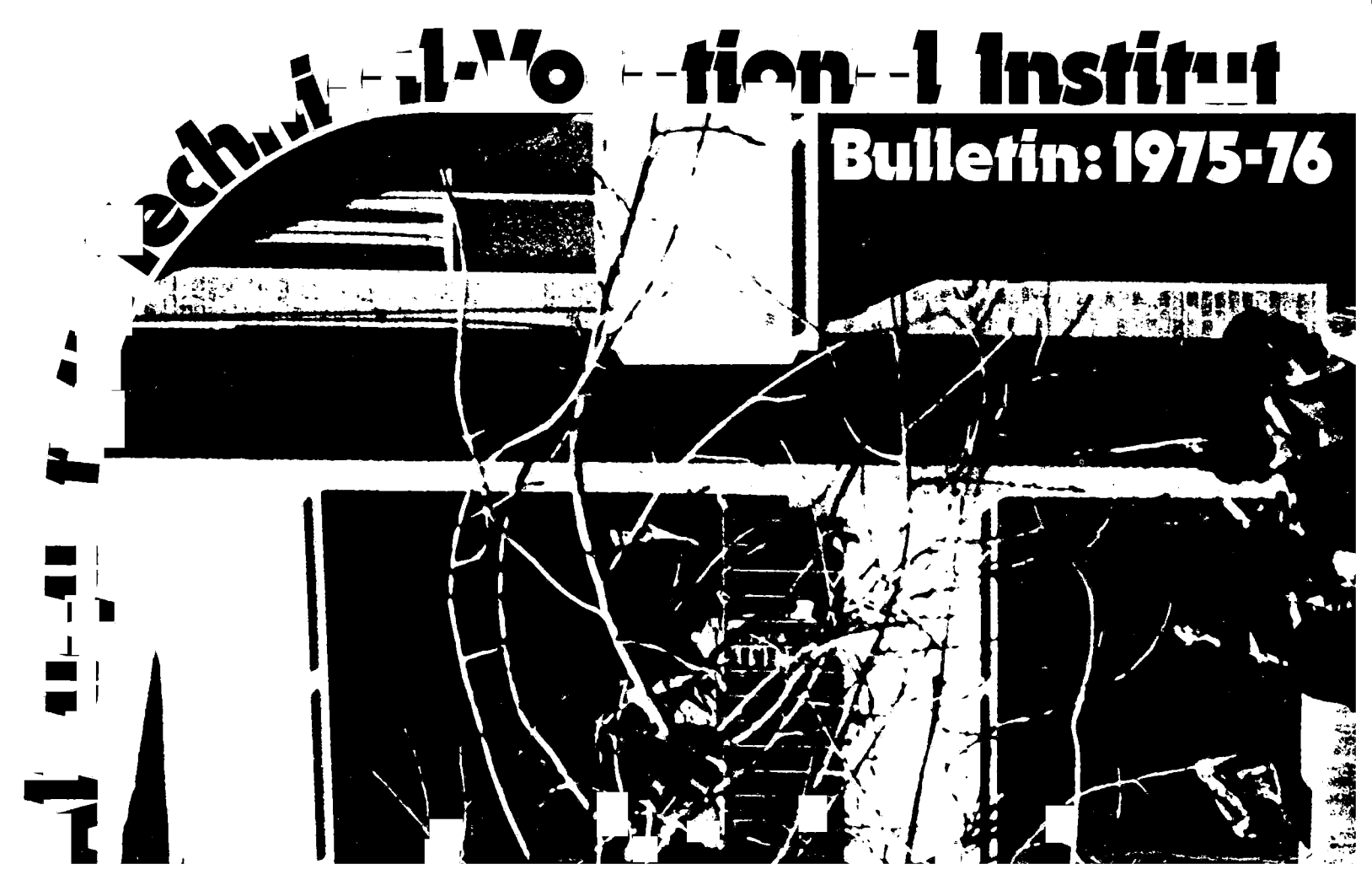
Technical Vocational Institute

Bulletin: 1975-76



BULLETIN
1975-76

ALBUQUERQUE TECHNICAL-VOCATIONAL INSTITUTE

525 Buena Vista SE
Albuquerque, NM 87106

Telephone: 843-7250

Volume XI T-VI BULLETIN May, 1975

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MP MODERN PRESS, ALBUQUERQUE

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ABOUT THE INSTITUTE

The Albuquerque Technical-Vocational Institute (T-VI) is a public post-secondary school which has as its primary goal to provide high quality vocational education to adults who want to obtain entry-level job skills or improve existing occupational skills that are marketable in New Mexico.

T-VI began operating in 1965 following earlier elections which created the Institute district (Bernalillo County plus the Corrales and Rio Rancho communities of Sandoval County) and approved a local property tax levy to finance the school. Since 1968, the New Mexico State Legislature has also made an annual appropriation to support T-VI.

A vigorous effort to construct and equip modern laboratory and classroom facilities has added to the campus since 1965, and T-VI is now able to serve the educational needs of more than 7,000 full- and part-time students through day and evening programs.

The Institute is fully accredited by the New Mexico State Dept. of Education, and all of the full-time instructional programs of two or more trimesters in length have been approved for Veterans Administration benefits by the State Department of Education.

Because T-VI is publicly-supported, all of its programs are tuition-free to legal residents of New Mexico (persons who have lived in the state at least one full year).

PERIOD STARTING TIMES

Period 0	7:20
Period 1	8:20
Period 2	9:20
Period 3	10:20
Period 4	11:20
Period 5	12:20
Period 6	1:20
Period 7	2:20
Period 8	3:20
Period 9	4:20
Period 10	5:20

SCHOOL YEAR

T-VI operates year-round on a trimester plan, with each of the three trimesters providing 15 weeks (75 days) of classes. During 1975-76, the Fall Trimester will begin on Sept. 2, the Winter Trimester on Jan. 5 and the Spring/Summer Trimester on Apr. 28.

In four of the vocational majors — Auto Collision Repair, Culinary Arts, Masonry Trades and Sheet Metal — beginning groups are sometimes admitted at the mid-trimester point. During 1975-76, these mid-trimester starting dates are Oct. 28, Feb. 23 and June 21; and persons beginning on these dates would complete their programs on June 18, Oct. 22 and Dec. 17 of 1976, respectively.

Applicants wanting to enter a full-time Day Division program should make application **at least 30 days before the start of the trimester they want to enter.**

There is also a preregistration for part-time Evening Division classes. See the 1975-76 **Evening Division Bulletin** for complete details.

FALL TRIMESTER, 1975

July 21-August 8 ..... Evening Division Preregistration
August 2 ..... Day Division Application Deadline
August 6-7-8 ..... Day Division Registration
August 27-28 (Noon to 9 pm) ..... Evening Division Registration
September 2 ..... Day Division Classes Begin
September 8 ..... Evening Division Classes Begin
October 22 ..... Mid-Trimester Grades Due
October 23-24 ..... Teacher Inservice (No Classes)
November 27-28 ..... Thanksgiving Holiday
December 5 ..... Withdrawal Deadline
December 19 ..... Last Day of Classes
December 22-January 2 ..... Trimester Break

WINTER TRIMESTER, 1976

November 24-December 12 ..... Evening Division Preregistration (Excluding Nov. 27-28)
December 5 ..... Day Division Application Deadline
December 10-11-12 ..... Day Division Registration
Dec. 29-30 (Noon to 9 p.m.) . Evening Division Registration
January 5 ..... Day Division Classes Begin
January 12 ..... Evening Division Classes Begin
February 20 ..... Mid-Trimester Grades Due
April 2 ..... Withdrawal Deadline
April 16 ..... Last Day of Classes
April 19-27 ..... Trimester Break

SPRING/SUMMER TRIMESTER, 1976

March 29-April 9 ..... Evening Division Preregistration
March 29 ..... Day Division Application Deadline
April 7-8-9 ..... Day Division Registration
April 26-27 (Noon to 9 p.m.) Evening Division Registration
April 28 ..... Day Division Classes Begin
May 10 ..... Evening Division Classes Begin
May 27-31 ..... Memorial Day Holiday
June 18 ..... Mid-Trimester Grades Due
July 30 ..... Withdrawal Deadline
August 13 ..... Last Day of Classes
August 16-31 ..... Trimester Break

TRIMESTER CALENDAR

1975-76

SEPTEMBER, 1975

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30			

Labor Day, Sept. 1

OCTOBER, 1975

M	T	W	T	F
		1	2	3
6	7	8	9	10
13	14	15	16	17
20	21	22	**23**	**24**
27	28	29	30	31

Mid-Term, Oct. 22
In-Service, Oct. 23-24

NOVEMBER, 1975

M	T	W	T	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	**27**	**28**

Thanksgiving Holiday,
Nov. 27-28

DECEMBER, 1975

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	**23**	**24**	**25**	**26**
29	**30**	**31**		

Trimester Break,
Dec. 22-Jan. 2

JANUARY, 1976

M	T	W	T	F
			1	**2**
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

FEBRUARY, 1976

M	T	W	T	F
2	3	4	5	6
9	10	11	12	13
16	17	18	19	20
23	24	25	26	27

Mid-Term, Feb. 20

MARCH, 1976

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30	31		

APRIL, 1976

M	T	W	T	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	**20**	**21**	**22**	**23**
26	**27**	28	29	30

Trimester Break,
Apr. 19-27

MAY, 1976

M	T	W	T	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	**27**	**28**
31				

Memorial Day Holiday,
May 27-31

JUNE, 1976

M	T	W	T	F
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30		

Mid-Term, June 18

JULY, 1976

M	T	W	T	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

AUGUST, 1976

M	T	W	T	F
2	3	4	5	6
9	10	11	12	13
16	**17**	**18**	**19**	**20**
23	**24**	**25**	**26**	**27**
30	**31**			

Trimester Break,
Aug. 16-31

***Bold face type indicates non-school days.**

INSTRUCTIONAL PROGRAMS

The **DAY DIVISION** program at the Institute provides full-time instruction leading to certificates of completion in 26 career fields. They are listed in the table of contents.

Preparatory programs are offered for persons whose previous education does not qualify them for immediate acceptance into one of the technical and vocational programs, to provide refresher work for those who have not been in school for some time or to help prepare people for the General Educational Development (GED) high school equivalency exams.

Full-time students in the Day Division attend classes five or six hours a day. However, those not wishing to pursue a certificate may enroll as special students in specific courses as space is available. Full-time students may also enroll in any additional courses desired on a space-available basis.

Day Division classes meet between 7:20 a.m. and 6:15 p.m. with most classes one hour in length. Laboratory or shop-oriented courses are either two-hour or three-hour time blocks.

The **EVENING DIVISION** offers about 100 *Skill Improvement* classes to part-time students in the general areas of office education, trade and industrial, health occupations, distributive education and technical education. The *Adult Basic Education* section offers a variety of classes designed to give people the opportunity for improvement in written and spoken communication skills, math, and GED examination subjects. This section also includes a citizenship program for aliens. The *Apprenticeship Program* includes classes for many of the construction trades and is operated in cooperation with various labor-management Joint Apprenticeship Committees. A *Vocational Enrichment Program*, providing technical and vocational classes for high school students at their schools after regular school hours, is also sponsored by T-VI's Evening Division.

In addition to the main T-VI campus, the Evening Division classes are offered in facilities at most of the city's high schools. Most of the Evening Division courses meet two nights a week (either Monday-Wednesday or Tuesday-Thursday) in two- or three-hour time blocks.

Complete information about the evening programs, which are also tuition-free to New Mexico residents, is available in the **Evening Division Bulletin.**

INSTRUCTIONAL MATERIALS CENTER

T-VI's Instructional Materials Center (IMC) includes three services for use by students, staff and, in some instances, the entire community. They are the library, Adult Learning Center and Audio-Visual Services.

Library: Located directly above the student lounge, the library is open from 7:45 a.m. to 9 p.m. weekdays except Friday when it closes at 5 p.m. Its ever-growing collection includes fiction, non-fiction, magazines, a children's section, reference materials, pamphlet and poster collection and audio-visual materials.

Additional services provided by the library include personal reader guidance and assistance, free two-week book loans, library orientation, complete card catalog with three types of cross-referencing, bibliographies of books in subject areas taught at T-VI, index to periodical articles, interlibrary loan and copy machine service for five cents per copy.

Adult Learning Center: The ALC is provided free of charge for use by any adult in the community who wants to develop skills in basic education or a vocational field. It is not necessary to be a T-VI student to use the center.

The center is open the same hours as the library and a person visits the facility on an individual basis when his or her personal schedule permits. Audio-visual materials are used extensively and specially-trained personnel are available at all times to help one design and pursue an individualized program of study.

Basic education areas included are English As A Second Language, reading, spelling, English, mathematics, consumer education, human relations and preparation for the high school equivalency examinations.

The technical-vocational component includes audio-visual programs related to transistors, welding, computer systems, engine lathes, sales and human relations, slide rule and mathematics.

Audio-Visual Services: Used primarily by staff members during classroom and lab activities, this service provides delivery, set-up, instruction and maintenance of a variety of supplies and equipment. Production of video tape television programs for use in classrooms, slide presentations, audio tape recordings and rental of films and other audio-visual materials are arranged through this department.

TESTING SERVICES

The Testing Center at T-VI provides a variety of testing services free of charge to New Mexico residents.

An important community service is administration of the General Educational Development (GED) examinations for a high school equivalency diploma. Any New Mexico resident 18 years of age or older, who is not a high school graduate but whose high school class has graduated, may apply to take the GED exams at T-VI. However, it is strongly recommended that anyone planning to take the GED enroll in either the Day or Evening Division tuition-free GED preparatory courses before challenging the five-part examination. Information about the GED examination schedule can be obtained by calling the Testing Center at T-VI, 843-7250, ext. 217.

The Testing Center also gives a variety of tests to people who apply for admission to a full-time program. The test results are used by admissions counselors to help the applicant determine which of the training areas at T-VI appears best to match the applicant's aptitudes and abilities.

ADMISSIONS PROCEDURES

The Institute's Day Division programs are designed for adults who do not have a marketable skill and who are willing and able to pursue a full-time (25 to 30 hours per week) instructional program. To enter the Day Division programs, a student should either be 18 years of age or a high school graduate. However, persons under 18 years of age are eligible to apply if they have been excused from compulsory attendance in a secondary school under the provisions of Section 77-10-2 NMSA 1953 as amended.

Applications for admission to the Institute are handled on a first-come first-served, space-available basis each trimester. All of the programs offered have some minimum requirements in math and communication skills. Some applicants may find that they need to enter the Preparatory Program to strengthen

these basic skills before entering a vocational-technical program. Some programs have additional prerequisites which must be met before the applicant can be admitted to that particular program (see the program descriptions in this Bulletin for details). **No person shall be denied admission to any T-VI program on the basis of ethnic background, sex or creed.**

The entire admissions process is aimed at helping each applicant enter a career field in which his or her chances for success are good. For that reason, an applicant will be **discouraged** from entering a program for which he or she does not meet minimum physical requirements or academic preparation. The applicant will be **denied** admission to a program where a health or physical condition poses dangers to the applicant or to fellow students. In the latter case, the admissions counselor will help the applicant find a career area where the condition will not pose a hazard or prevent the student from completing required assignments.

In those programs which include paid on-the-job training among graduation requirements, T-VI will have sufficient training stations arranged so each student can be given one or more interview leads. The student has an obligation to interview for the training station leads provided. Students in paid on-the-job training must conform to personnel policies of the cooperating employer.

The Day Division admissions process gives first priority to persons who do not have a salable skill. **A student who has already obtained a salable skill by successfully completing a T-VI program will be admitted to a new T-VI career field only after first-priority applicants have been considered.** Applicants wanting to enroll for less than 15 hours a week also will be admitted only after first-priority applicants have been considered. (Persons wanting less than a full-time program are encouraged to consider T-VI Evening Division offerings, which are designed for part-time students.)

HOW TO APPLY

You must complete four steps before you are admitted, and these are described below. Once you have decided to come to T-VI, you should try to complete all four steps as quickly as possible. Missing a test date or interview appointment will delay completion of the steps, and may cause you to be disappointed at finding the program of your choice has already been filled.

1. COMPLETE AN APPLICATION FORM. These are available at the T-VI reception desk or in the counseling offices of most public high schools in the state. Completed applications are accepted first-come, first-served during application periods which begin as follows:

—For the Fall Trimester
(September 1975) ..... May 15, 1975
—For the Winter Trimester
(January 1976) ..... Sept. 16, 1975
—For the Spring/Summer Trimester
(April 1976) ..... Jan. 19, 1976

There are special application periods for two of the Health Occupations:

—For the Practical Nursing class which begins in September 1976, applications will be accepted **beginning March 1, 1976,** and will be closed when 350 applications have been received.

—For the Respiratory Therapy Technician class which begins in September 1976, applications will be accepted **beginning May 3, 1976,** and will be closed when 100 applications have been received.

2. YOU WILL BE SCHEDULED FOR AN ADMISSIONS TEST related to the program you have chosen when your application is received.

3. YOU WILL BE SCHEDULED FOR AN ADMISSIONS INTERVIEW with the program coordinator and a counselor after you take the admissions test. Using the test results and the admissions guidelines detailed earlier in this section, the counselor will talk with you about the programs of interest to you and will tell you the programs for which you have qualified.

