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**DAY DIVISION**  
**1976-77**  
**ALBUQUERQUE**  
**TECHNICAL-VOCATIONAL**  
**INSTITUTE**

**525 Buena Vista SE**  
**Albuquerque, NM 87106**  
**Telephone: 843-7250**

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**Volume XII**

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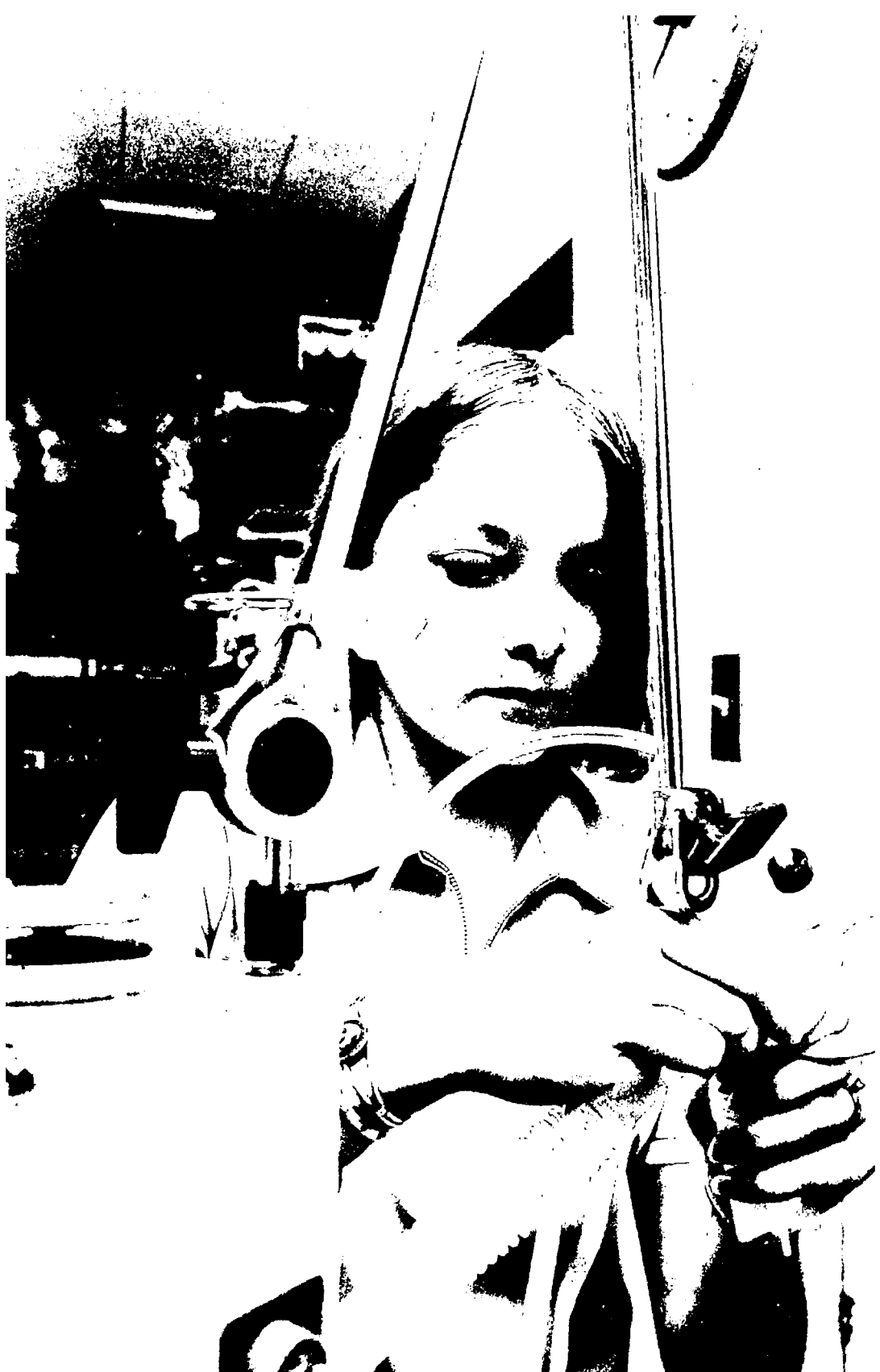
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A copy of this bulletin is provided each student upon enrollment as well as a copy of the **Student Handbook**, which contains additional information about policies and regulations affecting students. Students should familiarize themselves with the contents of both publications.

