprint Reading I	1
PLMB	106L	Backflow Prevention	2
PLMB	111	Systems Layout/Maintenance Theory	1
PLMB	111L	Systems Layout Lab	2
PLMB	112L	Systems Maintenance Lab	2
PLMB	115	Plumbing Blueprint Reading II	2
PLMB	116L	Building Maintenance, Heating and Cooling	1
PLMB	173L	Orbital Automated Welding Systems	4

Other Required Trades & Service Occupations Courses

ACHR	104	Basic Refrigeration Math	1
ACHR	107	Basic Electromechanical Principles	2
ACHR	107L	Basic Electromechanical Principles Lab	2
ACHR	108	Basic Service Procedures	2
ACHR	108L	Basic Service Procedures Lab	2
ACHR	109	Basic Applications	2
ACHR	109L	Basic Applications Lab	2
ACHR	114	Math for Systems Design	2
ACHR	118	Intermediate Electromechanical Principles	2
ACHR	118L	Intermediate EM Principles Lab	2
CM	132	Construction Graphics	3
EPT	213	Occupational Safety	3

SSKL	211	Employment Skills—General	
	or		
SSKL	213	Employment Skills for High-Tech Industry	1
WELD	170	Welding Skills Improvement	3
Computer Elective (any department)			3–4

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
ENG	102 or ENG 119		3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3–4
Physics Elective			3
		Total	**75–77**

Metals Technology

Associate of Applied Science Degree
Main Campus

The Metals Technology associate of applied science degree is available with two options: Machine Tool Technology and Welding.

The program prepares individuals for entry-level positions in the metal working industry. The program also provides the opportunity to transfer to a four-year program. Personal safety is stressed.

Courses are from the Machine Tool Technology and Welding certificate programs along with Business Occupations, Technologies and Arts & Sciences.

Metals Technology Program

Credit Hours

Option 1: Machine Tool Technology

MATT	101	Machine Tool Technology Math I	2
MATT	102	Machine Tool Technology Blueprint Reading I	2
MATT	103L	Basic Lathe Principles	2
MATT	104L	Basic Milling Machine Principles	2
MATT	105L	Basic Supporting Machine Tool Principles	2
MATT	108L	Basic Measurement and Inspection	2
MATT	111	Machine Tool Technology Math II	2
MATT	113	Machine Tool Technology Blueprint Reading II	2
MATT	117L	Intermediate Lathe Principles	2
MATT	120L	Intermediate Milling Machine Principles	2

MATT	121L	Intermediate Supporting Machine Tool Principles	2
MATT	122L	Computer Numerical Control I	2
SSKL	213	Employment Skills for High-Tech Industry	1
MATT	201	Geometric Dimensioning and Tolerancing	1
MATT	202	Metallurgy	1
MATT	208L	Advanced Lathe Principles	2
MATT	214	Machine Tool Technology CADD	2
MATT	216L	Advanced Milling Machine Principles	2
MATT	217L	Advanced Supporting Machine Tool Principles	2
MATT	218L	Computer Numerical Control II	2
WELD	170	Welding Skills	3
WELD	171	Advanced Welding Skills	3
Computer Elective (any department)			3-4
Business Occupations and/or Technologies Elective			3

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3-4
Physics Elective			3
		Total	**67–69**

Option 2: Welding

WELD	101	Welding Metallurgy Theory I	2
WELD	102	Welding Math I	1
WELD	103	Welding Blueprint Reading I	1
WELD	104L	Oxyacetylene Welding and Cutting	2
WELD	105L	Oxyacetylene Brazing/Soldering and Fabrication	2
WELD	106L	Introduction to SMAW	2
WELD	107L	Introduction to SMAW Qualifications and Fabrication	2
WELD	111	Welding Metallurgy Theory II	2
WELD	112	Welding Blueprint Reading II	1
WELD	113	Welding Math II	1
WELD	114L	Advanced SMAW	2
WELD	115L	Introduction to GMAW and Fabrication	2
WELD	116L	Introduction to GTAW and Fabrication	2
WELD	117L	Qualifications for SMAW and GMAW	2
SSKL	213	Employment Skills for High-Tech Industry	1
WELD	201	Welding Metallurgy Theory III	2
WELD	202	Welding Blueprint Reading III	2
WELD	205L	Pipe Layout and Welding	2

WELD	206L	Advanced GMAW and Fabrication	2
WELD	207L	Advanced GTAW and Fabrication	2
WELD	208L	Qualifications for GTAW	2
MATT	173	Machine Tool Technology Skills	3
MATT	174	Advanced Machine Tool Technology Skills	3
Computer Elective (any department)			3–4
Business Occupations and/or Technologies Elective			3

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social or Behavioral Science Elective			3
Math Elective			3–4
Physics Elective			3
		Total	**67–69**

Plumbing

Certificate Program
Main Campus

The Plumbing program provides safety training, technical knowledge and occupational skills necessary to enter the plumbing industry. Instruction is in the fundamentals of layout, assembly and installation, as well as nomenclature of tools and materials and practice with the tools of the trade.

Emphasis is on new construction, maintenance and remodeling; installation of fixtures; alteration, planning and coordination of the job; repair of piping systems; installation of water, soil and vent lines and application of codes.

Students must be free of chronic respiratory diseases and allergies to plumbing fluxes, oils, glues and plastic compounds, and must be able to lift 50 pounds.