4. FEES MUST BE PAID IN FULL when the counselor has approved admission in order to complete the process. If the program you want is already filled for the next trimester, you will be admitted on "standby" for that trimester and be given a guaranteed reservation to the earliest trimester when an opening exists in the desired program.

When all four steps have been completed and you are officially admitted, you will be told when to come for registration. Your class schedule will be ready on registration day, and when you have your approved schedule, you will be ready to report for classes on the first day of the trimester.

CHARGES AND FEES

TUITION: For non-residents of New Mexico, tuition is $300 per trimester, or $13 per trimester hour for schedules of less than 22 hours per week.

For residents of New Mexico, including dependents of and members of the armed forces stationed on active duty in New Mexico, there is no tuition charge.

All tuition charges must be paid in full by the close of registration day.

Anyone who has paid a tuition fee and withdraws before the end of a trimester will be refunded the unused part of the tuition fee.

Payments in lieu of tuition are requested from agencies that are authorized to pay the training expenses of students referred to the Institute.

REGISTRATION FEE: There is a $10 registration fee each trimester, which must be paid before the applicant is admitted. **Payment of the registration fee reserves the applicant a place in classes only through the close of the final registration day.** Unless the applicant has requested, in writing, an extension of the reservation beyond the formal registration days, his or her place in classes may be filled by another applicant during the late registration process.

The registration fee is a charge for processing the applicant's admission **and is not refunded once it has been paid.** A refund of the registration fee will be made only in the event that the Institute cancels an instructional program to which applicants have been admitted.

PERSONAL EQUIPMENT FEE: Several programs at T-VI require the students to buy personal equipment, such as uniforms in the health occupations and tool kits in the skilled trades. Students will be issued the equipment, purchased by T-VI at the most advantageous educational institution prices, during the early part of the program and the equipment is thereafter the personal property of the student.

Personal equipment fees must be paid in full before the student is officially admitted. Refunds of the personal equipment fee will be made if the applicant withdraws before the equipment has been issued. **Once it has been issued, no refund can be made.**

In some programs, there is a once-only personal equipment fee at the beginning. However, in other programs additional equipment fees are charged each trimester as the students need to add to their personal equipment in the advanced trimesters.

Those programs with personal equipment fees during 1975-76 are as follows:

	Trimester I	II	III	IV	V
TECHNOLOGIES					
Construction Drafting	$15				
HEALTH OCCUPATIONS					
Nursing Assistant	$20				
Patient Service Clerk	$20				
Practical Nursing	$65				
Respiratory Therapy Technician	$65				
TRADES & INDUSTRIAL					
Air-Conditioning, Heating and Refrigeration	$65	$25	$25		
Auto Collision Repair	$65	$25	$25		
Auto Mechanics	$65	$25	$25		
Carpentry	$65	$25			
Culinary Arts	$65				
Diesel Mechanics	$65	$25	$25	$25	$25
Electrical Trades	$65	$25			
Machine Trades	$65	$25	$25		
Masonry Trades	$65	$25			
Plumbing	$65	$25			
Small Engine Mechanics	$65	$25			
Sheet Metal	$65				
Welding Trades	$65	$25			

BOOKS AND SUPPLIES: Textbooks are provided on free loan to all full-time students, but they must be paid for if the student loses or damages them. **Students are required to make a $10 textbook deposit when they are admitted.** The deposit will be refunded if and when the student returns all the textbooks upon leaving the Institute or if the applicant withdraws before receiving any textbooks.

Students are responsible for buying their own routine school supplies, such as paper, notebooks and pencils.

ATTENDANCE POLICIES

Each person admitted to T-VI pledges to attend all class sessions of every course as a condition of his or her admission.

Attendance is taken each class period every day and absences are reported to the Attendance Office **where they become part of the student's permanent record.**

A student whose attendance record shows excessive absences in one or more classes will be issued a warning and asked to meet with a counselor to try to solve the problem which is causing the absences.

ATTENDANCE PROBATION: A student who continues to be absent after the warning will be placed on attendance probation. A student on probation is subject to suspension for the balance of the trimester from the class or classes in which the absences are occurring if there are additional absences. (A student who continues to be absent after having been placed on attendance probation will be suspended from the class or classes for the balance of the trimester.)

Anyone suspended for violation of attendance probation must re-apply at the Admissions Office if he or she wishes to re-enter the Institute in a future trimester.

STUDENT APPEALS COMMITTEE: A student suspended for violation of attendance probation, or for disruptive behavior, has the right to appeal the suspension to a Student Appeals Committee made up of students plus one faculty member.

After hearing the appeal by the suspended student, the Student Appeals Committee must recommend to the Vice President either: (1) that the suspension for the balance of the trimester be carried out, or (2) that the student be readmitted to classes under further probation.

VETERAN'S TRAINING BENEFITS will be terminated, in accordance with Veterans Administration regulations, whenever a student's absences reach the equivalent of ten full days during any calendar month.

STANDARDS OF PROGRESS

Progress reports are given each student at the mid-point and end of each trimester or unit of study. Only the final progress reports become part of the student's permanent records at T-VI.

Some of the classes at T-VI utilize letter grades in their progress reports. Those used are "S" (Satisfactory), "A" (Excellent), "B" (Above average), "C" (Average), "I" (Incomplete) and "U" (Unsatisfactory). Minimum grades for which credit is granted are "C" or "S."

Other courses at T-VI make use of proficiency ratings in progress reports. In these, the performance objectives for each class are clearly defined, and the student receives progress reports detailing proficiency achieved in each of the specific skills identified as objectives for that class. The proficiency rating sheets are the progress reports in these classes.

A student who receives an incomplete or unsatisfactory grade for a course may not enroll for any other course where the unsatisfactorily completed course is listed as a prerequisite.

ACADEMIC PROBATION: A student who receives an unsatisfactory or incomplete final report in any of his or her courses is automatically placed on academic probation for the next trimester in which he or she enrolls. If, at the end of the probationary trimester, the student again receives unsatisfactory or incomplete progress reports in any course, he or she will not be allowed to continue further in the same T-VI major.

ACADEMIC SUSPENSION: A student who fails to make satisfactory progress toward a certification goal for three successive trimesters will be placed on academic suspension for a period of one year and may not enroll at T-VI during the year of suspension.

CERTIFICATIONS

Certificates of completion are awarded to students who successfully complete the requirements listed in the program descriptions for one of the identified job-entry-level exit points (see individual program descriptions for details on approved exit levels).

In some areas, the certificate of completion may be in the form of a diploma if the student successfully completes the entire program described.

CREDIT BY EXAMINATION: A student may be given credit by examination, and a course in the program requirements waived, upon demonstrating that he or she already has the knowledge or skill required for successful completion of that course. A waiver request form is available which requires approval of the course instructor, the program coordinator or supervisor and the Director of the Student Services Division. The student will be required to take a final examination for the course or otherwise demonstrate competency. Credit by approved waiver counts toward meeting certificate of completion requirements and meets prerequisite requirements for advanced courses.

STUDENT RECORDS

Permanent records are maintained for each student who attends the Institute. The permanent transcript shows the amount of instruction each student has received, whether course credits are by full completion or waiver and whether the program of studies was partial or complete. It also records all final grades and/or proficiency ratings earned.

Most students authorize T-VI to provide confidential copies of transcripts to bona fide employers and to other educational institutions as part of the admissions process. **A student who does not want the transcript sent to prospective employers or other schools may indicate this on his or her transcript by visiting the Student Records Center.**

STUDENT SERVICES

The Student Services Division provides assistance to applicants, students and graduates in all matters related to admissions, testing, counseling and career guidance, attendance accounting, student records, student financial aids and job placement services.

COUNSELING: Professional counselors are available to help applicants select a career field and to advise students who have any problems related to their studies at the Institute. Applicants and students may request to see a counselor at any time.

STUDENT RECORDS: A student or former student may examine any or all documents in his or her student record file at any time during the normal working hours of the Student Records Center. The center also provides free of charge, on request, a copy of the student's transcript to employers and to other educational institutions.

JOB PLACEMENT: Finding a job after leaving the Institute is a responsibility of the student. However, T-VI has a Placement Services Office and any student or graduate desiring assistance may establish a placement file there at any time he or she is seeking a job.

HEALTH SERVICES: A student health office, staffed by a Registered Nurse, is available for students wanting advice regarding any health problem or who become ill or require first aid while at school.

FOOD SERVICES: A student lounge and snack bar offer short order food service throughout the day, Monday through Friday.

HOUSING: There are no student housing facilities on the campus and students are responsible for obtaining their own housing.

TRANSPORTATION: Limited parking facilities are available, free of charge, to registered students who drive their own cars. However, because parking is limited, students are encouraged to form car pools with other students or to use city buses whenever possible. Full-time T-VI students are entitled to student discount rates on Albuquerque city buses on school days during school hours, upon presentation of their T-VI identification cards. **Students with severe financial needs may apply for free city bus tokens at the Student Financial Aids office.**

FINANCIAL ASSISTANCE

The Institute has no provisions for financial aid to students from its general operational funds. However, many students attending T-VI are eligible for financial assistance from other agencies while they are in school.

Financial aid information can be obtained by contacting T-VI's Student Financial Aids Manager (Room A-125). Some of the forms of financial help available are:

BASIC EDUCATIONAL OPPORTUNITY GRANT (BEOG): Students in financial need attending more than half-time **in a Day Division vocational major of two or more trimesters in length,** and who have not been enrolled in a post-high school educational institution before April 1, 1973, may apply for a federal grant under the BEOG program. (NOTE: Students who were enrolled in a post-high institution that was not eligible for the BEOG program before April 1, 1973, could still meet the eligibility requirement. T-VI, for example, was not in the BEOG program before April 1, 1973.)

The amount of the grant which a student may be given depends upon how much Congress appropriates for BEOG in

any particular year. During 1974-75, the maximum grant for a T-VI student was $788.

To apply, the student must complete a detailed application form which tells all of the financial resources available to him or her. The completed application is evaluated by a national center to determine how much the student and/or student's family is able to contribute toward the cost of attending the institution.

Any student eligible for a BEOG will be issued one-half of his or her grant during the first trimester, if the student is still attending T-VI and still meets all BEOG eligibility requirements.

The BEOG is intended to be the base upon which other kinds of student financial aid may be added as needed. A student may apply for other kinds of student financial aid in addition to the BEOG if he or she can demonstrate need.

NEW MEXICO STUDENT LOAN PROGRAM: New Mexico residents are eligible to apply for a loan of up to $1,500 for their first two trimesters and $500 more their third trimester each calendar year they attend T-VI. Additional loans may be applied for each year the student is in school up to a maximum of $7,500.

The loans are made by the State of New Mexico under the Federally Insured Student Loan Program and are to help full-time students defray normal educational expenses including room and board, clothing, transportation and fees. Interest rate is seven percent annually but the interest is paid by the federal government while the student is attending school. The student must begin repayment of the loan, and interest charges, 12 months after he graduates or withdraws from school. The repayment plan calls for a minimum monthly payment of $30.

At T-VI, students awarded a New Mexico Student Loan place the full loan amount into an escrow fund and then receive a monthly portion of their loan, in advance, the first of each month, while they are attending the Institute. If the student leaves school, the unused balance is returned to the state and the student owes only that amount which has actually been issued.

COLLEGE WORK-STUDY (CWS): A limited number of full-time students can be employed by T-VI under the federal CWS program. Eligible students may work up to 15 hours per week. CWS application forms are available at the T-VI Student Financial Aids office.

VETERANS BENEFITS: Most Day Division programs at T-VI are approved by the State Department of Education for

support under the GI Bill. In addition to service veterans, persons entitled to benefits include children and widows of deceased veterans and dependents of veterans with 100 percent disability classifications. However, no person may be approved for Veterans Administration benefits for refresher training in a course in which he or she already has required skills, regardless of where these job skills were acquired.

Information about eligibility for these education benefits can be obtained from the nearest Veterans Administration office. The Albuquerque office is at 500 Gold SW, phone 766-3361. Disabled veterans should phone 766-2222.

SOCIAL SECURITY: Under the 1965 amendments to the federal Social Security Law, children of retired, disabled or deceased workers covered under Social Security and the Railroad Retirement Act are eligible to receive financial support until they reach age 22 while they are full-time T-VI students in either the Preparatory Program or a vocational major. The nearest Social Security District Office can provide eligibility information. The Albuquerque office is at 500 Gold SW, phone 766-2531.

BUREAU OF INDIAN AFFAIRS (BIA): Indian students may be eligible for educational benefits throuth the BIA. For information, contact the Albuquerque Area Office at 5301 Central NE, Room 414, phone 766-3153.

DIVISION OF VOCATIONAL REHABILITATION (DVR): Persons with disabilities may be able to attend T-VI with training support from the New Mexico Division of Vocational Rehabilitation. The Albuquerque office is at 3010 Monte Vista NE, phone 842-3186.

MANPOWER TRAINING PROGRAMS: Unemployed and underemployed disadvantaged persons who are accepted for training programs by the Albuquerque/Bernalillo County Office of Manpower Programs (OMP) may receive training allowances while attending T-VI.

Students for these OMP programs are selected by the federal Employment Security Commission and its New Mexico State Employment Service. Information can be obtained from the State Employment Service at 505 Marquette NW, phone 842-3036, or any of the Manpower Service Centers: North Valley, 4918 Fourth NW, phone 842-3431; South Broadway, 1024 Broadway SE, phone 842-3461; South Valley, 1731 Isleta SW, phone 842-3486; Heights, 7013 Central NE, phone 842-3322; and Service Education Redevelopment (SER), 309 Stover SW, phone 247-0401.

BUSINESS OCCUPATIONS

ACCOUNTING

(4 Trimesters)

The Accounting Program takes the student from the basic accounting cycle through intermediate accounting, cost accounting and income tax accounting.

The four-trimester program offers up to 1800 hours of instruction. To qualify as a full-time student, the individual must take at least 25 hours per week.

Students may select any of the electives listed which best prepare them for their employment goals. Not all courses will be offered each trimester. A minimum enrollment of 15 students is required to offer an elective.

Students acquire an employable skill after the successful completion of the first 15 weeks. All students are furnished a certificate which indicates the degree of proficiency and the

various performance objectives achieved. Special recognition is given those students who satisfactorily complete all of the courses listed under Trimesters I, II, III and IV below plus 225 hours of electives.

Employment possibilities range from payroll clerks, accounts receivable and payable clerks, to full-charge bookkeepers, office managers, cost analysts and construction estimators.

Students attending under the Veterans Administration program may receive only partial benefits when the supervised work experience is in progress during the third or fourth trimester.

Applicants for Accounting are required to know basic math.

ACCOUNTING PROGRAM

Trimester I	*Hours/Week*
Accounting Principles Lab I	10
Accounting Math	5
Office Machines	5
Principles of Data Processing	5
Trimester II	
Accounting Principles Lab II	10
Typing I Lab	10
Business Communications I	5
Trimester III	
Intermediate Accounting Lab I	10
Tax Accounting Lab	5
Business Communications II	5
Trimester IV	
Intermediate Accounting Lab II	5
Cost Accounting Lab	5
Managerial Accounting Lab	5
Recommended Electives	
Cashiering	5
Supervised Work Experience	10
Principles of Economics	5
Report Program Generator	5
Principles of Management	5
COBOL	10
Business Law	5
Typing II	5
Secretarial Procedures	5
Posting Machines*	5

* The posting machines class takes from three to five weeks, depending upon a student's progress and does not count toward a full-time program.

COURSE DESCRIPTIONS

Accounting Principles Lab I
This is an introductory course on the theory and practice of accounting.

Accounting Math
This course covers basic arithmetic operations and familiarizes the student with a wide range of accounting procedures for which mathematics is required.

Office Machines
Instruction is given in the most widely used office machines including ten-key adding machines, electronic and printing calculators, and keypunch machines.

Principles of Data Processing
This course covers manual and automated information systems, historical development, definitions, planning and recording data in punched cards and other input media, unit record equipment, and digital and analog computers.

Accounting Principles Lab II
(Prerequisite: Accounting Lab I) This is a continuation of Accounting I. Planning of, and accounting for, the partnership and corporate form of business organization is covered. A brief introduction to cost accounting is also included.

Upon successful completion of this course, the student should, with minimum supervision, be a competent bookkeeper for most small business organizations.

Typing I Lab
Individual instruction permits a student to progress at his own pace. At the end of the course, a student should be able to type a minimum of 30 words per minute.

Business Communications I
The student learns to communicate more effectively in business through the study of grammar, punctuation, vocabulary and spelling. Instruction is provided in speaking and writing. The student practices writing basic business letters and memos.

Intermediate Accounting Lab I
(Prerequisite: Accounting Principles II Lab) This lab 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.

Tax Accounting Lab
(Prerequisite: Accounting Principles II Lab) This course examines the fundamental characteristics of federal income taxes as applied to individuals, partnerships and corporations.

Business Communications
(Prerequisite: Business Communications I) A student completing this course knows how to write effective business letters, reports and memoranda. Effective use of oral communications is studied.

Intermediate Accounting Lab II
(Prerequisite: Intermediate Accounting Lab I) Accounting for capital stock transactions, dividends, retained earnings, income tax allocation, error correction, long-term investments, amortization schedules, statements from incomplete records, flow of funds statements, and analysis and interpretation of financial statements are covered in this course.