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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 adults with entry-level vocational skills and the work attitudes necessary to succeed in an occupation.

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. More than 7,000 full- and part-time students are now served by T-VI each trimester.

**ACCREDITATION:** All full-time instructional programs of two or more trimesters in length have been approved for Veterans Administration benefits by the State Department of Education.

The Institute is a candidate for accreditation with the North Central Association of Colleges and Schools. Candidate for accreditation is a status of affiliation with a regional accrediting commission which indicates that an institution is progressing toward accreditation. Attainment of this affiliate status does not automatically assure accreditation. Candidate for accreditation status indicates that an institution has provided evidence of sound planning, has available the resources to implement its plans and appears to have the potential for attaining its goals within a reasonable time.

## 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 1976-77, the Fall Trimester will begin on Aug. 30, the Winter Trimester on Jan. 4, and the Summer Trimester on May 2.

In four of the vocational majors—Auto Collision Repair, Culinary Arts, Masonry Trades and Sheet Metal Trades—beginning groups are admitted at the mid-trimester point: Oct. 25, Feb. 28 and June 24. Persons beginning on these dates would complete their programs on June 24 and Oct. 26 of 1977, and Feb. 24 of 1978, 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 1976-77 **Evening Division Bulletin** for complete details).



### FALL TRIMESTER 1976

July 19-August 6	Evening Division Preregistration
July 30	Day Division Application Deadline
August 4-5-6	Day Division Registration
August 25-26 (Noon to 9 p.m.)	Evening Division Registration
August 30	Day Division Classes Begin
September 6	Labor Day Holiday
September 7	Evening Division Classes Begin
October 22	Mid-Trimester Grades Due
October 28-29	Teacher Inservice (No Classes)
November 25-26	Thanksgiving Holiday
December 3	Withdrawal Deadline
December 17	Last Day of Classes
December 20-January 2	Trimester Break

### WINTER TRIMESTER, 1977

November 22-December 10	Evening Division Preregistration (Excluding Nov. 25-26)
December 3	Day Division Application Deadline
December 8-9-10	Day Division Registration
December 29-30 (Noon to 9 p.m.)	Evening Division Registration
January 3	Day Division Classes Begin
January 10	Evening Division Classes Begin
February 18-21	School Holiday
February 25	Mid-Trimester Grades Due
April 5	Withdrawal Deadline
April 8	Easter Holiday
April 20	Last Day of Classes
April 21-29	Trimester Break

### SUMMER TRIMESTER, 1977

March 28-April 7	Evening Division Preregistration
April 1	Day Division Application Deadline
April 11-12-13	Day Division Registration
April 27-28 (Noon to 9 p.m.)	Evening Division Registration
May 2	Day Division Classes Begin
May 9	Evening Division Classes Begin
May 30	Memorial Day Holiday
June 24	Mid-Trimester Grades Due
June 30-July 5	Independence Day Holiday
August 5	Withdrawal Deadline
August 19	Last Day of Classes
August 22-September 5	Trimester Break

# TRIMESTER CALENDAR 1976-77

## AUG./SEPT., 1976

M	T	W	T	F
30	31	1	2	3
<b>(6)</b>	7	8	9	10
13	14	15	16	17
20	21	22	23	24
27	28	29	30	

Labor Day, Sept. 6

## OCTOBER, 1976

M	T	W	T	F
				1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	<b>(28 29)</b>	