This program requires basic hand tools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term.

A suggested schedule per term includes:

Term 1: PLMB 101, 101L, 102, 102L, 103, 103L, 104, 105, 106L, SSKL 211 or SSKL 213, computer elective

Term 2: PLMB 111, 111L, 112L, 115, 116L, 173L

Plumbing Program

			Credit Hours
PLMB	101	Basic Plumbing Theory	1
PLMB	101L	Basic Plumbing Lab	2
PLMB	102	Plumbing Systems Teory	1
PLMB	102L	Plumbing Systems Lab	2
PLMB	103	Heating Control Circuitry Theory	1
PLMB	103L	Heating Control Circuitry Lab	2
PLMB	104	Plumbing Mathematics	1
PLMB	105	Plumbing Blueprint Reading I	1
PLMB	106L	Backflow Prevention	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
PLMB	111	Systems Layout/Maintenance Theory	1
PLMB	111L	Systems Layout Lab	2
PLMB	112L	Systems Maintenance Lab	2
PLMB	115	Plumbing Blueprint Reading II	2
PLMB	116L	Building Maintenance, Heating and Cooling	1
PLMB	173L	Orbital Automated Welding Systems	4
Computer Elective (any department)			3–4
		Total	**29–30**

Course Descriptions

PLMB 101 Basic Plumbing Theory **1 credit hour**

Procedures for installing plastic, steel, cast iron and copper pipe are covered. Installation, addition, repair, replacement or maintenance of plumbing and gas piping systems are also covered. Personal safety is stressed.

PLMB 101L Basic Plumbing Lab **2 credit hours**

Identification of plumbing fittings and pipe nomenclature is covered. The correct procedures for soldering copper pipe, threading and cutting iron pipe, flaring copper pipe and making diagonal offsets are covered.

PLMB 102 Plumbing Systems Theory **1 credit hour**

This class covers the design of drainage and vent systems, sprinkler systems and water supply systems. Also covered are the correct methods to rough in a system and top out of an installation. Installation of DWV, cast iron, ABS and PVC vent systems in combustible construction is also covered.

PLMB 102L Plumbing Systems Lab **2 credit hours**

The student is introduced to the correct procedure for installation, repair and service of drainage and vent, sprinkler and water supply systems. Rough-ins and top outs are also covered.

PLMB 103 Heating Control Circuitry Theory 1 credit hour
This course includes installation and troubleshooting of heating control circuitry. Control theory, terminology and symbols are covered. Instructional emphasis is on electrical control devices from various manufacturers. Also covered are the reading and developing of wiring diagrams and line schematics.

PLMB 103L Heating Control Circuitry Lab 2 credit hours
The focus is on installation and troubleshooting of heating control circuitry. The correct use of electrical test instruments is stressed. Wiring and testing gas-fired heating test boards and actual furnaces are also covered. Safety is stressed.

PLMB 104 Plumbing Mathematics 1 credit hour
This course covers basic arithmetic, whole numbers, fractions and decimals. Volumes and weight measurements are also covered.

PLMB 105 Plumbing Blueprint Reading I 1 credit hour
This course introduces blueprint reading. Also covered are sketching and reading blueprint working drawings for new construction, maintenance and remodeling.

PLMB 106L Backflow Prevention 2 credit hours
Students identify, test and repair backflow prevention assemblies in this theory/lab course. A minimum of 50 percent of class time is spent in the lab. Completion of the course qualifies the student to become a certified backflow prevention assembly tester. Personal safety is emphasized. (1 theory + 3 lab hours a week)

PLMB 111 Systems Layout/Maintenance Theory 1 credit hour
(Prerequisite: PLMB 103L, PLMB 106L or department approval) This course emphasizes design, layout and installation of water, soil and vent lines, fixtures and fittings; inspecting and testing systems; soldering; maintenance and repair of plumbing, solar systems and yard irrigation; and swimming pool, hot tub and spa installation and service.

PLMB 111L Systems Layout Lab 2 credit hours
(Pre- or corequisite: PLMB 106L, PLMB 111 or department approval) The emphasis is on layout and installation of water, soil and vent lines, related fixtures and fittings, inspecting and testing systems and soldering.

PLMB 112L Systems Maintenance Lab 2 credit hours
(Pre- or corequisite: PLMB 111, PLMB 111L or department approval) This course covers maintenance and repair of plumbing and yard irrigation as well as swimming pool, hot tub and spa installation and service.

PLMB 115 Plumbing Blueprint Reading II **2 credit hours**
(Prerequisite: PLMB 104, PLMB 105 or department approval) Course content includes a detailed study of piping drawings, isometric pipe layouts, interpreting blueprints, application of plumbing codes, knowledge of terms, and planning and coordinating the job.

PLMB 116L Building Maintenance, Heating and Cooling **1 credit hour**
(Pre- or corequisite: PLMB 101L, PLMB 103L or department approval) This course presents complete requirements for the installation, pre-fabrication and maintenance of heating, sheet metal, cooling and ventilating systems.

PLMB 170 Mechanical Trades Math **1 credit hour**
Topics include basic arithmetic, whole numbers, fractions and decimals. Volumes, weight measurements and basic algebra as it applies to electricity are also covered.

PLMB 171 Journeyman Preparation **3 credit hours**
This course is designed for persons interested in becoming journey level plumbers and natural gas fitters in New Mexico. Licensing requirements, rules and regulations and the Uniform Plumbing Code are covered.