Cost Accounting Lab
(Prerequisite: Accounting I and II) This course emphasizes construction and manufacturing as compared to merchandising or service businesses. The student performs the accounting operations for estimating, bidding and application of the materials, labor and overhead factors of production are studied and reports are prepared.

Managerial Accounting Lab
(Prerequisite: Intermediate Accounting Lab II) This course is basically concerned with how accounting data can be interpreted and used by management in planning and controlling business activities. Fund or governmental accounting is also studied.

Cashiering
The student learns how to use various cash registers, including the ability to solve procedural problems that occur at a register and checkout station.

Supervised Work Experience
Students work a minimum of 150 hours at supervised work stations with Albuquerque business firms. The student trainee is paid by the cooperating firm.

Principles of Economics
The economic system is studied with emphasis placed on production and distribution, money and banking, governmental fiscal policy and economic conditions in New Mexico.

Report Program Generator
(Prerequisite: Principles of Data Processing) This course will introduce the student to the procedures and techniques of processing basic accounting applications using the Report Program Generator programming language. The computer used is an IBM 360-30.

Principles of Management
An introductory course helping the student develop an understanding of the basic management functions including planning, organizing, staffing, directing and controlling.

COBOL for Accounting
(Prerequisite: Principles of Data Processing) The student will record transactions, produce reports, develop management data, keep inventories

and accounts receivable, and other accounting procedures using Common Business Oriented Language (COBOL) programming and an IBM 360-30 computer system.

Business Law

This course provides a basic knowledge of law as it applies to all business dealings in our society. Particular emphasis is placed on the Uniform Commercial Code. Practical problems in law are considered.

Typing II

(Prerequisite: Typing I Lab) Students type business letters, reports, memoranda, statistical reports and business forms. Emphasis is on the typing skills the student is most likely to use in an accounting job.

Office Procedures

This course studies duties of the professional secretary. Emphasis is placed on understanding of human relations in business. The information on office procedures is covered in one-half of the trimester. The balance is devoted to records management.

Posting Machines

(Prerequisite: Accounting Principles Lab I) This is an introduction to machine posting. The work is restricted to accounts receivable subsidiary ledgers. The student works on a number of different makes and models of posting machines.

DISTRIBUTIVE EDUCATION

(1 Trimester)

The Distributive Education (Cashier-Sales) Program is designed so that students spend a portion of the school day in the T-VI cashier-sales classroom laboratory and time at a cooperative training station in the business community.

This one-trimester major provides up to 225 hours of classroom instruction and 150 hours at the business training station.

The cashier-sales laboratory teaches the skills of salesmanship, cash register operation touch system and the judgment tasks involving the interpersonal aspects of selling.

It is a course for those preparing for, or engaged in, distribution of goods and services to the public, including all retail, wholesale and service occupations. It offers preparatory instruction for students desiring to explore sales as a career.

Applicants may be admitted to this program at any time during the trimester when there is a vacancy in the class, and students may leave the program upon completion of their training objective. Students receive rating sheets describing proficiency levels attained.

This program is *not* approved for Veterans Administration training benefits.

DISTRIBUTIVE EDUCATION PROGRAM

Course Requirements	*Hours/Week*
Cashier-Sales Education	15
Cooperative Training	10-20

COURSE DESCRIPTIONS

Cashier-Sales Education Lab

Learning the techniques of operating the cash register is a skill subject and this instruction and drill normally take place every day. Merchandising math, store salesmanship and retailing are also covered.

Cooperative Training

Typically, each student is employed by a retail businessman for ten or more hours each week and is paid for his work. The instructor and businessman periodically schedule meetings to discuss the progress of the student trainee. There are times when it is impossible to place all students in work stations because of poor economic conditions.

FASHION MERCHANDISING

(2 Trimesters)

Many career opportunities are available to both men and women in the area of Fashion Merchandising. This course is recommended for individuals interested in selling, buying, manufacturing, planning, promoting and coordinating fashion apparel, accessories and related items.

Merchandising organizations such as department stores, retail chains, and specialty stores have expressed an interest in enthusiastic people with a specialized education who can work their way into such jobs as fashion coordinator, fashion buyer, fashion display, fashion consultant and merchandise manager. Graduates should expect to start as entry-level sales clerks in this occupation.

The two-trimester program offers up to 750 hours of instruction.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

FASHION MERCHANDISING PROGRAM

Trimester I	*Hours/Week*
Fashion Lab I	10
Business Communications I	5
Introduction to Business	5
Salesmanship	5
Trimester II	
Fashion Lab II	10
Principles of Retailing	10
Advertising and Display	5

COURSE DESCRIPTIONS

Fashion Lab I

This foundation course orients the student to the world of fashion merchandising. Included are basic fashion terminology and industry practices; the historical development of fashions; and the components of fashion, including elements of design, apparel construction, basic apparel and accessory styles, size ranges and basic textiles.

Business Communications I

The ability to communicate effectively in the fashion business is increased by the study of grammar, punctuation, vocabulary, pronunciation and spelling. Instruction is given in principles of effective speaking and writing.

Introduction To Business

This course surveys the structure of business, its activities and problems. It also provides a broad understanding of the nature of the business world.

Salesmanship

This course follows the steps of a sale from preparation to completion. Class participation and student demonstrations are stressed.

Fashion Lab II

(Prerequisite: Fashion Lab I) This course concentrates on the coordination and merchandising of fashion, including buying, styling and trend reporting. Project, audio-visual presentations, guest speakers and field trips enrich this advanced fashion lab. The highlight of the program is a fashion show produced, coordinated and presented by the students.

Principles of Retailing Lab

(Prerequisite: Principles of Salesmanship) This lab is designed to cover merchandising math, hiring procedures, cash register management and merchandise management.

Advertising and Display

This course explores four major areas of fashion promotion: advertising, display, publicity and special events. Students create displays in class, prepare copy and layout for various printed materials and plan a fashion event.

OFFICE EDUCATION

(3 Trimesters)

The Office Education Program is designed to provide persons with skill levels through which they can gain employment in clerical, secretarial and stenographic positions in all types of business establishments.

Students receive proficiency rating sheets describing proficiency levels in all courses. Special recognition is given to those students completing *all* of the courses in the program.

The three-trimester program offers up to 1350 hours of instruction.

Entering students who already possess a strong background in math, English, office experience and typing may waive such courses by examination.

Prospective students should have an interest in office-type work, enjoy people and working with detail.

OFFICE EDUCATION PROGRAM

	Hours/Week
Trimester I (15 wks)	
Typing Lab I	10
Business English	5
Business Methods	10
Trimester II (15 wks)	
Typing Lab II	10
Office Machines	5
Office Procedures	5
Business Letter Writing	5
Trimester III (15 wks)	
Typing Lab III	10
Fundamentals of Data Processing	5
Secretarial Accounting	5
Business Relations	5
*Electives**	
Shorthand I	5
Shorthand II	5
Transcription	5
Cashiering	5

* Will be an additional course each day.

COURSE DESCRIPTIONS

Typing Lab I (Beginning)

This course builds the student's skills to a typing proficiency of at least 40 words per minute. The student practices typing of business letters, memos, business forms and manuscripts.

Business English

This course is a thorough review of grammar, punctuation and sentence structure. Emphasis is placed on business vocabulary building, spelling and the development of oral communication skills.

Business Methods

This course reviews basic mathematics and its application in solving business problems. The student also studies business and economic concepts relative to business organization, banking, postal services, insurance and credit.

Typing Lab II (Intermediate)

(Prerequisite: Typing Lab I) Typing competence of at least 50 words per minute is the goal of this course. Students produce mailable business letters, manuscripts, tables, business forms and other correspondence.

Office Machines

(Prerequisite: Business Methods) Skills on the most widely used office machines, including the ten-key adding machine; electronic and mechanical calculators; key-punch; spirit duplicator and mimeograph machine are developed and practical application of business mathematics is reinforced.

Office Procedures
Filing and operational and managerial duties of the office worker are studied in this course.

Business Letter Writing
(Prerequisite: Business English) Principles of writing and the composing of business letters, memorandums and other general correspondence that may be handled by the office worker are taught. The student also prepares a job portfolio.

Typing Lab III (Advanced)
(Prerequisite: Typing Lab II) This course provides continued development of typing skills and the use of transcription equipment to transcribe mailable letters. The typing goal is a speed of 60 words per minute.

Fundamentals of Data Processing
This course teaches basic data processing terminology, preparation of source data for processing and other aspects of automation.

Secretarial Accounting
(Prerequisite: Business Methods) This course is a study of the complete bookkeeping cycle, including preparation of the balance sheet, income statement and worksheet. Emphasis is placed on journalizing and posting to the general ledger and posting from the combined cash journal. Payroll accounting is also covered.

Business Relations
Here skills relating to human relations, telephone techniques for business situations, business etiquette and professionalism are studied.

Shorthand I (Gregg)
A dictation rate at 40 words per minute, using the shorthand alphabet, theory and brief forms, is the goal of this course.

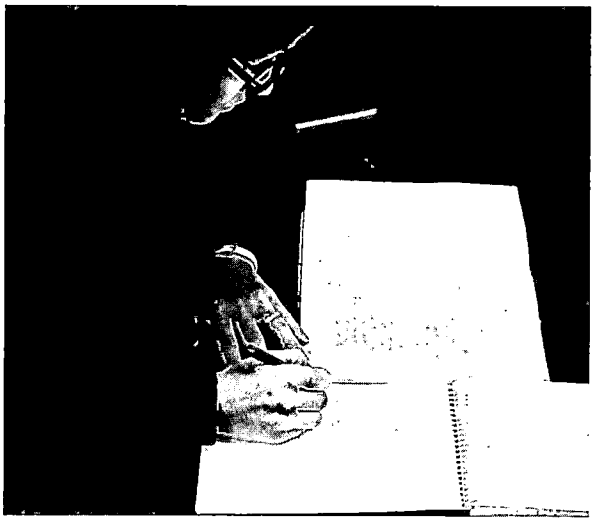
Shorthand I (ABC)
Reading and writing of ABC shorthand is taught with a writing speed of 50 words per minute the goal by the end of the course.

Shorthand II
The ability to write shorthand at a rate of 60 words per minute is sought with emphasis placed on speed, accuracy, grammar and punctuation as well as transcription speed.

Transcription
Goals for this course are a dictation speed of at least 80 words per minute on new material and a transcription skill of mailable copy at the typewriter with 100 percent accuracy.

Cashiering
Use of various cash registers, including the ability to solve procedural problems that occur at a register and checkout station, are developed in this course.

REFRESHER COURSE FOR OFFICE WORKERS



The Refresher Course is designed for persons who need review of office skills and procedures to prepare for re-employment. Students entering this program must have had previous clerical or secretarial work experience.

Students may enter this program as space is available and may leave upon completion of their training objective. Students receive rating sheets describing proficiency levels attained in all areas.

This is an individualized course of study in which a student progresses at his or her own rate with special emphasis on particular areas that need review and improvement. Students attend class four hours a day, five days a week, for a maximum of 15 weeks (300 class hours).

Review is given in typewriting, shorthand, machine transcription, office machines, English and mathematics.

This program is **not** approved for Veterans Administration benefits.

REFRESHER COURSE PROGRAM

	Hours/Week
Typing Review Shorthand Review Office Machines Communications Review Business Mathematics Review	20

COURSE DESCRIPTIONS

Typing Review
Practice is given on the latest model electric typewriters with stress placed on speed and accuracy. Letter styles, memoranda, tabulations and manuscripts are reviewed as well as typewriter operation and care.

Shorthand Review
Shorthand theory will be reviewed with emphasis on dictation and transcription.

Business Mathematics Review
Emphasis is on review of basic mathematical computation that will easily be transferred to office machines.

Office Machines
Skill is built on ten-key adding machines and electronic and mechanical calculators that reinforce practical application of business mathematics. Practice is also given on transcription machines.

Communications Review
Review covers both written and oral communication with emphasis on punctuation, grammar, letter writing and telephone communication.

RETAIL SALES MANAGEMENT

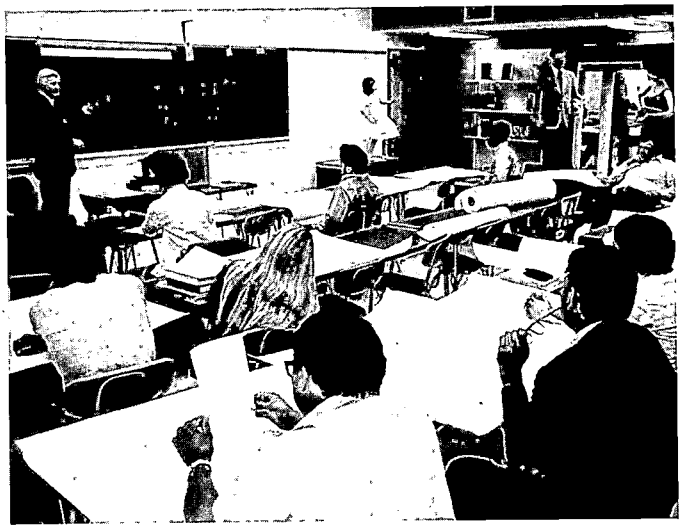
(3 Trimesters)

The Retail Sales Management program places emphasis on the principles of managing a modern retail business or department therein. The job possibilities for graduates in this area include small retail businesses, variety and discount stores, large department stores, specialty stores and professional selling.

The three-trimester program offers up to 1125 hours of instruction in promotion of goods and services, buying, pricing, accounting, personnel, salesmanship, economics and supervision.

Students receive proficiency rating sheets in all courses. Special recognition is given to those students completing *all* of the courses in the program.

Students attending under Veterans Administration benefits receive only partial benefits when the supervised work experience is in progress during the third trimester.



RETAIL SALES MANAGEMENT PROGRAM

Trimester I	*Hours/Week*
Principles of Salesmanship Lab	5
Merchandising Math	5
Introduction to Business	5
Basic Accounting	10
Trimester II	
Principles of Retailing Lab	10
Office Machines	5
Advertising and Display	5
Business Communications I	5
Trimester III	
Principles of Marketing Lab	5
Supervised Work Experience	10
Principles of Data Processing	5
Business Communications II	5

COURSE DESCRIPTIONS

Principles of Salesmanship Lab

The principles, facts and techniques of selling are explored along with the development of communications and human relations skills.

Merchandising Math
This course is a review of arithmetic fundamentals, equations, percent, commercial discounts, markup, markdown and turnover.

Introduction To Business
The structure of business, its activities and problems are surveyed in this course. It also provides a broad understanding of the nature of the business world.

Basic Accounting
Instruction is provided in accounting fundamentals. Included are the accounting cycle, accounting statements and the principles of journalizing and posting.

Principles of Retailing Lab
(Prerequisite: Principles of Salesmanship Lab) Among the areas covered in this lab are inventory, credit, buying, services, pricing, sales promotions, merchandise management and cash register management.

Office Machines
Instruction is given in the most widely used office machines including ten-key adding machines, electronic and printing calculators and keypunch machines.

Advertising and Display
This course is about retail advertising and stresses the major media. Display themes, organization, techniques and their practical application are emphasized in one portion.

Business Communications I
Effective spoken and written business communication is the object of this study of grammar, punctuation, vocabulary, pronunciation and spelling.

Principles of Marketing Lab
(Prerequisite: Principles of Retailing Lab) This lab is designed to study the total marketing picture from a management point of view — from the production of goods to the potential customer.

Principles of Data Processing
This introductory course covers manual and automated information systems, historical development, definitions, planning and recording data in punched cards and other input media, unit record equipment, and digital and analog computers.

Business Communications II
(Prerequisite: Business Communications I) Training is provided in oral communication and in writing all types of business letters, reports and memoranda. The student also completes a personal job portfolio.

Supervised Work Experience

HEALTH OCCUPATIONS

T-VI's Health Occupations Department is located on the first two levels of the Presbyterian Professional Building, 201 Cedar SE. Five health occupations are included in the department: Nursing Assistant, Practical Nursing, Respiratory Therapy Technician, Patient Service Clerk and Home Health Assistant.

Persons may inquire about them and apply for admission at the T-VI admissions office on the main campus, 525 Buena Vista SE.

Groups in the Nursing Assistant and Home Health Assistant Program begin each trimester. The admission policies and procedures described earlier in this bulletin apply to the Nursing Assistant Program. Persons applying to the Home Health Assistant Program must have completed a certified nursing assistant program or have a written recommendation for admittance from a home health agency employer.

Two of the health occupations programs — Practical Nursing and Respiratory Therapy Technician — have beginning groups only once a year. Applications for the Practical Nursing Program will be accepted only from March 1 to 31, 1976, and applications for the Respiratory Therapy Technician Program will be accepted only from May 3 through 26, 1976. Classes in both programs will start in September, 1976.