Mid-Term, Oct. 22  
In-service,  
Oct. 28-29

## NOVEMBER, 1976

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

Thanksgiving,  
Nov. 25-26

## DECEMBER, 1976

M	T	W	T	F
		1	2	3
6	7	8	9	10
13	14	15	16	17
<b>(20 21 22 23 24)</b>				
<b>27 28 29 30 31)</b>				

Trimester Break,  
Dec. 20-31

## JANUARY, 1977

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				

## FEBRUARY, 1977

M	T	W	T	F
	1	2	3	4
7	8	9	10	11
14	15	16	17	<b>(18)</b>
<b>21)</b>	22	23	24	25
28				

School Holiday,  
Feb. 18-21  
Mid-Term, Feb. 25

## MARCH, 1977

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	31	

## APRIL, 1977

M	T	W	T	F
				1
4	5	6	7	<b>(8)</b>
11	12	13	14	15
18	19	20	<b>(21 22)</b>	
<b>25 26 27 28 29)</b>				

Easter Holiday,  
Apr. 8  
Trimester Break,  
Apr. 21-29

## MAY, 1977

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
<b>(30)</b>	31			

Memorial Day,  
May 30

## JUNE, 1977

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	<b>(30)</b>	

Mid-Term, June 24  
Independence Day  
Holiday,  
June 30-July 5

## JULY, 1977

M	T	W	T	F
				<b>(1)</b>
4	<b>5)</b>	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	28	29

## AUG./SEPT., 1977

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

Trimester Break,  
Aug. 22-Sept. 5

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



## CLASS SCHEDULES

All class periods begin at 20 minutes after the hour and end at 15 minutes after the hour. Typical class schedules begin at 8:20 a.m. and end at 3:15 p.m. with one hour for lunch. However, some classes begin as early as 7:20 a.m.; and some classes do not end until 6:15 p.m.

Laboratory or shop-oriented courses are either two-hour or three-hour time blocks.

Each student will be given a copy of his or her individual class schedule at registration.

## INSTRUCTIONAL PROGRAMS

The **DAY DIVISION** program at the Institute provides full-time instruction leading to certificates of completion in 28 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 persons 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.

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 some of the construction trades and is operated in cooperation with various labor-management Joint Apprenticeship Committees. A **Vocational Enrichment Program**, providing post-secondary vocational classes for high school students at their schools after regular school hours, is also sponsored by T-VI's Evening Division.

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

## 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 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 a danger to the applicant or to fellow students. In the latter case, the admissions counselor will help the applicant find a career area in which 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. This restriction applies for 12 months after graduation.** 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.

## 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 high schools in the state. The T-VI Admissions Office will be closed Aug. 30-Sept. 13, Jan. 3-14 and May 2-13.

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

—For the Practical Nursing class which begins in Sept., 1977, applications will be accepted **beginning Mar. 1, 1977, and will be closed when 350 applications have been received.**

—For the Respiratory Therapy Technician class which begins in Sept., 1977, applications will be accepted **beginning May 2, 1977, 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 reservation to the earliest trimester for which an opening exists in your 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 \$360 per trimester, or \$16 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/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 if the Institute cancels an instructional program to which applicants have been admitted.

**PERSONAL EQUIPMENT FEE:** Many 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. In other programs additional equipment fees are charged at each level, as the students need to add to their personal equipment at the advanced levels.

Personal equipment fees in effect during 1976-77 are as follows:

	Level I	II	III	IV	V
PREPARATORY .....	none				
BUSINESS OCCUPATIONS .....	none				
TECHNOLOGIES					
Drafting Technology .....	\$25		\$25 (Civil/Map option only)		
HEALTH OCCUPATIONS					
Nursing Assistant .....	\$20				
Patient Service Clerk .....	\$20				
Practical Nursing .....	\$65				
Respiratory Therapy Technician .....	\$65				
TRADES AND INDUSTRIAL					
Air-Conditioning, Heating and Refrigeration .....	\$65	\$25	\$25		
Auto Collision Repair .....	\$65	\$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 .....	\$65	\$25			
Plumbing .....	\$65	\$25			
Sheet Metal .....	\$65				
Small Engine Mechanics .....	\$65	\$25			
Urban Horticulture .....	\$65				
Welding .....	\$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.