PLMB 173L Orbital Automated Welding Systems **4 credit hours**
(Pre- or corequisite: PLMB 101, 104 or department approval) This theory/lab course provides instruction in automated pipe ultra-pure stainless steel welding. Students operate and interpret the orbital tube welding machine, identify the operating sequence, and lay out and analyze welding applications for testing sequences. (2 theory + 5 lab hours a week)

PLMB 174L Polyvinlediene Fluoride (PVDF) Welding Systems **4 credit hours**
(Prerequisite: PLMB 173L) In this theory/lab course instruction includes Asahi Butt Fusion System, UF 2000 infra-red fusion and bead and crevice free system. (2 theory + 5 lab hours a week)

PLMB 296 Special Topics **1–6 credit hours**
This flexible course is designed to enable students currently in the plumbing trades to pursue studies in specialized areas. This class also may be taken as an independent or guided study or as a refresher to sharpen skills prior to licensing.

Quantity Food Preparation

Certificate Program
Main Campus

The Quantity Food Preparation program emphasizes occupational safety/sanitation criteria nd nutritional food preparation. It prepares students for entry into the rapidly growing food industry—as saute cooks after the first term or dinner cooks upon completion of the full program.

Classes are held in industrial kitchens. Students prepare large quantities of food and operate a cafeteria line including cash registers. Advanced students operate the Student Specialties program, a fine dining restaurant open to the public.

Graduates are encouraged to enroll in the Baking program, as space permits, to gain an additional job skill which may be helpful in their careers.

Students must be free of chronic allergies. Each student must also present a physician's certificate to TVI before the start of classes stating that the student is free from tuberculosis in a transmissible form.

This program requires basic hand tools. Tool lists with approximate costs and purchase deadlines are provided by instructors at the beginning of each term.

A suggested schedule per term includes:

Term 1: QUFD 101, 102, 103L, 104L, 105L, 106L, SSKL 211 or SSKL 213

Term 2: QUFD 111, 112L, 113L, 114L, 115L, computer elective

Quantity Food Preparation Program

			Credit Hours
QUFD	101	Quantity Food Theory I	2
QUFD	102	Food Service Math	3
QUFD	103L	Buffet Procedures	2
QUFD	104L	Salad and Pantry	2
QUFD	105L	Breakfast/Lunch	2
QUFD	106L	Fry	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
QUFD	111	Quantity Food Theory II	3
QUFD	112L	Dining Room Skills	1
QUFD	113L	Cold Preparation	2
QUFD	114L	Stocks and Sauces—Sous Chef	2
QUFD	115L	Entree (Meat and Fish Preparation)	3
Computer Elective (any department)			3–4
		Total	**28–29**

QUFD 101 Quantity Food Theory I **2 credit hours**
This course provides instruction in large quantity cooking of preparing sandwiches, salads and breakfast foods. Emphasis is placed on cost, nutrition, sanitation, safety, tools and equipment, cooking methods and techniques, speed and efficiency, and cafeteria line operation.

QUFD 102 Food Service Math **3 credit hours**
Basic arithmetic for sales, portioning and costing of food products is covered. Students also learn how to operate cash registers.

QUFD 103L Buffet Procedures **2 credit hours**
(Pre- or corequisite: QUFD 101, 102 or department approval) This course provides instruction for safe and sanitary front-of-the-house serving techniques, cashiering and product tracking.

QUFD 104L Salad and Pantry **2 credit hours**
(Pre- or corequisite: QUFD 101, 102 or department approval) Safe and sanitary procedures are utilized as assorted garnishes, salads, dressings, sandwiches, soups, vegetables and condiments are stressed.

QUFD 105L Breakfast/Lunch **2 credit hours**
(Pre- or corequisite: QUFD 101, 102 or department approval) Entree preparation of various types, along with complementary sauces, is covered. The course ranges from breakfast to lunch and special main offerings. Safe and sanitary conditions are promoted.

QUFD 106L Fry **2 credit hours**
(Pre- or corequisite: QUFD 101, 102 or department approval) Entree preparation of various types is stressed, including saute, deep fat and table side frying for the restaurant industry.

QUFD 111 Quantity Food Theory II **3 credit hours**
(Prerequisite: QUFD 101, 102, 103L, 104L, 105L, 106L or department approval) Methods of cooking stews, fricassees, garnishes, sauces and other dinner items are presented. Also covered are herbs and spices, salad preparation, use of recipes, application of costing procedures, pantry work, restaurant service and operation and customer service.

QUFD 112L Dining Room Skills **1 credit hour**
(Pre- or corequisite: QUFD 111 or department approval) Setting tables, folding napkins, serving customers, cashiering and managing a service staff in the dining room are covered in this course.

QUFD 113L **Cold Preparation** **2 credit hours**
(Pre- or corequisite: QUFD 111 or department approval) Safe and sanitary basic salad and dressing preparations and dessert preparations are practiced. Skills such as safe use of knives are developed.

QUFD 114L **Stocks and Sauces—Sous Chef** **2 credit hours**
(Pre- or corequisite: QUFD 111 or department approval) Students safely prepare stocks and the basic sauces and derivations of these sauces.

QUFD 115L **Entree (Meat and Fish Preparation)** **3 credit hours**
(Pre- or corequisite: QUFD 111 or department approval) Safe basic techniques of preparing meats, fish and poultry are covered.