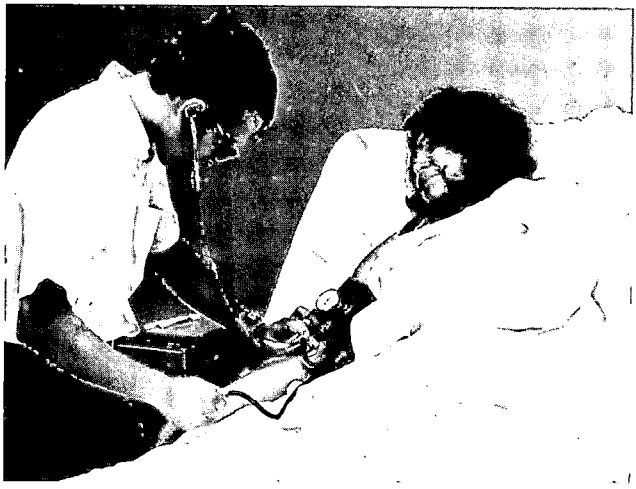
Because these two programs are very demanding, and because the number of applicants far exceeds the number of student training positions available, the admissions process is designed to select applicants who appear best qualified to succeed in the programs. The process used is a combination of admissions testing, examination of past academic records and work experiences, examination of references and interviews of those who meet minimum requirements on the admissions test scores.

There are beginning groups in the Patient Service Clerk Program in the winter trimester and the spring/summer trimester only. The course is not offered in the fall trimester.

Applicants for Practical Nursing, Respiratory Therapy Technician and Patient Service Clerk must have a high school diploma or equivalency to meet requirements of licensing agencies and the prevailing employment practices in local hospitals.

HOME HEALTH ASSISTANT

(5 Weeks)



The Home Health Assistant Program trains persons to care for patients in a home setting. They help home-bound patients achieve and maintain a maximum level of independence. Home Health Assistants are supervised by a home health care registered nurse or appropriate registered certified therapists.

Home Health Assistants must have good knowledge and use of basic nursing, cleaning and cooking, and be able to apply appropriate skills in a given situation. Good communication skills are necessary. Applicants must be able to provide their own means of transportation to the various home health agencies and patients' homes.

To enter the program, applicants should be in good health and free from any communicable disease. Proof of a recent T.B. test and blood test are required. As a prerequisite, applicants must show proof of completion of a minimum of ten-weeks training in an approved nursing assistant program which meets the State's minimum standard requirements. Exceptions to this prerequisite will be made on an individual basis using recent employer recommendations and years of experience as guidelines.

No special uniform is required for this program. The program is five weeks in length with classroom, laboratory, and field experiences. Field experiences will be in homes connected with home health agencies. There are 150 hours of instruction in the program. The program will be offered each trimester following the ten-week nursing assistant course.

This program is not approved for VA benefits.

HOME HEALTH ASSISTANT PROGRAM

Course Requirements	*Total Hours*
Home Health Theory and Lab	83
Basic Nutrition and Lab	35
Field Observations and Experiences	32
Total	150

COURSE DESCRIPTIONS

Home Health Theory and Lab

This course incorporates concepts of home health care and patient care skills as they relate to the home environment.

Basic Nutrition Theory and Lab

Concepts of basic nutrition and adaptation of regular and special diets to the home setting will be discussed. Home management, community resources, purchasing food, and preparing special foods will be covered in the course. Lab experiences will implement the theory.

Field Observations and Experiences

Local home health agencies will be used for field experiences and observations and supervised experiences will take place in homes associated with home health agencies.

NURSING ASSISTANT

(10 Weeks)

The Nursing Assistant Program trains persons in basic nursing skills required for the care and comfort of the sick. Nursing Assistants work in hospitals, nursing homes, public health agencies, private medical and dental offices and medical centers.

There is a $10 registration fee and a $20 personal equipment fee which covers the cost of the required uniform and laboratory tests. A watch with a second hand and uniform shoes are not provided but required.

The program is ten weeks in length, totaling 240 hours of instruction, with six weeks of classroom and laboratory work followed by four weeks of extensive clinical training in a local hospital. A certificate is awarded for successful completion.

The program is not approved for Veterans Administration training benefits.

NURSING ASSISTANT PROGRAM

Course Requirements	*Total Hours*
Health Communications	50
Math	50
Nursing Assistant Lab and Theory	140
Total	240

COURSE DESCRIPTIONS

Health Communications

Instruction covers selected readings and special assignments in the nursing field as they relate to nursing assistants' activities.

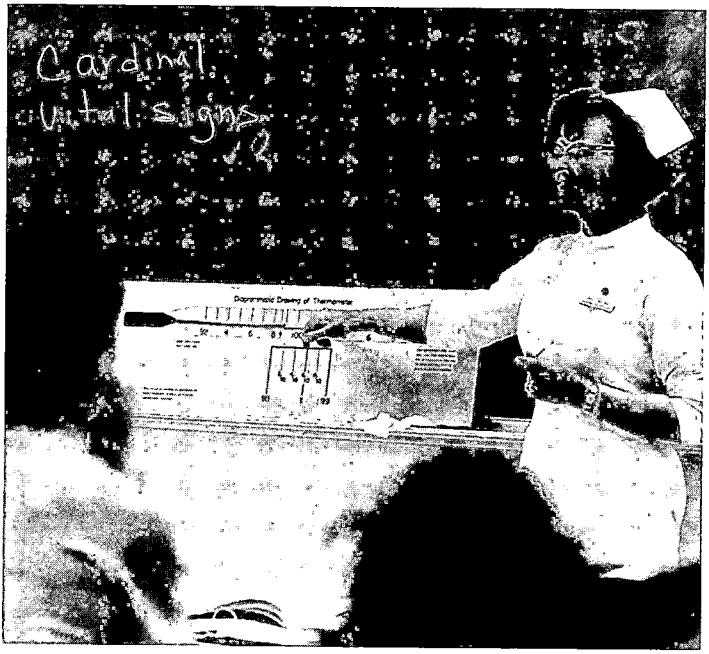
Math

This course covers basic arithmetical operations in working selected problems related to nursing assistant work.

Nursing Assistant Theory and Lab

During the first six weeks, students attend lectures on basic nursing skills and practice in the lab two hours per day.

In the last four weeks of the course, students receive four hours per day of specialized training in various hospitals throughout the city during which time application of the skills acquired during the first six weeks is practiced.



PATIENT SERVICE CLERK
(10 Weeks)

The program for Patient Service Clerk, sometimes called ward clerk or service secretary, is designed to train a person to serve as the hub of communications in a hospital unit. The patient service clerk primarily transcribes physicians' written and verbal orders, answers the telephone and gives information to patients, visitors and staff.

Applicants must have a high school diploma or equivalency. They must be able to write clearly and accurately as well as have an ability to speak distinctly to others. Knowledge of and ability to speak Spanish, as well as English, is desired.

There is a $10 registration fee and a $20 personal equipment fee which covers the required uniform and laboratory tests. The 300-hour program is ten weeks in length with six weeks of classroom and laboratory experiences followed by four weeks of clinical practice in local hospitals. A certificate is awarded for successful completion.

The Patient Service Clerk Program will be offered twice a year — in the winter trimester and again in the spring/summer trimester. It will not be offered during the fall trimester.

This program is not approved for Veterans Administration benefits.

PATIENT SERVICE CLERK PROGRAM

Course Requirements	*Total Hours*
Patient Service Clerk Theory and Lab	204
Patient Service Clerk Clinical Practice	96
Total	300

COURSE DESCRIPTIONS

Patient Service Clerk Theory and Lab

This course combines a number of individual topics, including orientation to the hospital, the patient, and the role of the patient service clerk, as well as presentations and practice of medical terminology, abbreviations, communications, pharmacology terminology, forms and transcription of orders.

Clinical Practice

Supervised clinical experience takes place in local hospitals during the last four weeks of the program.

PRACTICAL NURSING

(3 Trimesters)

The Presbyterian Hospital School of Practical Nursing is jointly sponsored by T-VI and Presbyterian Hospital Center. The program prepares students to care for patients in a variety of health care facilities under the supervision of registered nurses and physicians. After the completion of the three-trimester program, students are eligible to take the state practical nurse license examination given by the New Mexico State Board of Nursing. The school is accredited by the National League for Nursing and the New Mexico State Board of Nursing.

Applicants must have either a high school diploma or equivalency, and score satisfactorily on achievement tests to be considered for the program. *Applicants for the September, 1976, class will not be accepted until after March 1, 1976.*

The Practical Nursing Program totals 1350 hours of instruction with students usually attending classes six hours a day, Monday through Friday. *However, students must be able to attend Saturday classes occasionally if scheduled and be able to attend some evening clinical experiences and observations which are scheduled at various community agencies and hospitals. Students plan for their own transportation to the agencies and hospitals.* The first trimester, or 15-week block,

consists of preclinical training in nursing skills with related theory courses. The second and third trimesters are spent in classroom and clinical experiences related to medical-surgical nursing for children and adults and maternal-infant nursing.

Practical Nursing requires a once-only payment of a $65 personal equipment fee. The fee covers the cost of required uniforms, cap, scissors, identification tag and any other required fees such as liability insurance needed at some hospitals. It does not cover the cost of an entrance physical exam, a watch with second hand, uniform shoes, graduation uniform, graduation pin or state board exam fees.

PRACTICAL NURSING PROGRAM

	Total Hours
Trimester I — 15 Weeks	
Anatomy and Physiology I	60
Nursing Foundations Core	163
Nursing Skills Lab and Clinical Experience	120
Dosages and Solutions	32
Directed Studies	75
Total	450
Trimester II — 18 Weeks	
Medical-Surgical Nursing in Children and Adults	
Clinical Experiences	360
Theory	180
Total	540
Trimester III — 12 Weeks	
Maternal and Infant Nursing	
Clinical Experience	120
Theory	60
Advanced Medical-Surgical Nursing in Children and Adults	
Clinical Experience	120
Theory	60
Total	360

COURSE DESCRIPTIONS

Anatomy and Physiology I

This course is designed to give the student a basic concept of the general plan, structure and the normal function of the body systems and the dependency of one on another.

Nursing Foundations Core

Man's needs in sickness and health are presented through an integrated curriculum approach. Nursing principles and skills, personal and community health, nutrition, human growth and development, vocational concepts and first aid are correlated with the needs of self and others.

Nursing Skills Lab and Clinical Experiences
Practice situations in the laboratory and experiences in clinical unit accompany the theory learned in the Nursing Foundations Core.

Dosages and Solutions
This course is designed to teach the student the mathematics involved in preparing fractional dosages of drugs and in preparing solutions. Methods of converting from one system to another are included. Safety in calculating and preparing dosages is stressed.

Medical-Surgical Nursing For Children and Adults
Man's needs during illness are expanded in the theory presentations of this course. Clinical experience implements the theory presentations. The course is designed to help students learn to care competently for patients, both children and adults, with medical and surgical disorders.

Maternal-Infant Nursing
Normal processes of the reproductive cycle including pre-natal, labor, delivery and postpartum care are introduced in this part of the program. Care of the newborn and a study of the more common anomalies seen in the newborn are covered. Clinical experiences accompany the classes.

Advanced Medical-Surgical Nursing for Children and Adults
This course focuses on patients experiencing complex medical-surgical problems. It will include theory and experience with emergency situations, disaster nursing, principles of care and the emotional and physical effects of a major illness.

RESPIRATORY THERAPY TECHNICIAN

(3 Trimesters)

The Respiratory Therapy Technician Program trains persons in the performance of special skills required for the treatment, management, control and care of patients with deficiencies and abnormalities associated with breathing. The program is one year in length and includes classroom instruction and specialized clinical training in local hospitals.

Applicants must have either a high school diploma or equivalency and must score satisfactorily on algebra and achievement tests to be considered. Since respiratory therapy involves handling and maintenance of treatment equipment, the applicants must be able to lift materials weighing up to 50 pounds. The program has a beginning group in the fall trimester only.

The Respiratory Therapy Technician Program requires a once-only payment of $65 personal equipment fee. The fee covers the cost of required uniforms, special personal respiratory equipment, an identification tag and miscellaneous costs such as student registration at special workshops, if scheduled, and liability insurance. It does not cover the cost of the school's graduation pin or a pre-entrance physical examination.

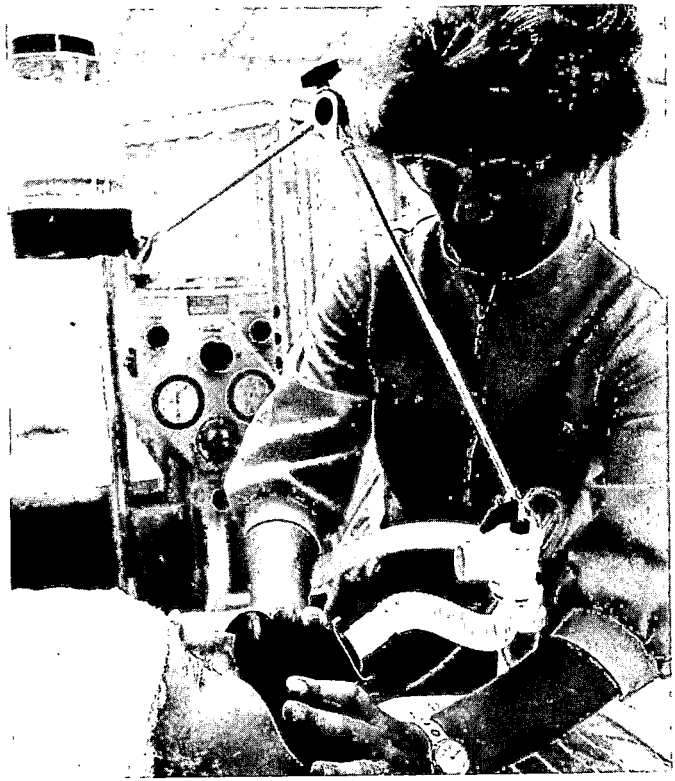
The Respiratory Therapy Technician Program totals 1350 hours of instruction with students attending classes, usually six hours a day, Monday through Friday. However, clinical experiences generally have to be scheduled at different hours so that the hours of classes and clinical experiences may vary from day to day. The first trimester, or 15-week block, consists of pre-clinical training and basic respiratory therapy skills. The second and third 15 weeks are spent in classroom and hospital clinical experiences which progress from simple to complex situations. Students must provide their own transportation to the various clinical facilities.

RESPIRATORY THERAPY PROGRAM

Trimester I	*Total Hours*
Fundamentals of Respiratory Therapy	105
Respiratory Therapy Lab I and Clinical Observations	165
Chemical and Physical Principles of Respiratory Therapy	90
Anatomy and Physiology I	60
Introduction to Patient Care	30
Total	450

Trimester II	
Anatomy and Physiology II	60
Microbiology and Demonstration Lab	75
Clinical Observations and Experiences II	210
Psychosocial Aspects of Patient Care	30
Respiratory Therapy Lab II	75
Total	450

Trimester III	
Cardio-Pulmonary Problems	40
Pharmacology	40
Administrative Procedures	10
Clinical Experience III	310
Respiratory Therapy Lab III	50
Total	450



COURSE DESCRIPTIONS

Fundamentals of Respiratory Therapy

Fundamentals is a basic course which surveys respiratory therapy as a paramedical profession — the personal qualifications, expectations and opportunities. The course also presents procedures pertinent to respiratory therapy.

Respiratory Therapy Lab I and Clinical Observations

The laboratory experiences stress safe practices in the use and maintenance of regulators and gas supply systems, devices and respiratory therapy machines. Students are introduced to hospitals and the respiratory therapy departments.

Chemical and Physical Principles of Respiratory Therapy

This general survey course covers the physics and chemical principles pertinent to respiratory therapy.

Anatomy and Physiology I

This course is designed to give the student a basic concept of the general plan, structure, normal function of the body systems and the dependency of one on another.

Introduction to Patient Care
The patient is introduced as an individual and as the central figure in a complex environment. Routine nursing care, isolation and special nursing problems are discussed in relation to respiratory therapy.

Anatomy and Physiology II
This course emphasizes more advanced knowledge of the anatomy and physiology of the circulatory and pulmonary systems, and the nervous system with its relationship to the circulatory and pulmonary systems.

Microbiology and Demonstration Lab
This course studies some of the micro-organisms related to sickness and health, particularly those affecting patients with respiratory problems. Cleaning of respiratory therapy equipment is practiced. The microbes discussed in class are studied during the lab.

Clinical Observations and Experience II
Supervised clinical observations are at city hospitals. Experiences are planned to learn beginning skills in the administering of various respiratory therapies and caring of equipment.

Psychosocial Aspects of Patient Care
The basic psychodynamics of human behavior are presented. Emphasis is placed on human behavior during illness and especially chronic pulmonary disease. Understanding self as well as others is also included in the course.

Respiratory Therapy Lab II
This laboratory stresses resuscitation techniques, resuscitators both mechanical and manual, ultrasonic therapy and preventive maintenance.

Cardio-Pulmonary Problems
General pathological processes are studied as applied to different pathological conditions, both surgical and medical. Each condition will be explained from the standpoint of etiology, symptoms, diagnosis, therapy and prognosis.

Pharmacology
The general principles of pharmacology and respiratory therapy pharmacology are given in this course.

Administrative Procedures
Principles and practices involved in the supervision and administration of a respiratory therapy department, supplies and finances are studied.

Clinical Experiences III
Experiences in the third trimester will provide practice in giving more complex respiratory therapy treatments to patients and in identifying physical, social and emotional patient needs.

Respiratory Therapy Lab III
This lab offers application of basic techniques to more complex patient care situations such as emergency and intensive care.