**CREDIT CARDS:** The Institute accepts BankAmericard and Master Charge credit cards for payment of tuition and fees.



## ATTENDANCE POLICIES

Anyone admitted to T-VI pledges to attend all sessions of every course as a condition of admission. **Attendance is taken every class hour, and absences become part of the student's permanent record.**

In the event of an absence, the student is responsible for contacting the instructor to arrange for makeup of work missed. Such makeup work will be recorded by the teacher in his or her grade book.

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

**ATTENDANCE PROBATION:** A student who continues to be absent after the warning will be placed on probation and is subject to suspension from the class or classes in which the absences are occurring if there are additional absences.

**SUSPENSION:** A student who continues to be absent while on probation will be suspended from the class or classes for the balance of the trimester and 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.

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 VA regulations, whenever a student's absences reach the equivalent of ten full school days during the calendar month.

## 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 a part of the admissions process. **A student who does not want the transcript sent to prospective employers or other schools may indicate this at any time on his or her transcript by visiting the Student Records Center.**

## STANDARDS OF PROGRESS

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

Some classes at T-VI use letter grades in the progress reports: "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 use proficiency ratings. In these classes, performance objectives are clearly defined, and the student receives progress reports detailing proficiency achieved in each of the specific skills identified as objectives for the class. The proficiency rating sheets are the progress reports for these classes, and those with sufficient achievement also result in an "S" final grade on the transcript.

A student who receives either an "I" or "U" final grade for a course may not enroll for any other course where the unsatisfactorily completed course is a prerequisite. An "I" grade can be converted to a credit grade by satisfactorily completing the missing assignments; a **"U" grade can be made up only by repeating the course.**

**ACADEMIC PROBATION:** A student who receives an "I" or "U" final report in any course is automatically placed on academic probation for the next trimester in which he or she enrolls **and may be terminated from the program at any time he or she is doing less than satisfactory work during the probationary trimester.** If, at the end of the probationary trimester, the student again receives an "I" or "U" progress report in any course, he or she will not be allowed to continue any 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 programs, the certificate of completion will 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 the knowledge or skill required for successful completion of that course. A waiver request form is available which requires the approval of the course instructor, program coordinator, department chairman and the Director of Student Services. The student will be required to take a final examination for the course or otherwise demonstrate competency. Credit by approved waiver may be applied toward meeting certificate of completion requirements and prerequisite requirements for advanced courses.

## **STUDENT SERVICES**

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

**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/her student record file at any time during the regular 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 and use of the free New Mexico State Employment Service is recommended. However, T-VI has a placement assistance office and any student or graduate may establish a placement file there at any time when 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 offers 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 for students who may obtain parking permits free of charge. However, because parking is limited, students are encouraged to form car pools or use city buses whenever possible. Full-time T-VI students are entitled to student discount rates on Albuquerque city buses 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.

## 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 (in either English or Spanish) at T-VI free of charge. 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 persons 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 appear best to match the applicant's aptitudes and abilities.

## 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 previously received a Bachelor's degree from any institution, may apply for a federal grant under the BEOG program.

The amount of the grant which a student may be given depends upon how much the U.S. Congress appropriates for BEOG in any particular year. During 1975-76, the maximum grant for a T-VI student was \$812 for in-state residents.

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-third of his or her grant during each trimester 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 in a vocational major of two or more trimesters in length. 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 graduation or withdrawal 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 in good standing. If the student leaves school, or is placed on either attendance or academic probation, 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. Applicants must have a high school diploma or GED equivalency in order to be eligible. 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 VA education and training benefits. 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 VA benefits for refresher training in a course or program for which he or she already has required skills, regardless of where those skills were acquired.**

Information about eligibility for these education benefits can be obtained from the nearest Veterans Administration office, or from the VA representative stationed on the T-VI campus (Room A-28). The Albuquerque VA office is at 500 Gold SW, phone 766-3361.