QUFD 296 **Special Topics** **1–6 credit hours**
(Prerequisite: department approval) This course enables students enrolled in Culinary Arts classes to pursue related studies in specialized areas.

Transportation Technology

Associate of Applied Science Degree
Main Campus

The Transportation Technology associate degree is available to students with three options: Automotive Body Repair, Automotive Technology and Diesel Equipment Technology.

The program prepares individuals for entry-level positions, including management and supervision, in the transportation industry.

Courses are from the Automotive Body Repair, Automotive Technology and Diesel Equipment Technology certificate programs and from other Trades & Service Occupations programs, as well as Arts & Sciences.

Transportation Technology Program

Credit Hours

Option 1: Automotive Body Repair

AUBO	101	Auto Body Theory I	3
AUBO	102L	Welding Plastics and Adhesives I	2
AUBO	103L	Metal Prep/Repair and Mechanical Systems	2
AUBO	104L	Metal Finishing/Body Filling	2
AUBO	105L	Basic Refinishing Systems	2
DETC	102	Math/Basic Electricity	3
AUBO	111	Auto Body Theory II	3
AUBO	112L	Welding Plastic and Adhesives II	2

AUBO	113L	Suspension and Alignment	2
AUBO	114L	Frame and Unibody Repair	2
AUBO	115L	Mechanical Systems	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
AUBO	201	Auto Body Theory III	3
AUBO	202L	Welding Plastics and Adhesives III	2
AUBO	203L	Advanced Refinishing Systems/Techniques	2
AUBO	204L	Advanced Restraint/Electrical Systems	1
AUBO	206L	Air Conditioning	1
AUBO	208L	Advanced Frame and Unibody Repair	2

Additional Required Trades & Service Occupations Courses

AUTC	113	Transportation Electronics	3
EPT	102	Emergency Response	3
EPT	213	Occupational Safety	3
Automotive Technology Elective			3
Computer Elective (any department)			3–4

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3–4
Physics Elective			3
		Total	**70–72**

Option 2: Automotive Technology

AUTC	101	Braking Systems Theory	1
AUTC	101L	Braking Systems Lab	2
AUTC	102	Suspension and Alignment Theory	2
AUTC	102L	Suspension and Alignment Lab	2
AUTC	103	Manual Transmissions and Axles Theory	2
AUTC	103L	Manual Transmissions and Axles Lab	2
AUTC	106	Automotive Electricity	3
AUTC	111	Engine Overhaul Theory	2
AUTC	111L	Engine Overhaul Lab	2
AUTC	112	Automatic Transmissions and Transaxles Theory	2
AUTC	112L	Automatic Transmissions and Transaxles Lab	2
AUTC	113	Transportation Electronics	3
AUTC	114	Heating and Air Conditioning Theory	1
AUTC	114L	Heating and Air Conditioning Lab	2

SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
AUTC	201	Automotive Ignition Systems Theory	2
AUTC	201L	Automotive Ignition Systems Lab	3
AUTC	202	Automotive Fuel Systems Theory	2
AUTC	202L	Automotive Fuel Systems Lab	2
AUTC	203	Automotive Computer Systems Theory	2
AUTC	203L	Automotive Computer Systems Lab	2

Additional Required Trades & Service Occupations Courses

EPT	102	Emergency Response	3
EPT	213	Occupational Safety	3
Computer Elective (any department)			3–4
Welding Elective			3

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Humanities/Social and Behavioral Science Elective			3
Math Elective			3–4
Physics Elective			3
		Total	~~72–73~~ 73-74

Option 3: Diesel Equipment Technology

DETC	101	Diesel Drive Train Theory	3
DETC	102	Math/Basic Electricity	3
DETC	103L	Manual Shift Transmissions Lab	3
DETC	104L	Drive Axles, Brakes, Automatic Transmissions Lab	2
DETC	105L	Hydraulic Systems	2
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
AUTC	113	Transportation Electronics	3
DETC	111	Diesel Engine Theory	3
DETC	111L	Diesel Engine Overhaul	3
DETC	112L	Precision Measurement and Component Repair Lab	2
DETC	113L	Engine Tune-up and Testing Lab	2
DETC	201	Diesel Electrical Theory	1
DETC	201L	Diesel Electrical Lab	3
DETC	202	Diesel Fuel Injection Theory	1
DETC	202L	Diesel Fuel Injection Lab	3

DETC	203	Transport Refrigeration/Air Conditioning Theory	1
DETC	203L	Transport Refrigeration/Air Conditioning Lab	2

Additional Required Trades & Service Occupations Courses

EPT	102	Emergency Response	3
EPT	213	Occupational Safety	3
MATT	105	Basic Supporting Machine Tool Theory	2
MATT	105L	Basic Supporting Machine Tool Principles	2
Computer Elective (any department)			3–4
Welding Elective			3

Required Arts & Sciences Courses

Communications Elective (oral communications course)			3
ENG	101	College Writing	3
English Elective (writing course)			3
Math Elective			3–4
Physics Elective			3
Humanities/Social and Behavioral Science Elective			3
		Total	**72–74**

Truck Driving

Certificate Program
Main Campus

The Truck Driving program provides students who are already licensed drivers the basic instruction required to become professional commercial truck drivers.