Technologies

CONSTRUCTION DRAFTING AND TECHNOLOGY

(4 Trimesters)

The Construction Drafting and Technology Program provides students with job entry skills in six distinct areas as architectural draftsmen, mechanical equipment draftsmen, structural draftsmen, civil and map draftsmen, beginning surveyors, and estimators and schedulers. Related technical courses are also included.

The program requires 1710 hours of instruction, including 450 hours of laboratory instruction and 1260 hours of theory and supporting courses. A student qualifies for a certificate in construction drafting after satisfactory completion of all courses offered in the first two trimesters or certification as a construction drafting technician by completing the four-trimester diploma program.

Construction Drafting and Technology students pay a once-only personal equipment fee of $15.

CONSTRUCTION DRAFTING AND TECHNOLOGY PROGRAM

Trimester I	*Hours/Week*
Basic Construction Drafting Lab/Theory	15
Technical Math I-II	10
Building Materials and Methods I	5
Trimester II	
Mechanical Equipment Lab/Theory	15
Building Materials and Methods II	5
Technical Math III	5
Physics	5
Trimester III	
Structural Drafting Lab/Theory	15
*Beginning Plane Surveying	6
Surveying and Mapping Techniques	5
Communications	3
*Substitute: Pipe Drafting	6
Trimester IV	
Civil and Map Drafting Lab/Theory	15
Estimating and Scheduling	10
Elective: Intermediate Plane Surveying	6

COURSE DESCRIPTIONS

Basic Construction Drafting Lab/Theory

This course introduces the general drafting theory and techniques needed to produce construction drawings for residential and light commercial structures. The student also learns to use manufacturers' materials and standard references in developing drawings.

Technical Math I-II

This course applies basic and advanced algebra concepts and geometry to the drafting field.

Building Materials and Methods I

Properties of building materials are related to actual methods of light construction and building design. Blueprint reading, zoning, building codes, specification writing, material estimates and financing are included in this course.

Mechanical Equipment Lab/Theory

(Prerequisite: Basic Construction Drafting Lab/Theory) Calculations and design of mechanical and electrical systems for residential and commercial buildings and the materials and equipment used in those systems are covered. The lab section provides practice in graphically defining common heating, air conditioning, plumbing, waste disposal and electrical systems.

Building Materials and Methods II

(Prerequisite: Building Materials and Methods I) With major emphasis on heavy construction, students in this course study various aspects of commercial building applications including zoning, building codes and specifications.

Technical Math III
(Prerequisite: Technical Math I-II) This applied approach to trigonometry is based on surveying and mechanical computational needs.

Physics
(Prerequisite: Technical Math I-II) This course covers the basic principles of heat, light, sound, electricity, strength of materials and common testing procedures. Beam theory, which introduces the student to structural design in wood, steel and concrete, is a major part of this course.

Structural Drafting Lab/Theory
(Prerequisite: Physics) This course covers techniques used to produce framing plans and other structural drawings for buildings. Practice is provided in detailing for steel structures and steel reinforcement in reinforced concrete structures.

Beginning Plane Surveying
(Prerequisite: Technical Math III) This course introduces the student to the basic techniques and equipment used in surveying such as tape, level, theodolite, transit and electronic instruments. Field work is done in leveling, distance and angle measurement related to mapping and simple construction surveys.

Surveying and Mapping Techniques
This course presents an overview of modern surveying methods. Extensive practice in the use of the New Mexico State Coordinate system is provided in addition to work with surveys of the U.S. Public Lands, land grants, mining claims and the National Geological Survey (NGS) Horizontal and Vertical Control Network.

Communications
This course reviews speaking, writing and listening skills as used in simulated industrial situations.

Civil and Map Drafting Lab/Theory
(Prerequisite: Surveying and Mapping Techniques) This course provides an introduction to highway and map drafting. Students use field data to develop a topographic map. Practical experiences are provided.

Intermediate Plane Surveying
(Prerequisite: Beginning Plane Surveying) This course covers control, construction and route surveys. Training in field and office procedures is given. The operation and application of one-second theodolites and electronic distance measuring devices in field work are studied. Computer techniques for reduction of field data collected are practiced. A unit on photogrammetry is included.

Estimating and Scheduling
Construction project planning and management are presented in this course. Construction estimating, planning and control, and the application of the computer in the construction field are provided.

Pipe Drafting
(Prerequisite: Mechanical Equipment Lab) This course is devoted to producing pipe drawings for the various types of industries as a major means of transporting fluids and gases. This course is offered as a substitute for *Beginning Plane Surveying* for those students who do not desire, or cannot participate in, the required field work of surveying.

DATA PROCESSING TECHNOLOGY

(4 Trimesters)

The Data Processing Technology Program is designed to qualify students as business applications programmers with emphasis on the COBOL (Common Business Oriented Language) language, accounting-related applications and program-systems relationships.

The computing facilities include an IBM System 360 computer with 80 column card input and output, direct access mass storage devices and Wang 2200 mini-computer. Training is also offered in the field of computer time-sharing.

This four-trimester course in programming totals 1695 hours of instruction, including laboratory experience.

Applicants should be able to demonstrate strong reading, communication and mathematical skills. Certificates of proficiency may be issued after the second trimester indicating subjects or areas of study which the student has successfully completed.

DATA PROCESSING PROGRAM

Trimester I	*Hours/Week*
Technical Math I-II	10
Basic Accounting for Data Processing	5
Introduction to Computers	5
COBOL I	10
Trimester II	
Technical Math III/FORTRAN	10
Managerial Accounting for Data Processing	5
JCL, Files, Utilities, and Sorts	5
COBOL II	10
Trimester III	
Assembler I with Computer Operations	10
Management Methods I	5
Systems Analysis I	5
Report Program Generator	5
Trimester IV	
Assembler II	10
Management Methods II	5
Systems Analysis II	5
COBOL Problems	5
Conversational Computers	3

COURSE DESCRIPTIONS

Technical Math I-II
This course is a complete review of algebra and right triangle trigonometry.

Basic Accounting for Data Processing
This introductory course is designed to familiarize data processing students with accounting theory, practice and terms and their relation to computer data processing. Activities and projects are coordinated with COBOL I.

Introduction to Computers
Instruction is provided in computer arithmetic, memory coding schemes, memory dumps, computer logic and control, flow charting of computer problems and some system flowcharting.

COBOL I
Introduction of JCL (Job Control Language) and the required entries in the four basic divisions of COBOL are covered. Projects directly related to programming business and accounting applications are emphasized.

Technical Math III/FORTRAN
(Prerequisite: Technical Math I-II or equivalent) Trigonometry, exponential and logarithmic functions plus beginning instruction in FORTRAN (FORmula TRANslator) programming are included in this course.

Managerial Accounting

(Prerequisite: Basic Accounting for Data Processing) This course emphasizes cost accounting, encumbrance accounting and special governmental accounting practices. A description of the accounting responsibilities and understanding of the paper and information flow within a typical business are included.

JCL, Files, Utilities and Sorts

The standard Disk Operating System (DOS) utilities and JCL (Job Control Language), as well as standard direct-access storage devices and their use for data file organization, creation and maintenance are studied in this course.

COBOL II

(Prerequisite: COBOL I or equivalent) This course continues development of programming skills in the COBOL language with emphasis on more complicated sentences, statements and clauses. Content includes special COBOL techniques such as table handling and subroutines. Sequential, index sequential, random file creation, updating, processing and maintenance are also included. Extensive COBOL edit and file maintenance and processing programs are also emphasized.

Assembler I With Computer Operation

(Prerequisite: Introduction to Computers) This "machine oriented" language is essential to the professional programmer. This introductory course uses the System/360 Assembler Language Commercial Instruction set under the DOS (Disk Operating System). In conjunction with this course, students have the opportunity to operate the computer under direct supervision of the computer operator.

Management Methods I

(Prerequisite: Technical Math III; Corequisite: Systems Analysis I) The application of graphic techniques and description statistics to a variety of computerized business and management applications, such as inventory control, decisions related to purchase or manufacture, stocking options and data analysis are covered.

Systems Analysis I

(Corequisite: Management Methods I) This is a study of business organizations, staff and line responsibilities, EDP (Electronic Data Processing) group organization, data security, source data controls, processing controls, editing, auditing the system and output review. Design, data collection coding and implementation of an actual system provide laboratory experience.

Report Program Generator (RPG)

This course covers the RPG programming language and its application to business and accounting computer applications.

Assembler II

(Prerequisite: Assembler I or equivalent) The purpose of this course is to further develop programming fundamentals of the IBM Assembler Language as well as develop programming techniques to more fully exploit features of the system which can often enhance the use of the higher-level languages.

Management Methods II
(Prerequisite: Management Methods I; Corequisite: Systems Analysis II) This is a continuation of the application of statistics and mathematical techniques to market surveys, cash flow analysis, accounts receivable projections and sampling related to auditing and financial control.

Systems Analysis II
(Prerequisite: Systems Analysis I; Corequisite: Management Methods II) All necessary data collection, refinement and editing procedures for the projects started in Systems Analysis I are designed and implemented. Procedure manuals and run books are prepared to document all input, output forms, programs and procedures.

COBOL Problems
(Prerequisite: COBOL II or equivalent) Students are provided with selected systems problems to be solved, submitting written proposals and presentation of the proposals. Programming and documentation of the system are also included in this course.

Conversational Computers
(Prerequisite: Introduction to Computers or equivalent) This course includes the philosophy and techniques of time shared systems, the BASIC language, man-machine interactive systems, Culler-Fried languages, Computer Assisted Instruction, Help Routines, search and retrieval techniques and telecommunication systems.

ELECTRONICS TECHNOLOGY

(4 Trimesters)

The Electronics Technology Program prepares students for employment in various areas of the electronics industry. Students who complete the program are thoroughly trained in theory and maintenance of both industrial and consumer electronic equipment.

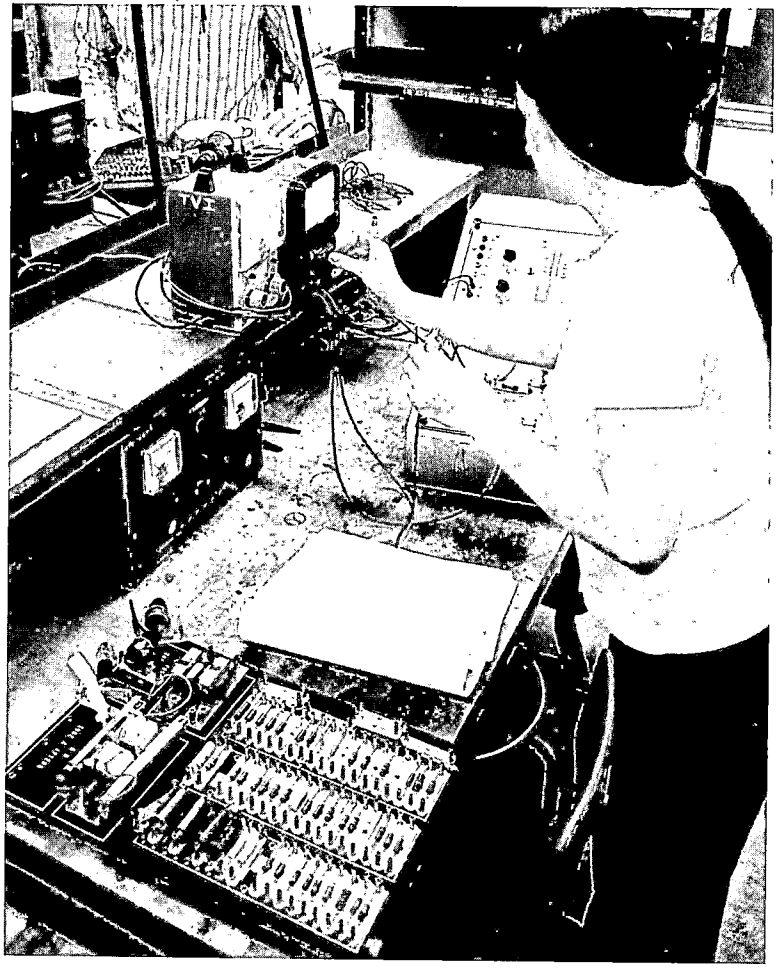
After three trimesters a student completes training for a Certificate in Electronics Testing. After successful completion of four trimesters, a student qualifies for a Diploma in Electronics Technology.

The certificate program consists of 1350 hours of instruction. Of those, 750 hours are electronics theory and related course work and 600 hours are laboratory work, providing a student with basic electronics job entry-level skills.

The diploma program provides 1725 hours of instruction of which 960 hours are electronics theory and related course work and 765 hours are laboratory work. It provides additional training in advanced electronics principles, applications and logic, or color television theory and repair.

Entering students who already possess a strong background in math and have recent training or equivalent experience in basic electronics may waive those courses in which adequate knowledge can be demonstrated.

The Electronics Department operates an amateur radio station which is available to students during their out-of-class time.



Electronics Program

Trimester I	*Hours/Week*
Electronics Theory I	5
Electronics Lab I	10
Technical Math I-II	10
Digital Circuits Theory I	5
Trimester II	
Electronics Theory II	5
Electronics Lab II	10
*Physics	5
Technical Math III/Fortran	10
Drafting for Electronics/Rotating Electrical Machines	5
Trimester III	
Electronics Theory III	5
Electronics Lab III	10
Circuit Analysis I	5
Semiconductor Principles and Applications	5
Electronics Instruments	5
*Technical Math IV	5
*Communications	5
Trimester IV	
Electronics Theory IV	5
Electronics Lab IV	6
Digital Circuit Theory II	5
Industrial Applications	5
*Electronics Industrial Applications Lab	5
*Electromechanical Industrial Applications Lab	5
*Technical Math IV	5
Licensing Examination Preparation	2
Microwave Technology	2

*Optional: To be offered when requested by ten or more students.

COURSE DESCRIPTIONS

Electronics Theory/Lab I

This course covers direct current electricity as it relates to electronic components and circuitry. The laboratory part of the course is concerned with development of basic skills with tools, components, meters, soldering techniques and schematics.

Technical Math I-II

Students study the concepts of beginning and advanced algebra, introductory trigonometry, logarithmic and exponential functions and the analytic geometry of the straight line.

Digital Circuit Theory I

Logic equations, truth tables and NAND logic used for those logic gating functions typically found in electronic calculators, computers and other digital equipment will be covered.

Electronics Theory/Lab II

(Prerequisite: Electronics Theory/Lab I and Technical Math I-II) The study of single phase and polyphase alternating current applied to electronic circuits is emphasized. The theory and applications of vacuum tubes and transistors will be introduced. The lab provides additional experience in fabrication, circuit tracing, project construction and trouble shooting. Emphasis is placed on the use of the cathode ray oscilloscope as a measuring and diagnostic instrument.

Physics

(Prerequisite: Technical Math I-II) Basic principles of mechanics, heat, light, sound, electricity, atomic and nuclear physics are covered. Emphasis will be placed on modern trends in physics which apply to electronics.

Technical Math III/FORTRAN

(Prerequisite: Technical Math I-II) This course includes the study of basic trigonometry, periodic functions, elementary vector analysis and complex numbers. Application of mathematics to AC circuits is emphasized. Part of the course is devoted to the FORTRAN computer language and students will use an IBM/360 computer to solve circuit problems.

Drafting for Electronics/Rotating Electrical Machines

(Corequisite: Electronics Theory/Lab II) This course presents the operational principles, connections, characteristics, control requirements and testing of DC generators, DC motors, AC alternators, single- and three-phase AC motors and synchronous motors.

Electronics Theory/Lab III

(Prerequisite: Electronics Theory/Lab II) Principles of operation of AM, FM and SSB communications equipment will be presented and circuits typically found therein will be studied and analyzed. Fundamentals of transmission line theory pertaining to high frequency signal transmission will also be covered.

Circuit Analysis I

(Prerequisite: Technical Math III) Emphasis in this course is on the use of algebra, trigonometry and geometry in the solution of advanced electronic problems. The work will involve analysis of specific applications such as television circuits. Laboratory exercises are used to verify the theoretical analysis.

Semiconductor Principles and Applications

(Prerequisite: Electronics Theory/Lab II) This introduction to transistor theory application includes PN Junction, common emitter, common base and common collect amplifiers and an introduction to linear amplifiers.

Electronics Instruments

(Corequisite: Electronics Theory/Lab III) This course involves the study of selected electronic instruments, together with the procedures for their calibration, maintenance and repair in accordance with manufacturers' specifications.

Technical Math IV
(Prerequisite: Technical Math III) This course covers the basic concept of limits, derivatives, integrals and their application to solving areas, volumes, centroids, inertia and other applications and derivatives of basic trigonometric functions. FORTRAN programs are assigned where relevant.

Communications
The student gains experience in speaking, writing and listening skills while involved in simulated industrial situations.

Electronics Theory/Lab IV
(Prerequisites: Electronics Theory/Lab III) The course will cover the advanced semiconductor theory and application and an introduction to modern solid state devices. The student is provided the opportunity to specialize in electronics repair and to study for a Federal Communications Commission (FCC) radio operator's license.

Digital Circuit Theory II
(Prerequisite: Digital Circuit Theory I) Students study the analysis and design of linear and nonlinear wave shaping; switching and logic circuits, including Boolean algebra binary arithmetic; and their application in control and computing devices.