**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 1816 Carlisle Blvd. NE, phone 766-2531.

**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/Comprehensive Employment and Training Administration (OMP/OCETA) may receive training allowances while attending T-VI.

Students for OMP/OCETA programs are selected by the federal Employment Security Commission and its New Mexico State Employment Service. Information can be obtained from the **Metro Office** at 302 Sixth SW, phone 842-3292, or at any of the OMP/OCETA Service Centers: **Downtown**, 505 Marquette NW, phone 842-3330; **Heights**, 10801 Lomas NE, phone 842-3322; **North Valley**, 4918 Fourth NW, phone 842-3431; **South Broadway**, 1000 Broadway SE, phone 842-3461; **South Valley**, 3248 Isleta SW, phone 842-3421; and **Service Employment Redevelopment (SER)**, 1500 Walter SE, phone 247-0401.

## **INSTRUCTIONAL MATERIALS CENTER**

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

### **LIBRARY**

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 collections and audio-visual materials.

Additional services provided by the Library include individual reading guidance and assistance, two-week book loans, library orientation, a complete card catalog listing three types of cross-referencing, bibliographies of books in subject areas taught at T-VI, index to periodical articles, interlibrary loan and a copy machine.

### **ADULT LEARNING CENTER**

ALC services are provided free of charge for use by any adult in the community who wants to develop skills in basic education. This center also provides materials for persons entering a variety of vocational fields.

The center is open from 8 a.m. to 8:30 p.m. except on Friday when it closes at 5 p.m. Audio-visual materials are used extensively and specially-trained personnel are available at all times to help a person develop 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 (GED).

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**

This service, used primarily by staff members, provides delivery, set-up, instruction and maintenance of a variety of audio-visual equipment. Arrangements may be made through this department for production of video-tape television programs, slide presentations, audio tape recordings and for rental of films and other audio-visual materials.

## PREPARATORY PROGRAM

The Preparatory Program is for persons who need or would like individualized refresher or developmental work before entering one of the T-VI vocational programs.

The Preparatory Program also offers the person who is not certain about a career choice an opportunity to explore those career fields available at T-VI prior to entering a full-time vocational program. The General Educational Development (GED) Program provides classes to students who want to earn a high school diploma.

After completion of the Preparatory Program, students usually qualify for the vocational program of their choice. Should additional development in communications or mathematics be needed, the student may continue in the Preparatory Program for a second trimester. A student may enter this program anytime up until the last five weeks of the trimester or until classes have reached capacity—which ever occurs first.

Students under the sponsorship of a specific agency, such as the Veterans Administration, are required to take the full schedule of 25 hours per week for full benefits. Other students may take as many class hours per week as are recommended according to personal needs.

The Preparatory Program does not apply towards fulfilling requirements of a vocational program. However, students are evaluated, their attendance record in the program is compiled, and the results become a part of their permanent transcript at T-VI.

The Preparatory Program is not approved for Veterans Administration benefits for dependent children attending under Chapter 35 of the GI Bill.

## PREPARATORY PROGRAM

RECOMMENDED SCHEDULE	HOURS/WEEK
Mathematics .....	10
Exploratory Cluster .....	5
Communications .....	5
Enrichment Cluster .....	5
OR	
General Educational Development (GED) .....	25
ELECTIVES	
*Personal Financial Management .....	5
*Operating Your Own Business .....	5
Introduction to Typing .....	5
Human Relations .....	5
Reading Improvement .....	5
*These classes are open to the entire student body.	



## COURSE DESCRIPTIONS

### Communications

This is a general refresher course in written and oral communication and includes reading skills, written expression, speaking skills, vocabulary, spelling and grammar as related to the student's intended vocational program.