Students learn how to handle a tractor trailer safely and efficiently. The goal is to prepare students to earn the commercial driver's license needed to operate tractor trailers professionally.

The program is certified by the Professional Truck Driver Institute of America (PTDIA). The certification agency requires students to purchase textbooks.

Each entering student must:

- not have been convicted of or forfeited bond for more than four moving violations in the past three years;
- not have more than one at-fault, preventable accident in the past three years;
- not have been convicted of or forfeited bond for DWI or reckless driving;
- have a valid New Mexico license authorizing operation of vehicles that he/she is to drive;
- pass a physical examination conducted by a qualified physician familiar with Section 391.41 of the Federal Motor Carrier Safety Regulations;

- obtain pre-qualification testing for controlled substances and alcohol use as set forth in 49 CFR Part 382 from a qualified testing facility;
- be at least 23 years old; and
- provide a certified copy of his or her New Mexico driving record for the past three years.

Students are subject to all Federal Highway Administration drug and alcohol testing rules. Tests (pre-qualification, random, post-accident, reasonable suspicion, return-to-duty and follow-up) are performed when applicable for alcohol and controlled substances. Instructors will provide students detailed information regarding federal drug and alcohol testing.

Students pay a non-refundable course fee of $210 prior to entering TRDR 101, $105 prior to entering TRDR 102L and $105 prior to entering TRDR 103L.

This program may not qualify students for Veterans Administration benefits or other financial aid.

Students must meet the TVI computer literacy requirement (see page 41) to earn the Truck Driving certificate.

Truck Driving Program

			Credit Hours
TRDR	101	Basic Operational Theory	6
TRDR	102L	Basic Operational Lab	4
TRDR	103L	Advanced Operational Practices	3
SSKL	211	Employment Skills—General	
	or		1
SSKL	213	Employment Skills for High-Tech Industry	
		Total	**14**

Course Descriptions

TRDR 101 Basic Operational Theory 6 credit hours

This course provides instruction in the fundamentals of control systems, hours of service requirements, trip planning, public and employer relations, accident procedures, defensive driving techniques, written commercial driver's licensing needs and state and federal regulations governing the professional truck driver.

TRDR 102L Basic Operational Lab 4 credit hours

(Pre- or corequisite: TRDR 101, CDL learner's permit or department approval) This hands-on course provides basic instruction in vehicle inspection, basic control, shifting, backing, coupling and uncoupling, hazard perception, visual search, speed and space management, preventive maintenance and handling cargo. These activities are carried out in driving range conditions.

TRDR 103L Advanced Operational Practices **3 credit hours**
(Prerequisite: TRDR 101, 102L or passing score on basic operational skills test) Students gain higher skill levels needed to cope with hazards of the roadway environment. Learning activities are conducted during day and evening hours on mountain grades, urban and rural roads, interstates and docking facilities.

TRDR 171 Material Handling **2 credit hours**
This theory/lab course provides instruction in basic forklift/hand truck operation and basic material handling. Instruction also covers forklift safety inspections and cost factors of improper handling. (1 theory + 2.5 lab hours a week)

TRDR 296 Special Topics **1–6 credit hours**
This course includes an in-depth study of problems and the advanced techniques that experts in the trucking industry use to solve them.

Welding

Certificate Program
Main Campus

The Welding program qualifies students for entry-level employment in the metals-processing industry. All courses emphasize safe operations of various welding equipment. Classes meet in well equipped labs where students study, practice and simulate qualifying exercises in oxyacetylene, shielded metal-arc (SMAW), gas metal-arc (GMAW), gas tungsten-arc (GTAW) and pipe welding processes. Instruction is also offered in welding fabrication and materials testing. The program conforms to the American Welding Society EG 2.0-95 training standard for training of entry-level welders.

Students must be free of chronic respiratory diseases and have depth perception correctable in both eyes.

This program requires basic hand tools. Tool lists are provided by instructors at the beginning of each term.

A suggested schedule includes:

Term 1: WELD 101, 102, 103, 104L, 105L, 106L, 107L, computer elective
Term 2: SSKL 213, WELD 111, 112, 113, 114L, 115L, 116L, 117L
Term 3: WELD 201, 202, 205L, 206L, 207L, 208L

Welding Program

			Credit Hours
WELD	101	Welding Metallurgy Theory I	2
WELD	102	Welding Math I	1
WELD	103	Welding Blueprint Reading I	1
WELD	104L	Oxyacetylene Welding and Cutting	2
WELD	105L	Oxyacetylene Brazing/Soldering and Fabrication	2

WELD	106L	Introduction to SMAW	2
WELD	107L	Introduction to SMAW Qualifications and Fabrication	2
SSKL	213	Employment Skills for High-Tech Industry	1
WELD	111	Welding Metallurgy Theory II	2
WELD	112	Welding Blueprint Reading II	1
WELD	113	Welding Math II	1
WELD	114L	Advanced SMAW	2
WELD	115L	Introduction to GMAW and Fabrication	2
WELD	116L	Introduction to GTAW and Fabrication	2
WELD	117L	Qualifications for SMAW and GMAW	2
WELD	201	Welding Metallurgy Theory III	2
WELD	202	Welding Blueprint Reading III	2
WELD	205L	Pipe Layout and Welding	2
WELD	206L	Advanced GMAW and Fabrication	2
WELD	207L	Advanced GTAW and Fabrication	2
WELD	208L	Qualifications for GTAW	2
Computer Elective (any department)			3–4
		Total	**40–41**

Course Descriptions

WELD 101 Welding Metallurgy Theory I **2 credit hours**
Safety, general tools and equipment and introduces students to the fundamental elements of welding metallurgy are covered. Instruction is provided in the structure, properties and alloying of metals, the effect of welding gasses on metals, weldable materials, joints, manufacturing processes and filler metals.