Industrial Applications
(Corequisite: Electronics Theory/Lab IV) This course will deal with topics which will meet the current needs of the industrial community such as instrumentation, computer technology and television theory. Practical experience in these areas is provided in the Industrial Applications Lab course.

Electronics Industrial Applications Lab
(Corequisite: Industrial Application) Students will learn the repair and maintenance of various electronic equipment which will be encountered when placed on a job such as computer circuiting, pulse code modulations circuiting, color television circuiting and video tape recorder circuiting. The course will complement the theoretical course work done in Industrial Applications.

Electromechanical Industrial Applications Lab
(Corequisite: Industrial Applications) Students learn the repair and maintenance of electromechanical devices such as movie projectors, record changers, duplicators, copy machines, cassette recorders, transducers, synchros, servos and other mechanical equipment powered by electricity; and industrial motor controls.

Licensing Examination Preparation
(Prerequisite: Electronics Theory/Lab III) The course will prepare the student to take Federal Communications Commission (FCC) commercial license examinations or other required licensing such as certified electronics technicians exams as required by employers.

Microwave Technology
(Prerequisite: Electronic Theory/Lab III) The course will introduce the theory of microwave technology by lecture, demonstrations and experimentation. Topics to be covered include wave guides, standing wave ratio; klystron generators, cavity resonators and parabolic reflectors.

TRADE AND INDUSTRIAL

Most classes in the trade and industrial field, the largest skill cluster at T-VI, meet in a new trades building at Coal and University NE which contains classrooms, lab space and a live work area. Programs not housed in that complex meet on the main campus or in a temporary facility on Yale Blvd. SE.

Almost all of the trades programs will accept new students at the beginning of each trimester. A few — including Auto Collision Repair, Culinary Arts, Masonry Trades and Sheet Metal — accept new students at the midpoint as well as the beginning of the trimester. Admissions information concerning all trades programs is available at the T-VI reception desk in the lobby on the main campus.

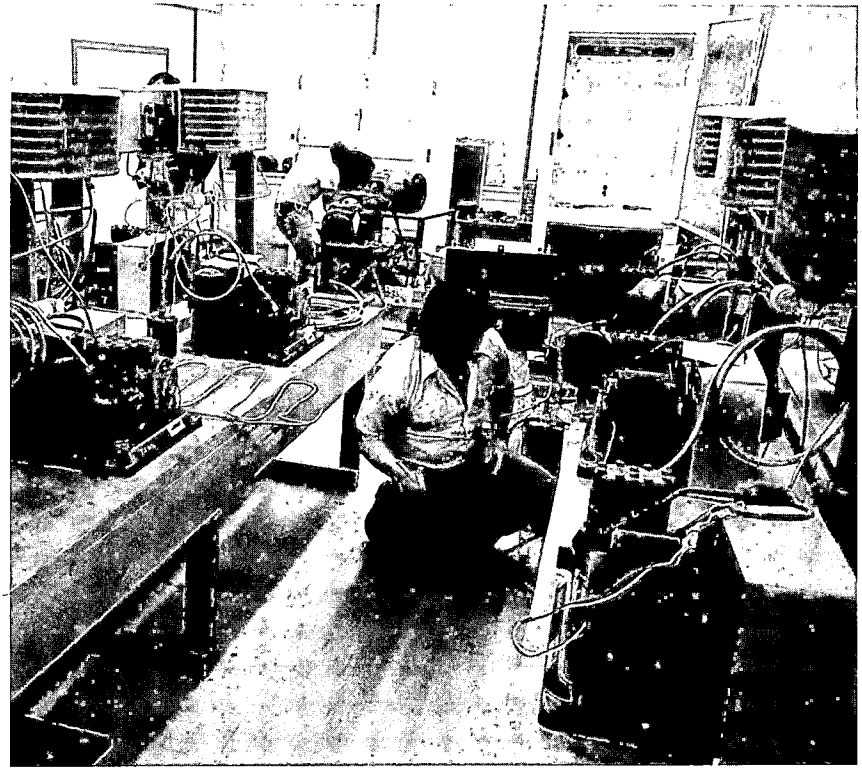
Entrance requirements shared by all of the trades programs are that the applicant be able to lift materials weighing up to 50 pounds and be free of allergies or health conditions which cannot be controlled and which would endanger his or her own safety or the safety of others. These include allergies to such things as fuels, solvents, detergents, lime or cement products, sheet metal fluxes or sawdust, depending on the major.

Each applicant is also required to have an interview with the program coordinator during the admissions process and to score satisfactorily on the pre-admissions mathematics examination.

Students in the trades are expected to furnish their own appropriate shop clothes for their program.

AIR CONDITIONING, HEATING AND REFRIGERATION

(3 Trimesters)



The Air-Conditioning, Heating and Refrigeration Program is designed to prepare students for successful entry into the installation, maintenance and service field in this specialty.

With further training offered by employers at the dealer, distributor and mechanical contractor level, the graduate of this program should be able to assist the journeyman mechanic in installing the equipment necessary to complete residential and light commercial projects.

This includes the installation of mechanical equipment and electrical controls; servicing various air-conditioning, heating and refrigeration components; troubleshooting the systems and preventive maintenance that is required.

The three-trimester program totals 1350 hours of instruction, of which 600 hours are laboratory work and 750 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Air Conditioning, Heating and Refrigeration students must pay a personal equipment fee of $115, $65 before entering the first trimester and $25 before each additional trimester.

AIR-CONDITIONING, HEATING AND REFRIGERATION PROGRAM

Trimester I	*Hours/Week*
Air-Conditioning, Heating, Refrigeration Lab I	15
Air-Conditioning, Heating, Refrigeration Theory I	5
Trade Math I	5
Basic Electricity	5
Trimester II	
Air-Conditioning, Heating, Refrigeration Lab II	15
Air-Conditioning, Heating, Refrigeration Theory II	5
Trade Math II	5
Blueprint Reading I	5
Trimester III	
Air-Conditioning, Heating, Refrigeration Lab III	10
Air-Conditioning, Heating, Refrigeration Theory III	5
Business Relationships	5
Blueprint Reading II	5
Control Circuitry	5

COURSE DESCRIPTIONS

Air-Conditioning, Heating, Refrigeration Lab/Theory I

This course gives the beginning student instruction in shop safety, basic tools and equipment, introduction to physics and chemistry, basic controls and systems, and installation, maintenance and service knowledge for residential-type heating and cooling equipment.

Trade Math I

This course reviews the basic arithmetic and algebraic operations needed to solve specific problems in temperature conversion, dimensions, area, standard volumes, force, work and energy, power, therm, British thermal unit, specific and latent heat, and various mathematical laws as applied to the major.

Basic Electricity

Instruction is offered in the areas of units and symbols, classes of materials and their usage, electrical circuits and laws of electricity, magnetic circuits-electric meters, transformers and motors, relays, contactors, starters, circuit protection and test and measuring equipment.

Air-Conditioning, Heating, Refrigeration Lab/Theory II

(Prerequisite: All Trimester I courses) This course provides instruction in the installation, maintenance and service of light commercial air-conditioning, heating and refrigeration systems. Instruction emphasizes electrical problems and controls, gas-electric packages, compressors, condensers, pressure reducing devices, load calculations, heat transfer, psychrometrics and safety code for mechanical refrigeration.

Trade Math II

(Prerequisite: Trade Math I) This course includes rules and formulas, ratio and proportion, volume, pulley speeds, load calculations, geometric construction and velocity as applied to the air-conditioning, heating and refrigeration program.

Blueprint Reading I

(Prerequisite: All Trimester I courses) Instruction covers terminology, freehand sketching of orthographic and isometric drawings, construction details, abbreviations and symbols, electrical constants and unit prefixes, schematics and color code for piping.

Air-Conditioning, Heating, Refrigeration Lab/Theory III

(Prerequisite: All Trimester II courses or equivalent) This course includes installation, maintenance and service of commercial air-conditioning, heating, and refrigeration systems. Emphasis is on installing and servicing, heat loads and piping, principles and applications of absorption systems, heat pumps, water chillers, special devices and applications, air distribution, advance controls, service problems and troubleshooting.

Business Relationships

Course content includes business terminology, organization, law, finance, record keeping and operations; distribution; physical facilities; invoice and billing procedures; managing merchandise; and customer and personnel relations as they relate to the air-conditioning, heating and refrigeration industry.

Blueprint Reading II

(Prerequisite: Blueprint Reading I) This course covers drawing and measurement review; angular measurement; building trade symbols; types of building construction and insulation; sheet metal shop procedures; general sheet metal work; duct systems, design methods and materials; ventilation plans; interpretation of mechanical and electrical plans; codes; craftsmanship; and design concepts.

Control Circuitry

(Prerequisite: All Trimester II courses or equivalent) This course includes the study of the design, installation and troubleshooting of air-conditioning, heating and refrigeration control systems. Instructional emphasis will be placed on electrical, pneumatic and solid state circuitry.

AUTOMOTIVE COLLISION REPAIR

(2 Trimesters)

The Automotive Collision Repair Program is designed to qualify a student for entry level employment as a metal man or painter in the automotive industry. The student should be able to qualify in the area of his choice and ability.

In the first trimester, students are given instruction and practical experience in minor body work and basic automotive painting procedures. Students are encouraged to specialize as they progress in their training. The quality of work and the flat-rate manual are used to determine the student's rating.

The second trimester includes two areas. The metal man does more complex R & R (removal and replacement) of panels, front-end sections, medium frame and body damage repair. Quality and flat-rate skills are used for rating students. The painting area rating is based on quality and the amount of supervision required.

The two-trimester program totals 900 hours of instruction, of which 600 are laboratory work and 300 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Automotive Collision Repair students must pay a $90 personal equipment fee, $65 prior to entering the first trimester and an additional $25 prior to the second trimester, and must provide their own industrial safety glasses or goggles.

AUTOMOTIVE COLLISION REPAIR PROGRAM

Trimester I	*Hours/Week*
Auto Collision Repair Lab I	20
Auto Collision Repair Theory I	5
Auto Collision Welding	5
Trimester II	
Auto Collision Repair Lab II	20
Auto Collision Repair Theory II	5
Auto Collision Repair Math and Estimating	5

COURSE DESCRIPTIONS

Automotive Collision Repair Lab/Theory I

This laboratory practice course provides instruction in shop safety, chassis construction, hand and power tool operation, minor fender and body section repairing, basic body pulls, trim and hardware replacement, preparing for painting and basic painting processes.

The theory part includes fundamental information on body and chassis nomenclature, metal alloy characteristics, uses of grinders and abrasives, metalworking techniques, metal finishing with lead and reinforced plastic, and basic painting procedures.

Automotive Collision Welding

Students get practical experience in use of the oxyacetylene torch for welding, cutting and brazing on various types and sizes of sheet metal. This course develops welding skills in basic shielded arc welding for frame repair, and basic inert gases and gas-arc welding for body repairing.

Automotive Collision Repair Lab/Theory II

(Prerequisite: All Trimester I courses) The laboratory practice in this course covers body section replacement and alignment, interior trim removal and replacement, spray painting procedures and processes, surface buffing and polishing, frame and body pulls, and basic unitized body alignment.

During the theory section, students are instructed in frame and unitized body alignment, body straightening on panels and sections, clip replacement, accessory removal and replacement, finishing procedures and processes, and advanced estimating. Instruction is also provided in the basic principles of electricity; schematic reading; series, parallel and series-parallel circuits; alternating and direct current; and basic automotive electrical systems encountered in the automotive collision repair area.

Auto Collision Math and Estimating

This course reviews basic arithmetic operations including surface measurements and direct measurements, ratio and proportion, and percentage. Rules and formulas, volume, crash book estimating and the metric system are thoroughly covered and applied to the automotive collision repair area.

AUTOMOTIVE MECHANICS

(1 to 3 Trimesters)

The Automotive Mechanics Program is designed to help the student gain the technical knowledge and occupational skills necessary to enter the automotive service field.

The designated options are nonsequential and students may take them in any order providing that space in the class is available in the trimester chosen and they have met the specific entrance requirements and prerequisites.

In one trimester, students are instructed in the fundamentals of engine operation and construction; engine testing and diagnosis; and engine disassembly, inspection, cleaning, reconditioning, reassembly and check-out. In another

trimester, emphasis is placed on the basics of electricity, tests and operations of batteries and cranking motors; and charging, ignition, fuel, emission control and air-conditioing systems. During a third trimester, emphasis is placed on brakes, front suspensions, steering, alignment, transmissions and drive train mechanisms.

The courses are designed to give students a general background in automotive mechanics prior to their selection of a specialty in the automotive mechanics field.

The three-trimester program totals 1350 hours of instruction, of which 900 hours are laboratory work and 450 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Automotive Mechanics students must pay a $115 personal equipment fee, $65 prior to entering the first trimester and $25 before each additional trimester.

AUTOMOTIVE MECHANICS PROGRAM

	Hours/Week
Option I	
Automotive Engines and Engine Systems Lab	20
Automotive Engines and Engine Systems Theory	5
*Supporting Course	5
Option II	
Automotive Electrical and Tune-Up Lab	20
Automotive Electrical and Tune-Up Theory	5
*Supporting Course	5
Option III	
Brakes, Front-End Alignment and Drive Trains Lab	20
Brakes, Front-End Alignment and Drive Trains Theory	5
*Supporting Course	5

REQUIRED SUPPORTING COURSES*

	Hours/Week	Trimester
Basic Math and Precision Measurements	5	I
Basic Automotive Math and Physics	5	II
Basic Machine Tool Practice	5	III

*Must be taken in trimester designated.

COURSE DESCRIPTIONS

Automotive Engines and Engine Systems Lab/Theory

(Prerequisite: Specific Entrance Requirements and/or satisfactory completion of Option II or III) This course offers instruction in automotive shop safety, basic tools and equipment used by automotive mechanics, engine systems operation and maintenance; engine operation and construction; engine testing and diagnosis; and engine disassembly, inspection, cleaning, reconditioning, reassembly and check-out. The course will also teach the student to read and interpret technical data. Proper shop procedures and job operations are emphasized.

Basic Math and Precision Measurements

This course reviews basic mathematics and metric and English systems of measurements. Precision measurements will be emphasized and practical applications on the micrometer caliper, vernier caliper, depth micrometer and telescoping gages will be the main part of the course.

Automotive Electrical and Tune-Up Lab/Theory

(Prerequisite: Specific Entrance Requirements and/or satisfactory completion of Option I or III) This course introduces the student to the automotive electrical and tune-up field. Instruction covers basic electricity; schematics; batteries; cranking motors; charging, ignition, fuel and emission control systems. Automotive air-conditioning will be studied as a separate service unit.

Basic Automotive Math and Physics

(Prerequisite: Basic Math and Precision Measurements) This course is correlated with the Automotive Lab/Theory to give the math and physics required for an operational understanding of automotive DC circuits. Ohm's law, temperature-pressure relationships of gases, hydraulics, gear applications, steering geometry, forces and stresses, and power transmission are also covered.

Brakes, Front-end Alignment and Drive Trains Lab/Theory

(Prerequisite: Specific Entrance Requirements and/or satisfactory completion of Option I or II) This course introduces the student to the automotive specialties in brakes, front suspensions, steering, alignment, transmissions and drive train mechanisms. Basic troubleshooting techniques are studied in the operation and function of the various systems. The course also provides practice in technical research. Special emphasis will be placed on power flow circuits, basic diagnosis as correlated with lab projects, safety and basic servicing.

Basic Machine Tool Practice

(Prerequisites: Trade Math and Precision Measurements) This combination laboratory and theory course is designed for instruction in shop safety, basic benchwork, precision measuring instruments, machine construction, and basic operations on the drill press, pedestal grinder, lathe and band saw. Operations on bushings, bearings, gear shafts, drilling and reaming holes in automotive engine blocks, transmission final drive housings and ancillary accessories are thoroughly covered.

CARPENTRY
(2 Trimesters)

The Carpentry Program is designed to provide practical and realistic experiences, including actual construction trade exposure, which will enable the student to enter the construction industry.

During the first trimester, instruction is provided in the fundamentals of residential framing and tools of the trade. In the second trimester, emphasis is placed on interior finish, millwork, cabinetmaking and estimating.

The two-trimester program consists of 900 hours of instruction, of which 450 hours are laboratory experiences and 450 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

CARPENTRY PROGRAM

Trimester I	*Hours/Week*
Carpentry Lab I	15
Carpentry Theory I	5
Trade Math I	5
Blueprint Reading I	5
Trimester II	
Carpentry Lab II	15
Carpentry Theory II	5
Trade Math II	5
Blueprint Reading II	5

COURSE DESCRIPTIONS

Carpentry Lab and Theory I
This combined theory and laboratory practice class provides instruction in hand and power tools, site layout and foundations, rough framing, roof framing, structural shell basics, stair construction, exterior finish and safety.

Trade Math I
This course covers basic arithmetic, reading the rule, whole numbers, common and decimal fractions, cubic and weight measures, area calculations, surface and direct measurements and framing square computations.

Blueprint Reading I
This course offers basic instruction in sketching residential working drawings and blueprints.

Carpentry Lab and Theory II
(Prerequisite: All Trimester I courses) Materials covered in this course are a continuation of Trimester I lab/theory, with emphasis on interior trim and millwork, finish carpentry, cabinet making and installation.