### Exploratory Cluster

All career fields available at the Institute are reviewed and exploratory experiences are provided for each student in the field of his or her choice. The intent is to help students make more realistic decisions when choosing a career field.

### Mathematics

The courses listed below are designed for persons whose math skills are below the minimum standards needed to enter training in any of the vocational or technical fields. Upon entering the Preparatory Program, students are placed in the math course that best meets their interests and needs. Should those interests and needs change, it is possible to transfer to a different Preparatory math course. During the trimester, students' math skills are re-evaluated. If they meet requirements, they are scheduled to enter their major.

#### FOUNDATIONS

This course is designed to bring students to a point in basic arithmetic where they can function satisfactorily in a Preparatory math class, specifically geared to the intended major, at which time the student may be transferred to that class.

#### BUSINESS OCCUPATIONS

Math related to the business occupations is provided to students in this class.

#### HEALTH OR FOOD OCCUPATIONS

Among topics included in this math course are a review of the fundamentals of arithmetic, basic geometry, ratio and proportion, the metric system, weights, measurements and mixtures.

#### TECHNOLOGIES

This course is designed to increase math skills, especially in algebra, for students wanting to enter a technology program.

#### TRADES

This course aids students wanting to enter one of the trades programs in improving the level of their math skills.

#### GENERAL EDUCATIONAL DEVELOPMENT

Any student preparing to take the math portion of the GED test may enroll in this class to strengthen math skills.

### Enrichment Cluster

This is a series of units, each meeting five weeks for one hour daily, to improve the student's self-concept and social understanding and relate these areas to a work situation. The student may choose any three units from the enrichment cluster.

#### HOW TO STUDY

Taking notes and tests, outlining, study skills in reading, use of resource facilities, study time organization and self-evaluation are included.

#### COMMUNITY RESOURCES

Students are acquainted with various agencies in the city through speakers, audio-visual materials and field trips.

#### CONSUMER EDUCATION

This unit is designed to help the student to be a wise buyer and money manager in today's complicated economy.

**PERSONAL DEVELOPMENT**

Emphasis in this unit is placed on the development of self-awareness in relation to one's environment, ethics, attitudes and the importance of "getting along" in a work situation.

**FIRST AID AND PERSONAL SAFETY**

This unit provides a basic first aid course following which students may qualify for a three-year Red Cross certificate. This can be useful to those encountering special safety requirements in a future job.

**PRACTICAL SPANISH**

Designed for non-Spanish-speaking students who will be working in a bilingual society, this unit includes information about the Spanish culture and an appreciation of its customs and traditions.

**VOCABULARY AND SPELLING DEVELOPMENT**

This unit is designed for the student who feels the need to improve spelling abilities and to expand written and oral vocabulary.

**Introduction to Typing**

This course is designed for Preparatory Program students who want to learn to type. Students in Business Occupations who have been identified as having probable and/or unique difficulties in learning the skill of typewriting may also enroll. It is not approved for Veterans Administration benefits.

**Human Relations**

Recognizing that personal factors such as attitudes and temperament are important for obtaining, advancing and continuing in a job, this course explores human behavior to help the student develop a more positive attitude. Applications to work situations are stressed throughout.

**Operating Your Own Business**

Beginning and maintaining a small business are considered in this course.

**Personal Financial Management**

This course is designed to increase the student's knowledge and ability with respect to personal financial matters.

**Reading Improvement**

Students improve their reading skills in this course, with emphasis on word attack and reading comprehension skills.

**General Educational Development (GED)**

Students without a high school diploma may prepare for the GED test, also known as the high school equivalency test, by taking this course. Upon successful completion of the GED tests, the New Mexico State Department of Education will issue a New Mexico high school diploma. The GED program meets five hours per day, 25 hours per week.

This course is not approved for Veterans Administration benefits.