WELD 102 Welding Math I **1 credit hour**
Instruction is provided in basic arithmetic, fractions and decimals, shop geometry, surface and direct measurements and the metric system.

WELD 103 Welding Blueprint Reading I **1 credit hour**
This course offers instruction in detail and fabrication drawing interpretation, welding symbols and terminology as applied to the welding industry.

WELD 104L Oxyacetylene Welding and Cutting **2 credit hours**
(Pre- or corequisite: WELD 101) Safety and use of fabrication tools and oxyacetylene equipment are presented. Training is provided in thermal cutting torches, brazing techniques, tubing welding, fusion welding, welding of alloys and general all position welding.

WELD 105L **Oxyacetylene Brazing/Soldering and Fabrication** **2 credit hours**

(Pre- or corequisite: WELD 101) Instruction in safety and uses and applications of brazing and soldering is presented. Fluxes are applied to various metal and filler metals. Basic fabrication and repair problems are used for practical applications.

WELD 106L **Introduction to SMAW** **2 credit hours**

(Pre-or corequisite: WELD 101) This basic course in shielded metal-arc welding (SMAW) provides instruction in safety and electrical arc welding. Instruction is in beading, build-ups and welding various types of joints.

WELD 107L **Introduction to SMAW Qualifications and Fabrication** **2 credit hours**

(Pre- or corequisite: WELD 101) This course provides instruction in safety and proper procedure for arc welding qualifications. AWS D1.1 Code is followed on A36 material with A501 electrodes. Basic fabrication and repair problems are used for practical applications.

WELD 111 **Welding Metallurgy Theory II** **2 credit hours**

(Prerequisite: WELD 101 or department approval) Instruction in safety, shrinkage and distortion, pre-heating and post-heating, and difficulties and defects is presented. Students are introduced to heat treatment and destructive and non-destructive testing of ferrous and non-ferrous metals.

WELD 112 **Welding Blueprint Reading II** **1 credit hours**

(Prerequisite: WELD 103 or department approval) This course provides instruction in commercial construction and fabrication drawing interpretation and covers detail and assembly drawings related to the welding field and the transferring of measurements from blueprints to a workpiece.

WELD 113 **Welding Math II** **1 credit hour**

(Prerequisite: WELD 102 or department approval) Instruction in area, perimeter and volumes of common structural shapes and common layout techniques supported with mathematical applications is provided.

WELD 114L **Advanced SMAW** **2 credit hours**

(Prerequisite: WELD 106L, 107L; corequisite: WELD 111 or department approval) Advanced instruction in SMAW with a strong emphasis on safety is offered. The student practices stringers, weaves and wash passes. Various electrode types and sizes are used.

WELD 115L **Introduction to GMAW and Fabrication Lab** **2 credit hours**

(Prerequisite: WELD 106L; corequisite: WELD 111 or department approval) This course in mig welding provides instruction in safety, spray and short-circuiting transfer. Fabrication and repairs are assigned for practical applications.

WELD 116L Introduction to GTAW and Fabrication Lab 2 credit hours
(Prerequisite: WELD 106L; corequisite: WELD 111 or department approval) Basic instruction in safety and TIG welding is provided. Instruction is given on aluminum and stainless steel. Fabrication and repairs are assigned for practical applications.

WELD 117L Qualifications for SMAW and GMAW 2 credit hours
(Pre- or corequisite: WELD 111, WELD 114L and 115L or department approval) Simulated qualification procedures for arc and mig welding are provided. The student simulates qualifications in all positions with A36 material.

WELD 170 Welding Skills 3 credit hours
This theory/lab course includes instruction in safety practices, general tools and equipment, sources of heat, operating procedures, metals and their properties, and applications of oxyacetylene and arc welding. (1 theory + 5 lab hours a week)

WELD 171 Advanced Welding Skills 3 credit hours
(Prerequisite: WELD 170 or department approval) Instruction is provided in advanced welding process. Mig and tig welding and other processes such as flux core are included. (1 theory + 5 lab hours a week)

WELD 201 Welding Metallurgy Theory III 2 credit hours
(Prerequisite: WELD 111 or department approval) This course provides instruction in safety, diagnosis of welding problems and processes used for carbon steels, stainless steels, aluminum and pipe. Concentrated instruction is offered in destructive and non-destructive testing of ferrous and non-ferrous metals including information on AWS inspection.

WELD 202 Welding Blueprint Reading III 2 credit hours
(Prerequisite: WELD 112 or department approval) This course provides instruction in the development of templets, pipe layout and development, structural print reading, performance of pipe qualification tests and design and layout considerations related to fabrication.

WELD 205L Pipe Layout and Welding 2 credit hours
(Prerequisite: WELD 114L; corequisite: WELD 201 or department approval) Working speed and proficiency are emphasized through various practical fabrication and repair assignments. Instruction is provided in basic pipe welding and layout, materials testing and industrial safety. This course also deals with welding problems for carbon steels and their repairs.