Trade Math II
(Prerequisite: Trade Math I) Instruction is provided in the use of rules and formulas, ratio and proportion, volume, geometric construction, basic surveying computations and estimating.

Blueprint Reading II
(Prerequisite: Blueprint Reading I) This course includes an introductory study of residential tract homes, multiple family dwellings, commercial buildings and industrial blueprint applications.

CULINARY ARTS

(2 Trimesters)

The Culinary Arts Program is designed to provide instruction in nutritional food preparation leading to entry into the food service industry, as saute cook after the first trimester or dinner cook upon completion of the full program.

In the first trimester, students are instructed in the fundamentals of food preparation and principles of cookery, use of tools and cleanliness of equipment. During the second trimester, students are given instruction in the cooking of various foods, proper care of foods, refrigeration of foods, fundamentals of baking, background knowledge and basic instruction in cutting of meats, and ordering and purchasing procedures.

The two-trimester program consists of 900 hours of instruction, of which 450 hours are laboratory and 450 hours are supporting courses. Students may enter the program at the beginning of each trimester or at midterm on a space available basis.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

The Culinary Arts students must pay a once-only personal equipment fee of $65.

HEALTH CERTIFICATE REQUIREMENT

Persons enrolled in this program must present, upon their initial enrollment, a certificate stating that they are free from tuberculosis in a transmissible form. The certificate must be signed by a physician and must be secured not more than 90 calendar days prior to the starting date of the program.

CULINARY ARTS PROGRAM

Trimester I	*Hours/Week*
Saute Cook Lab	15
Saute Cook Theory	5
Food Service Math	5
Human Relations	5
Trimester II	
Dinner Cook Lab	20
Dinner Cook Theory	5
Food and Nutrition	5

COURSE DESCRIPTIONS

Saute Cook Lab

This laboratory class provides instruction in the different methods of preparing meats, vegetables, soups, sauces and thickening agents, sandwiches and salads, and breakfast foods. Emphasis is placed on food costs, nutrition, personal hygiene and sanitation, safety, tools and stationary equipment, and basic cashiering as applied to Culinary Arts.

Saute Cook Theory

The theory class offers instruction in sauteed dishes, cuts of meat, mixing, breading, color and appearance of food, neatness of serving, cooking methods and techniques, speed and efficiency, and cleanliness. Basic instruction is given in saute frying, broiling of sea foods and methods of serving.

Food Service Math

This course covers basic arithmetic. Industrial applications are thoroughly covered and applied to the Culinary Arts major.

Human Relations

This class deals with employee-employer relations, employee-fellow employee relations, on-the-job attitude, dependability and initiative. Classroom discussions, audio-visual presentations and field trips will be part of this course.

Dinner Cook Lab

(Prerequisites: All Trimester I courses) This laboratory class gives instruction in cooking methods and techniques, herbs and spices, cutting meats, salads and salad dressings, baking, following instructions in menus, calculation of cost and pantry work.

Dinner Cook Theory

(Prerequisites: All Trimester I courses) Instruction supports the work accomplished in the dinner cook lab. Emphasis is placed on various types of stews, fricassees, garnishes, sauces, gravies and stocks. This course also covers roasting meats, use of leftover meats and meat trimmings, fundamentals of baking and storage of foods.

Food and Nutrition

(Prerequisite: Saute Cook Lab and Theory) This course covers the principles of good nutrition in menus and preparation; therapeutic diets; deteriorative factors and their control; preservation and various methods of processing; food irradiation and microwave heating; additives, wholesomeness and consumer protection; substitute and convenience foods; inspection and grading; environmental health requirements; and technological changes in the food service industry.

DIESEL MECHANICS

(5 Trimesters)

The Diesel Mechanics Program is designed to prepare students for entry into the job market by equipping them with the technical knowledge and skills needed for satisfactory performance in the diesel industry.

During the first trimester, students are instructed in basic engine block assembly design, component parts disassembly, inspection and reassembly, diesel engine accessories, and diagnosis and troubleshooting. In the second trimester, emphasis is placed on various fuel injection systems, injectors, governors and analysis procedures. Third trimester instruction emphasizes engine overhaul, troubleshooting and failure analysis, major causes of engine operational or performance failure and reclaiming engine performance procedures.

In the fourth trimester, transmissions, final drives, clutches, brakes, hydraulics, and diesel equipment and vehicle preventive maintenance are included. In the fifth trimester, basic and advanced electricity, various heavy duty electrical systems, hydraulic accessories and testing, service procedures, and corrective measures are studied.

The five-trimester program totals 2250 hours of instruction, of which 1275 hours are laboratory work and 975 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Diesel Mechanics students must pay a $165 personal equipment fee, $65 prior to entering the first trimester and $25 preceding each additional trimester, and must provide their own industrial safety glasses or goggles.

DIESEL MECHANICS PROGRAM

Trimester I	*Hours/Week*
Diesel Engine Principles and Accessories Lab	15
Diesel Engine Principles and Accessories Theory	5
Trade Math and Precision Measurements	5
Blueprint Reading	5
Trimester II	
Diesel Fuel Injection Lab	15
Diesel Fuel Injection Theory	5
Trade Math and Physics	5
Diesel Metallurgy	5
Trimester III	
Diesel Engine Overhaul Lab	15
Diesel Engine Overhaul Theory	5
Welding	5
Basic Machine Tool Practice	5
Trimester IV	
Diesel Transmissions, Final Drives, Clutches, and Brakes Lab	20
Diesel Transmissions, Final Drives, Clutches, and Brakes Theory	5
Business Relations	5
Trimester V	
Diesel Electrical Systems and Hydraulics Accessories Lab	20
Diesel Electrical Systems and Hydraulics Accessories Theory	5
Industrial Electricity	5

COURSE DESCRIPTIONS

Diesel Engine Principles and Accessories Lab/Theory

This course offers instruction in diesel shop safety and basic tools and equipment used by the diesel mechanic. Emphasis is placed on two- and four-stroke diesel engines, including basic engine cylinder block assembly design, component parts, disassembly, inspection and reassembly; fits, tolerances and service specifications; lubricating, cooling, air intake and fuel systems; governor control design; oil pressure and heat safety control devices; and diagnosis and troubleshooting.

Trade Math and Precision Measurements

This course is correlated with Diesel Engine Principles and Accessories Lab and Theory. The course reviews basic arithmetic operations including formulas, graphs, meters, fluid calculations and precision measuring instruments.

Blueprint Reading

Basic instruction in reading and interpreting drawings related to diesel mechanics is offered in this course. Emphasis is on terminology, details, abbreviations and symbols, schematics and sketching of orthographic and isometric drawings.

Diesel Fuel Injection Lab/Theory

(Prerequisite: Diesel Engine Principles and Accessories Lab/Theory and Trade Math and Precision Measurements) This combined theory and practice class provides instruction in fuel system design, theory, construction, operating principles and servicing procedures; distributor-type and multiplunger fuel systems; testing procedures for various fuel systems; injectors and governors; and troubleshooting and analysis sequence procedures.

Trade Math and Physics

(Prerequisite: Trade Math and Precision Measurements) This course offers instruction in the use of rules and formulas, ratio and proportion, volume, pulley speeds, velocity or surface speed, application of algebraic calculations, geometric figures and trigonometric functions, and physics principles as associated with engine operation and engine life expectancy.

Diesel Metallurgy

This course covers the principles of metallurgy as they relate to diesel engine block metals, sleeves, crankshaft materials and alloys, piston rings, connecting rods, piston alloys, and main and connecting rod bearings. Manufacturing processes, terminology, structure and properties of metal, effects of alloying elements, heat treatment of metals, destructive and nondestructive testing, and failure analysis of diesel engine parts and accessories are thoroughly covered.

Diesel Engine Overhaul Lab/Theory

(Prerequisite: All Trimester II courses) This combined laboratory and theory course provides instruction in the disassembling of the diesel engine, engine performance characteristics, engine operational or performance failure, major wear failure causes, salvage operations, wear failure to tolerances and specifications, reclaiming engine performance procedures, reassembly of the diesel engine, and testing and troubleshooting.

Welding

This laboratory practice class is designed to give instruction in safety practices, general tools and equipment, sources of heat, operational procedures, metals and their properties, and applications of oxyacetylene and arc welding to diesel repairs.

Basic Machine Tool Practice

(Prerequisite: Trade Math and Precision Measurements and Blueprint Reading) A combination laboratory and theory course designed for instruction in shop safety, basic benchwork, precision measuring instruments, machine construction and basic operations on the drill press, lathe and band saw. The fundamental machining and benchwork operations on bushings, bearings, gear shafts, drilling and reaming holes in diesel engine blocks, transmission final drive housings and ancillary accessories are thoroughly covered.

Diesel Transmissions, Final Drives, Clutches and Brakes Lab/Theory

(Prerequisite: All Trimester III courses or equivalent) A laboratory practice class designed to give instruction in service, repair and troubleshooting of transmissions, torque convertors, final drives, crawler tractor undercarriages, clutches and brakes. Hydraulic principles and service specifications are thoroughly covered. Dealer predelivery service; preventive, field and operational maintenance; dealer service department periodic service; equipment operational procedures; oil analysis and use of lubricants; and an understanding of the equipment life expectancy to the preventive maintenance program are covered.

Business Relationships

This course includes business terminology, law, organization and operations; problems of distributing goods and services; physical facilities; finance; keeping records; invoice and billing procedures, managing merchandise; and customer and personal relations as they relate to the diesel industry.

Diesel Electrical Systems and Hydraulics Accessories Lab/Theory

(Prerequisite: Diesel Engine Overhaul Lab/Theory, Trade Math and Physics, and Blueprint Reading or equivalent) This course offers instruction in basic and advanced diesel electricity, electrical circuits and components; carburetion on gasoline, liquified petroleum and natural gas engines; magneto design, construction and maintenance; and heavy-duty direct current usage in generators, regulators, cranking motors and their controls. Hydraulic pump operating principles, control devices, cylinders, tubing heat exchangers and hydraulic motors, fits, tolerances and service specifications are thoroughly covered. Test and service procedures are stressed throughout the course. The course also includes a study of technical data, specification materials, and service reports needed by the diesel industry with emphasis on the preparation, collection of data, organization, style and format.

Industrial Electricity

Basic principles of electricity, electronic components and symbols, schematic reading, transistor and automatic controls are covered. The course includes laboratory experiments in practical applications of electricity and electronics in the diesel mechanics field.

ELECTRICAL TRADES

(2 Trimesters)

The Electrical Trades Program is designed to provide students with entry-level skills for employment in the construction industry and related electrical trades.

During the first trimester, students are provided instruction in the fundamentals of installing residential electrical wiring, use of tools and equipment and electrical codes. In the second trimester, emphasis is placed on installation of electric service for appliances and special equipment, calculating service entrances, application codes, estimating electrical materials, and job planning and coordinating.

The two trimester program consists of 900 hours of instruction, of which 450 hours are laboratory and 450 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Electrical Trades students must pay a $90 personal equipment fee, $65 prior to entering the first trimester and an additional $25 prior to the second trimester.

ELECTRICAL TRADES PROGRAM

Trimester I	*Hours/Week*
Electrical Trades Lab I	15
Electrical Trades Theory I	5
Electrical Math I	5
Blueprint Reading I	5
Trimester II	
Electrical Trades Lab II	15
Electrical Trades Theory II	5
Electrical Math II	5
Blueprint Reading II	5

COURSE DESCRIPTIONS

Electrical Trades Lab and Theory I

This combined laboratory and related theory course provides instruction in safety; use of tools and equipment; electrical codes and utility regulations; basic electrical principles and measurements; wiring materials and devices; splices and connections; wiring systems and circuits; installing outlets, switch boxes, nonmetallic sheathed cable, overcurrent devices, low voltage equipment, branch circuits and service entrances.

Electrical Math I

This course covers basic arithmetic and simple electrical formulas; various trade application problems involving calculations of materials; Ohm's law; series, parallel and combination circuits; mechanical work and power; resistance of wire, size of wire and circuit loads.

Blueprint Reading I

This course offers basic instruction in sketching, reading working drawings and blueprints and includes specifications for electrical products, electrical codes, and circuit and lighting schedules.

Electrical Trades Lab and Theory II

(Prerequisite: All Trimester I courses) This course covers installation of range and clothes dryer circuits; electric service for water heaters, space heaters, motors and furnace controls; electric heating; service and metering equipment; remote control and outside wiring; signal and communication systems; methods of wiring flexible armored cable and electrical metallic tubing; modernizing electrical systems; electric lighting; electrical wiring design; and estimating electrical wiring and supplies for the job.

Electrical Math II

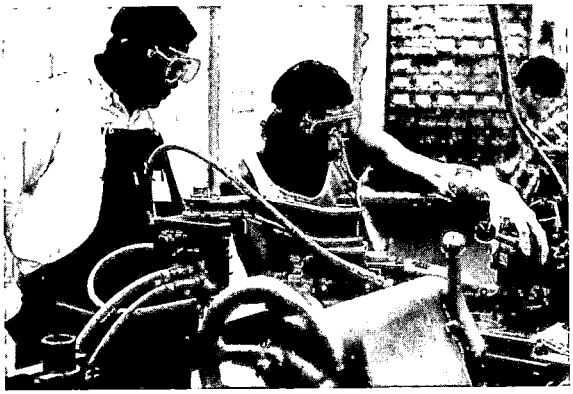
(Prerequisite: Electrical Math I) This course provides instruction in electrical rules and formulas; ratio and proportion; volume; basic principles of square root; trade application of geometric principles and right triangles; basic algebraic principles involving electrical efficiency; resistance of wire and wire sizing; calculating service entrances; and estimating materials for the electrical trades.

Blueprint Reading II

(Prerequisite: Blueprint Reading I) This course includes a detailed study of electrical drawings; knowledge of terms; methods of installation; local, state and national electrical codes; interpreting residential blueprints; and planning and coordinating the job.

MACHINE TRADES

(3 Trimesters)



The Machine Trades Program is designed to qualify students for entry into the machine trades field as machine tool operators.

In the first trimester, students are instructed in the fundamental operations of all machines, and it is possible to specialize in drilling machine set-up and operations. During the second and third trimesters, each student is encouraged to specialize on at least one type of machine in addition to continuing to develop skills on various types of machines. The specialization may include lathes, milling and grinding machines.

The three-trimester program offers up to 1350 hours of instruction, of which 675 hours are laboratory and optional supervised work experiences based on industrial trends and 675 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

When the cooperating employer is paying the student for the optional supervised work experience offered during the third trimester, students attending under Veterans Administration or other support agency benefits will receive only partial benefits.

Machine Trades students must pay a $115 personal equipment fee, $65 prior to entering the first trimester and $25 before each additional trimester, and must provide their own industrial safety glasses or goggles.

MACHINE TRADES PROGRAM

Trimester I	*Hours/Week*
Machine Trades Lab I	15
Machine Trades Theory I	5
Machine Trades Math I	5
Machine Trades Blueprint Reading I	5
Trimester II	
Machine Trades Lab II	15
Machine Trades Theory II	5
Machine Trades Math II	5
Machine Trades Blueprint Reading II	5
Trimester III	
Machine Trades Lab III	15
Machine Trades Theory III	5
Machine Trades Math III	5
Machine Trades Blueprint Reading III	5

COURSE DESCRIPTIONS

Machine Trades Lab I

This laboratory practice course gives the beginning student instruction in the areas of shop safety, basic benchwork, precision measuring instruments, machine construction, and basic operations on the drill press, pedestal grinder, drill point grinder, milling machine, lathe, band saw, basic use of the Machinery's Handbook and numerically-controlled (N/C) milling machine single tool operation.

Machine Trades Theory I

This course supports the work accomplished in Machine Trades Lab I. It covers the fundamental principles of various machines, such as the lathe, drill press, band saw and bench grinders, along with benchwork fundamentals.

Machine Trades Math I

Instruction covers powers and roots, percentages, surface measurements and direct measurements, threads and tapers as applied to the machine trades field.

Machine Trades Blueprint Reading I

Basic instruction in reading and interpreting shop drawings is offered. Emphasis is on terminology, dimensions, and visualizing and sketching of orthographic and isometric shop drawings.

Machine Trades Lab II

(Prerequisites: All Trimester I courses) Materials covered are similar to those covered in Machine Trades Lab I except that students will be exposed to more complex operations and set-up of various machine tools. Instructional emphasis will be placed on the engine lathe, with basic introductions to tracer lathes, basic milling machine operations, tool and cutter grinding, N/C operation, Machinery's Handbook applications, metric dimensioned drawings and utilization of true position dimensioning.

Machine Trades Theory II

(Prerequisites: All Trimester I courses) This class involves daily discussions of problems arising from lab sessions. Emphasis is on the technical aspects of tooling as it applies to the various machine tools assigned in the lab, with an introduction to the N/C milling machine.

Machine Trades Math II

(Prerequisite: Machine Trades Math I) Instruction is provided in the use of rules and formulas, ratio and proportion, velocity or surface speed, geometric principles, square root, right triangles, basic metric applications and indexing as applied to the machine trades field.

Machine Trades Blueprint Reading II

(Prerequisite: Machine Trades Blueprint Reading I) This course offers instruction in interpreting complete shop drawings, including size definition, true positioning symbols and coding practices as applied to the machine trades field.