WELD 206L Advanced GMAW and Fabrication 2 credit hours
(Prerequisite: WELD 117L; corequisite: WELD 201 or department approval) This course provides instruction in advanced carbon steel wire feed welding. Instruction is provided in AWS lab inspection and fabrication/repair.

WELD 207L Advanced GTAW and Fabrication 2 credit hours
(Prerequisite: WELD 116L; corequisite: WELD 201 or department approval) Advanced aluminum and stainless steel wire feed welding are covered. Instruction is provided on AWS lab inspection and fabrication/repair.

WELD 208L Qualifications for GTAW 2 credit hours
(Pre- or corequisite: WELD 201, WELD 207L or department approval) This course provides simulated qualification procedures for tig welding. The student simulates qualifications in all positions with A36 material.

WELD 296 Special Topics 1–6 credit hours
(Prerequisite: department approval) This flexible course enables students to pursue studies in specialized areas. This class may also be taken as an independent or guided study, as a refresher course, or to sharpen skills prior to certification or recertification exams.

TVI COMMUNITY COLLEGE

The TVI Community

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Richard Delgado, M.P.A., M.B.A.	Director of Assessment Programs
Holly DeWees, M.A.	Site Manager, Rio Rancho Campus
Mack G. Henington, Ph.D.	Main Campus Dean
Gloria Hernandez	Director of Student Job Placement Services
Cheryl Johnson, M.Ed., LPC	Director of Student Services, Montoya Campus
Howard Porter, M.S.	Director of Computer and Network Services
Paul A. Romero, B.A.	Director of Financial Aid
A. Paul Smarrella, M.A.	Director of Special Services
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Ruth Krug, Manager of Technical Services, B.A., M.L.S.
Sally Lindsey, Reference Librarian, B.A., M.L.S.
Steven Pla, Director of Libraries, M.L.S., M.A.
John Ungemach, Manager of Instructional Media Resources, B.A.

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Campus Directory

Switchboard/Locator 224-3000

Admissions
- Main Campus 224-3160
- TTY 224-3193
- Montoya Campus 224-5551

Adult & Developmental Education
- Main Campus 224-3939
- Montoya Campus 224-5681
- UNM.....277-5970

Arts & Sciences
- Main Campus 224-3561
- Montoya Campus 224-5781

Bookstore
- Main Campus 243-2665
- Montoya Campus 224-5803

Business Occupations
- Main Campus 224-3811
- Montoya Campus 224-5599

Campus Dean
- Main Campus 224-4757
- Montoya Campus 224-5518

Cashier
- Main Campus 224-4767
- Montoya Campus 224-5590

Counselors
- Main Campus 224-4321
- Montoya Campus 224-5646

Financial Aid
- Main Campus 224-3090
- Montoya Campus 224-5656

Health Center.....224-3080

Health Occupations 224-4111

Learning Resources Center (Library)
- Main Campus 224-3274
- Montoya Campus 224-5721

Registration 224-3160

Rio Rancho Campus..... 892-7113

Security ..... 0 or 224-3000

Snow Line 224-4SNO

South Valley Campus 873-8347

Special Populations 224-4740

Special Services
- Main Campus 224-3259
- TTY 224-4739
- Montoya Campus 224-5946

Student Activities 224-3238

Student Job Placement
- Main Campus 224-3060
- Montoya Campus 224-5507
- Job Hotline 224-3061

Student Records 224-3202

Technologies.....224-3340

Testing
- Main Campus 224-3244
- Montoya Campus 224-5761

Trades & Service
- Occupations.....224-3711

Tres Manos Child Development
- Center 848-1310

Tutorial/Learning Center
- Main Campus 224-4306
- Montoya Campus 224-5990
- Tele-Tutor.....224-4310

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TO: Sandra Gabaldon

FROM: Anita Frantz

DATE: June 25, 1998

RE: LAS Required or Elective Option

In fall 1998, LAS students will be required to take LAS 230, Civil Litigation II
or
LAS 243, Criminal Litigation II

The course not chosen to fulfill the requirement may be taken to fulfill the elective requirement.

The same would apply to LAS 203, Civil Litigation
or
LAS 206, Criminal Litigation

The course not chosen to fulfill the requirement may be taken to fulfill the elective requirement. This could be applied retroactively to 1996 when LAS 206 was introduced into the catalog. This policy would preclude the need for numerous green waiver forms.

Thank you.

Jane Campbell, Director, Admissions and Records

TO: Sandra Gabaldon

FROM: Anita Frantz

DATE: June 25, 1998

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In fall 1998, LAS students will be required to take LAS 230, Civil Litigation II
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Thank you.

Jane Campbell, Director, Admissions and Records

TVI
COMMUNITY
COLLEGE

TO: Jane Campbell, Registrar, Admissions & Records

FROM: Walt Niederberger, Program Director
Trades & Service Occupations

DATE: September 8, 1997

RE: **Environmental Technology Correction for 1996/1997 Catalog**

Please be advised that the information in the 1996/1997 Catalog for EPT 299—Cooperative Education is incorrect. The correct entry for this course should read: EPT 299—Cooperative Education or Approved Elective (3 credits). Also, the total credit hours is incorrect; it should be 78-80 total credit hours.

Thank you.

gh

xc R. Martin
L. Perez
S. Gabaldon
Environmental Technology Faculty

From:	**janec@tvi.cc.nm.us**
Organization:	**Albuquerque TVI - Main Campus**
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Date sent:	**Thu, 19 Jun 1997 12:20:11 -0700**
Subject:	**More changes for Fall 1997**
Copies to:	**epadilla@tvi.cc.nm.us**
Priority:	**normal**

Sorry this stuff is coming to you in bits and pieces. Hopefully, this will be the last of the catalog changes.

I left out one major bit of information. Though BA 150 and CP 176L are not listed in the 1997-98 catalog (an adendum is being developed), the are back and will be offered for the fall 1997 term. Information about their revival will be printed in the Schedule of Classes. Both classes will be 4 cr - same as CSCI 101. All three courses will use the same textbook and have the same basic core of proficiencies,

however, BA 150 will be applied to a business environment and CP 176L to a technology environment. Students interested in transferring credit to another institution should enroll in CSCI 101. Here are some basic facts about each course:

BA 150 Introduction to Computer Processing
prerequisite is 25 words per minute typing skill
course fee is $15
course description is the same as in 1996-97 catalog

CP176L Introduction to Technology Computer Applications
recommended prerequisite is typing proficiency
course fee is $10
Introductory computer hardware and software topics with a mix of lecture and hands-on instruction are covered. Students are introduced to operating systems (eg MS-DOS, Windows,), software applications (eg, wordprocessing, spreadsheets) and data-base concepts with an emphasis on technology applications.

BA 296F Time Management Skills
Principles and activities in this course are presented to aid the student in applying time management skills in a personal and professional environment.

BA 296G Work Site Learning
This course should be taken in the student's final five weeks of the Customer Service Representative program. The program coordinator is responsible for arranging the internship position. Students acquires a minimun of 75 contact hours of practical experience in a customer service environment.

Oh, and I apparently goofed on some of the registration/drop dates handed out at the registration meeting. An updated copy is being sent to you in the mail.

That's all folks!!!

From:	**janec@tvi.cc.nm.us**
Organization:	**Albuquerque TVI - Main Campus**
To:	**phendren@tvi.cc.nm.us, lindag@tvi.cc.nm.us, polsen@tvi.cc.nm.us, ldavis@tvi.cc.nm.us, mallen@tvi.cc.nm.us, eherrera@tvi.cc.nm.us, aortega@tvi.cc.nm.us, parch@tvi.cc.nm.us, pbenalli@tvi.cc.nm.us, awilliam@tvi.cc.nm.us, mtaylor@tvi.cc.nm.us, kjeffries@tvi.cc.nm.us, rruiz@tvi.cc.nm.us, shechil@tvi.cc.nm.us, sstein@tvi.cc.nm.us, mcampbel@tvi.cc.nm.us, jfrazier@tvi.cc.nm.us, rmartin@tvi.cc.nm.us, dianahm@tvi.cc.nm.us, eruiz@tvi.cc.nm.us, cserna@tvi.cc.nm.us, sgabaldon@tvi.cc.nm.us, psucholl@tvi.cc.nm.us, racarr@tvi.cc.nm.us, mperea@tvi.cc.nm.us, mdavis@tvi.cc.nm.us, ccrespin@tvi.cc.nm.us, irma@tvi.cc.nm.us, evelina@tvi.cc.nm.us, hollyd@tvi.cc.nm.us, cheryl@tvi.cc.nm.us, abc@tvi.cc.nm.us, pbustos@tvi.cc.nm.us, gloriah@tvi.cc.nm.us, pamm@tvi.cc.nm.us, paul@tvi.cc.nm.us, pauls@tvi.cc.nm.us, rdelgado@tvi.cc.nm.us, mack@tvi.cc.nm.us, mgutierr@tvi.cc.nm.us, cheryl@tvi.cc.nm.us, victor@tvi.cc.nm.us, abc@tvi.cc.nm.us, hollyd@tvi.cc.nm.us**
Date sent:	**Thu, 19 Jun 1997 08:23:32 -0700**
Subject:	**1997-98 COURSES**
Priority:	**normal**

Thought you should know about some new classes added to the Fall 1997 schedule that do not appear in the new catalog. Be prepared - this is a long list.

QUFD 296 Special Topics
FSAP 198 Fire Sprinkler Apprenticeship
These courses were in the 96-97 catalog but inadvertantly omitted from the 97 catalog.

FSMG 170L Computers in Food Service

This course appears in the 97 catalog as FSMG 104L. A new course number was not assigned because though the software used in the course has changed, the basic content of the course remains the same.

MMS 163 Word Fundamentals
This is the 5 week computer intro class which resulted from the governing board meeting. The course discription is:
Create, edit and enhance text documents. (Unfortunately, not much too it.)

The following 5-week courses will replace BA 115. Course discriptions follow each course number and title. I assume that students must complete all of these courses to receive the department issued certificate of proficiency.
BA 296A Working with a Challenging Customer
This course is designed to enhance the student's ability to utilize processes for acting effectively when working with a challenging customer.

BA 296B Computer Skills for Customer Service
Integrates math, English and word processing skills for a customer service environment.

BA 296C Human Relations for Customer Service
Focuses on human relations for a customer service environment. Tools and techniques to maximizing customer satisfaction.

BA 296E Product and Service Sales
This course gives students the opportunity to acquire skills in promoting goods and services. A quality approach to serving customers is emphasized.