Machine Trades Lab III

(Prerequisites: All Trimester II courses) Materials covered in this course will be similar to those covered in Machine Trades Lab I and II but in more depth. Major emphasis will be placed on milling machine operations of hole production, indexing and rotary table work with N/C setup and basic tape operations. Less time will be spent on lathe work. Students are given practical experience in utilizing precision measuring equipment as they apply to the inspection of manufactured parts, off-set four-jaw chuck work, cutting of acme threads, boring, and internal single point threads. True position dimensioning, the metric system, assembly drawings and the use of the Machinery's Handbook as applied to the trade will also be covered.

Supervised work experience may be substituted for this lab. Student trainees are paid by the cooperating industry. All students taking part will follow a training plan developed by the cooperating employer and the Machine Trades staff.

Machine Trades Theory III

(Prerequisites: All Trimester II courses) Problems arising from the lab sessions are reviewed daily. Instruction is given on the various measuring tools used in inspection, milling machine application with an introduction to word address N/C milling machines, lathe work and an introduction to basic elements of heat treatment.

Machine Trades Math III

(Prerequisite: Machine Trades Math II) This course provides instruction directly related to the machine trades lab and the use of mathematical operations from the Machinery's Handbook, Morse Practical Guide and industrial blueprints.

Machine Trades Blueprint Reading III

(Prerequisite: Machine Trades Blueprint Reading II) Studies include the interpretation, sketching and job planning as applied to the various industrial blueprints found in the machine trades.

MASONRY TRADES

(2 Trimesters)

The Masonry Trades Program helps the student to gain the skill necessary for successful entry into the masonry construction field.

In the first trimester, students are taught the fundamentals of masonry and masonry machines. During the second trimester, emphasis is placed on advanced masonry skills, such as chimneys, fireplaces, arches, floors and estimating.

The two-trimester program consists of 900 hours of instruction, of which 450 hours are laboratory experiences and 450 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Masonry Trades students must pay a personal equipment fee of $90, $65 before entering the first trimester and $25 before entering the second trimester.

MASONRY TRADES PROGRAM

Trimester I	*Hours/Week*
Masonry Trades Lab I	15
Masonry Trades Theory I	5
Trade Math I	5
Blueprint Reading I	5

Trimester II	
Masonry Trades Lab II	15
Masonry Trades Theory II	5
Trade Math II	5
Blueprint Reading II	5

COURSE DESCRIPTIONS

Masonry Trades Lab and Theory I
This class provides instruction in masonry trades safety, tools and equipment and scaffold building. Various masonry materials, simple structures and basic builders level and transit set-ups are covered.

Trade Math I
This course covers basic arithmetic, square cubic measure, measures of weight and capacity, mensuration, and estimating masonry materials.

Blueprint Reading I
Basic instruction is offered in sketching, and reading working drawings and blueprints. Specifications for masonry products are included.

Masonry Trades Lab and Theory II
(Prerequisite: All Trimester I courses) This course includes chimneys and multiple fireplaces, arches, decorative stone, concrete block walls and building construction, basic concrete plastering and cement work, various types of patios, estimating masonry materials for the job, advanced builders' level and transit set-ups.

Trade Math II
(Prerequisite: Trade Math I) This course provides instruction in the use of rules and formulas, ratio and proportion, volume, geometric construction, advanced estimating, and keeping cost records for the masonry trades.

Blueprint Reading II
(Prerequisite: All Trimester I courses) This course includes a detailed study of developments and variations in design, construction practices and materials; specifications; blueprint variation; masonry materials in landscape architecture; and effects of material variations on blueprint reading.

PLUMBING (RESIDENTIAL)

(2 Trimesters)

The Plumbing Program is designed to help the student gain the technical knowledge and occupational skills necessary to enter the residential plumbing industry.

During the first trimester, students are given instruction in the fundamentals of layout, assembly, installation; alteration and repair of piping systems; manipulative skills; and tools of the trade. In the second trimester, emphasis is placed on layout rigging, planning and coordinating the job, application of codes and installation of water, soil and vent lines.

The two trimester program consists of 900 hours of instruction, of which 450 hours are laboratory experiences and 450 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Plumbing students must pay a $90 personal equipment fee, $65 prior to entering the first trimester and an additional $25 prior to the second trimester.

PLUMBING PROGRAM

Trimester I	*Hours/Week*
Plumbing Lab I	15
Plumbing Theory I	5
Trade Math I	5
Blueprint Reading I	5

Trimester II	
Plumbing Lab II	15
Plumbing Theory II	5
Trade Math II	5
Blueprint Reading II	5

COURSE DESCRIPTIONS

Plumbing Lab/Theory I
This class provides instruction in the safe and proper use of tools and equipment; elements of plumbing; identification of plumbing fittings and pipe; basic hydraulics and pneumatics; and layout, assembly, installation, alteration and repair of pipe systems.

Trade Math I
This course covers basic arithmetic, reading the rule, whole numbers, common and decimal fractions, cubic and weight measures, area calculations, surface and direct measurements, hydraulics and pipe length calculations.

Blueprint Reading I
This course offers basic instruction in sketching, working drawings and blueprints.

Plumbing Lab/Theory II
(Prerequisite: All Trimester I courses) This course emphasizes design; layout and installation of water, soil and vent lines; related fixtures and fittings; inspecting and testing systems; soldering and brazing; rigging; and maintenance and repair of plumbing systems.

Trade Math II
(Prerequisite: Trade Math I) Instruction is provided in the use of rules and formulas, ratio and proportion, volumes, pressure and capacities, geometric construction, heat loss problems, basic surveying computations and cost estimating.

Blueprint Reading II
(Prerequisite: Blueprint Reading I) Course content includes a detailed study of piping drawings, isometric pipe layouts, interpreting residential blueprints, application of plumbing codes, knowledge of terms, and planning and coordinating the job.

SHEET METAL

(2 Trimesters)

The Sheet Metal Program is designed to prepare students for entry into the job market by equipping them with the technical knowledge and skills needed for satisfactory performance in layout, fabrication, installation and maintenance of sheet metal work.

During the first trimester, students are instructed in sheet metal processes performed with hand, bench, cutting and layout tools. In the second trimester, emphasis is placed on sheet metal machines and accessories, pattern development and sheet metal applications.

The two-trimester program consists of 900 hours of instruction, of which 450 hours are laboratory and 450 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Sheet Metal students must pay a once-only personal equipment fee of $65.

SHEET METAL PROGRAM

Trimester I	*Hours/Week*
Sheet Metal Lab I	15
Sheet Metal Theory I	5
Trade Math I	5
Blueprint Reading I	5
Trimester II	
Sheet Metal Lab II	15
Sheet Metal Theory II	5
Trade Math II	5
Blueprint Reading II	5

COURSE DESCRIPTIONS

Sheet Metal Lab/Theory I

This class provides instruction in sheet metal processes performed with hand, bench, cutting and layout tools; safety; care of tools and equipment; materials and supplies; straight, parallel and radial line pattern development; soldering techniques; and the fabrication, erection and maintenance of residential ventilating, air-conditioning and heating sheet metal systems.

Trade Math I

This course covers basic arithmetic. Area calculations, surface and direct measurements, angular measure, geometric constructions, geometric figures and solids, and basic right triangle calculations are thoroughly covered.

Blueprint Reading I

This course offers basic instruction in working drawings and blueprints. Emphasis is placed on elevations and floor plans, symbols and notations, scaling and dimensioning practices, structural information, detail drawings, plot plans, specifications for sheet metal products, city codes, straight, parallel and radial line pattern development.

Sheet Metal Lab/Theory II

(Prerequisites: All Trimester I courses) This course emphasizes sheet metal machines and accessories, radial line and transition pattern development.

Trade Math II

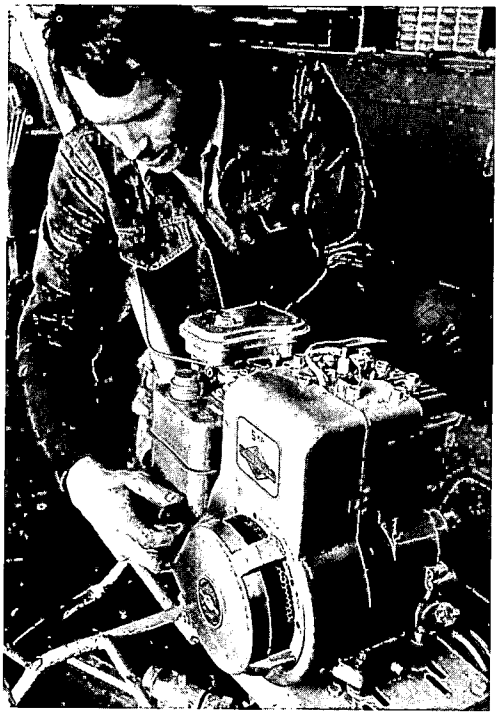
(Prerequisite: Trade Math I) Instruction is provided in the use of rules and layout formulas, ratio and proportion, volumes, geometric contruction, calculations related to allowances, pipes, Y-branches, transitions, elbows, offsets and conical caps, and estimating as applied to sheet metal jobs.

Blueprint Reading II

(Prerequisite: All Trimester I courses) This course includes a detailed study of measurement, drawing review, symbols, sheet metal shop procedures, general sheet metal work, warm-air heating plans, ventilation plans, air-conditioning plans, application of sheet metal codes, knowledge of terms, and planning and coordinating the job.

SMALL ENGINE MECHANICS

(2 Trimesters)



The Small Engine Mechanics Program provides instruction to enable the student to enter the expanding small engine repair field.

In the first trimester, students are instructed in the use of hand tools, two- and four-cycle engines, ignition and starting systems and engine tune-up procedures. During the second trimester, small engine troubleshooting; two- and four-cycle engine overhaul; use of specifications, manuals and microfiche; and reduction, lower units and clutches on construction support equipment and recreational vehicles are included.

The two-trimester program consists of 900 hours of instruction, of which 450 hours are laboratory and 450 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

Small Engine Mechanics students must pay a personal equipment fee of $90, $65 before entering the first trimester and an additional $25 before the second trimester.

SMALL ENGINE MECHANICS PROGRAM

Trimester I	*Hours/Week*
Small Engine Mechanics Lab I	20
Small Engine Mechanics Theory I	5
Trade Math and Precision Measurements	5
Trimester II	
Small Engine Mechanics Lab II	20
Small Engine Mechanics Theory II	5
Welding	5

COURSE DESCRIPTIONS

Small Engine Mechanics Lab and Theory I

This course offers instruction in occupational safety; hand tools and shop equipment; fastening devices, threads and lubrication; basic small engine troubleshooting, disassembly, inspection, cleaning, reconditioning, reassembly and checkout; introduction of ignition and starter systems, fuel systems and tune-up techniques; proper use of manufacturer's specifications, manuals, catalogs and price lists. The course will also teach the student to interpret small engine blueprints and schematics.

Trade Math and Precision Measurements

This course will review basic mathematics as required by the class. Emphasis will be placed on the use of precision measuring tools found in the trade.

Small Engine Mechanics Lab and Theory II

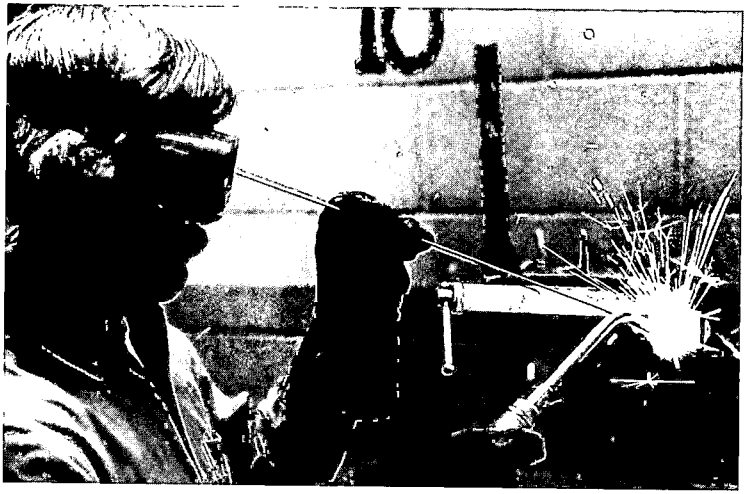
(Prerequisites: Small Engine Mechanics Lab and Theory I and Trade Math and Precision Measurements) This class provides detailed instruction in small engine troubleshooting; major engine overhaul; governors; fuel and air systems; engine cooling; advanced tune-up techniques; reduction and lower units; gear, belt and pulley applications; and an introduction of various small engine recreational vehicles. The course will also provide instruction in repair orders, invoices, warranty descriptions and customer relations.

Welding

This laboratory class provides instruction in safety practices, general tools and equipment, sources of heat, operational procedures, metals and their properties, and applications of oxyacetylene and arc welding to the small engine repair field.

WELDING

(3 Trimesters)



The Welding Trades Program is designed to qualify students for entry level employment in the metals processing industry. Emphasis is placed on oxyacetylene, shielded metal arc, gas tungsten arc, gas metal arc, automatic and semiautomatic cutting, pipe welding, welding fabrication and production work.

During the first trimester, students are given instruction in oxyacetylene and shielded metal arc welding. In the second trimester, shielded metal arc is continued and instruction is given in gas tungsten arc and gas metal arc welding. During the third trimester, emphasis is placed on proficiency ratings, welding fabrication, pipe welding and materials testing.

The three-trimester program totals 1350 hours of instruction, of which 675 hours are laboratory practice, and 675 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the proficiencies attained in the program. Special recognition will be given to those students completing all of the courses in the program.

All laboratory courses require standard operator qualification examinations and supporting courses require a final examination in each area supporting laboratory work.

Welding Trades students must pay a personal equipment fee of $90, $65 before entering the first trimester and an additional $25 before entering the second trimester.

WELDING PROGRAM

Trimester I	*Hours/Week*
Welding Lab I	15
Welding Metallurgy I	5
Trade Math I	5
Industrial Electricity	5

Trimester II	
Welding Lab II	15
Welding Metallurgy II	5
Trade Math II	5
Blueprint Reading I	5

Trimester III	
Welding Lab III	15
Trade Math III	5
Blueprint Reading II	5
Strength of Welding Materials	5

COURSE DESCRIPTIONS

Welding Lab I

This laboratory practice class provides instruction in welding safety, general tools and equipment, common gases and their properties, welding materials, welding joints, oxyacetylene welding and brazing, metal cutting with gas and shielded metal-arc welding procedures and processes.

Welding Metallurgy I

Instruction is offered in manufacturing processes; welding terminology, methods and processes; structure and properties of metal; temperature changes in welding; effects of alloying elements; variations of fluxes; slags and gases for shielding; and various symbols, weights, and conversion factors.

Trade Math I

This course reviews basic arithmetic. Surface and direct measurements, graphs and charts, and payroll calculations are thoroughly covered and applied.

Industrial Electricity

This practical course provides instruction in the basic principles of electricity; terminology; electrical components and symbols; schematic reading; conductors; insulators; resistors; Ohm's law and Watt's law; series, parallel and series-parallel circuits; alternating and direct current; transformers; and common practices in electrical circuits related to the welding area.

Welding Lab II

(Prerequisite: All Trimester I courses) This laboratory practice course provides advanced instruction in shielded arc welding and beginning instruction in inert gases and gas-arc welding through the use of various gas-arc welding power sources, torches, electrodes, and wire-feed systems. Occupational safety standards and practice are emphasized throughout.

Welding Metallurgy II

(Prerequisite: All Trimester I courses) Instruction is offered in filler metal for joining iron and steel, shrinkage and distortion in weldments, preheating and postheating, difficulties and defects in welds, welding carbon steel, welding alloy steels, welding tests, conversion factors and symbols, weights and properties.

Trade Math II

(Prerequisite: Trade Math I) The use of rules, formulas, ratio, proportion and volume as applied to welding make up the course content.

Blueprint Reading I

(Prerequisite: Welding Lab I, Welding Metallurgy I and Trade Math I) Basic drawing interpretation, welding symbols, terminology, detailed fittings and angle layout as applied to the welding area are covered in this course.

Welding Lab III

(Prerequisite: All Trimester II courses) Emphasis is placed on working speed and proficiency in the welding lab through continued practice, shop fabrication, production work and selected field work assignments. Instruction is also offered in pipe welding and layout, materials testing, shop management and industrial safety.

Trade Math III

(Prerequisite: Trade Math II) This course provides instruction in the development of geometric figures, mathematics of mechanics and basic shop trigonometry. Practical problems of estimating and layout from working drawings are assigned in conjunction with work in Welding Lab III and Strength of Welding Materials.

Blueprint Reading II

(Prerequisite: Trade Math II and Blueprint Reading I) Students study welding fabrication. Instruction includes specifications for various types of pipe and fabrication welding, materials estimating, pipe layout and development, pipe and structural print reading, transferring of measurements from working drawings and blueprints, design considerations and descriptive geometry layout as related to welding fabrication.

Strength of Welding Materials

(Prerequisite: Welding Metallurgy II and Trade Math II) This combination laboratory and theory course provides instruction in destructive and non-destructive testing, advanced fabrication theory and welding joint design, procedures and welder qualifications, welding equipment trouble shooting and advanced metallurgy theory.

525 Buena Vista SE Albuquerque, N.M. 87106