**There are no registration, equipment or testing fees required of students enrolled in the GED Preparatory Program. The GED exams are administered free to any interested persons in the community.**



## 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 enroll for 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 opportunities range from payroll, accounts receivable and/or accounts payable clerks to junior accountants, full-charge bookkeepers, cost analysts and office managers.

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

Applicants for Accounting must be proficient in 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 I for Accounting .....	5
COBOL II for Accounting .....	5
Business Law .....	5
Typing II .....	5
Office Procedures .....	5
Posting Machines* .....	5
Advanced Accounting .....	5
Auditing .....	5
Accounting Systems Design .....	5
Governmental Accounting .....	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 mechanical 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 PRINCIPLES 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 LAB II) 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 LAB II) This course examines the fundamental characteristics of federal income taxes as applied to individuals, partnerships and corporations.

**Business Communications II**

(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 PRINCIPLES LAB 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: ACCOUNTING PRINCIPLES LAB II) This course is basically concerned with how accounting data can be interpreted and used by management in planning and controlling business activities.

**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**

(PREREQUISITE: INTERMEDIATE ACCOUNTING LAB I) Students work a minimum of 150 hours at accounting-related supervised work stations. The student trainee is paid by the cooperating firm and is supervised jointly by T-VI and the cooperating employer.

**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 I 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.

**COBOL II for Accounting**

(PREREQUISITE: COBOL I FOR ACCOUNTING) The student will continue writing COBOL programs directly related to the processing of accounting data using the IBM 360-30 computer system.

**Business Law**

(PREREQUISITE: ACCOUNTING PRINCIPLES LAB I) 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**

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

**Posting Machines**

(PREREQUISITE: ACCOUNTING PRINCIPLES LAB I) This is an introduction to machine posting. The work is restricted to accounts receivable subsidiary ledgers and payroll. The student works on a number of different makes and models of posting machines.

**Advanced Accounting (Offered during Fall Trimester only)**

(PREREQUISITE: ACCOUNTING PRINCIPLES LAB II) The student learns partnership formation, dissolution and liquidation, consignment and installment sales, home office and branch office operations and business combinations.

**Auditing (Offered during Winter Trimester only)**

(PREREQUISITE: ACCOUNTING PRINCIPLES LAB II) Auditing procedure, reports and working papers used in financial procedure, reports and working papers used in financial investigations are studied and analyzed. Audit practices with verification of assets, liabilities, expense and revenue accounts are stressed. Internal control techniques are studied with the idea of developing the student's ability to conserve company assets.

**Accounting Systems Design (Offered during Summer Trimester only)**

(PREREQUISITE: ACCOUNTING PRINCIPLES LAB II) This course deals with the design of a chart of accounts, an accounting manual, flow charts, the systems of internal control and reports to management.

**Governmental Accounting (Offered during Fall Trimester only)**

(PREREQUISITE: ACCOUNTING PRINCIPLES LAB II) This course provides the student with additional accounting training for government and other non-profit entities.

## **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 community.

This one-trimester major provides up to 225 hours of classroom instruction and 150 hours at the 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
Supervised Work Experience .....	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.

#### **Supervised Work Experience**

Students work a minimum of 150 hours at retailing-related, teacher-approved work stations. The student trainee is paid by the cooperating employer and is supervised jointly by T-VI and the cooperating employer. There are times when it is impossible to place all students in work stations because of local employment requirements.



## FASHION MERCHANDISING

### (2 Trimesters)

This program is recommended for men and women interested in selling, buying, 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, although many have begun as assistant department managers and store-management trainees.

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, 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.

*Occupations*  
**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.

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 be interested in office-type work, enjoy people and enjoy working with detail.

## OFFICE EDUCATION PROGRAM

TRIMESTER I	HOURS/WEEK
Typing Lab I .....	10
Business English .....	5
Business Mathematics .....	5
Fundamentals of Business .....	5
TRIMESTER II	
Typing Lab II .....	10
Office Machines .....	5
Office Procedures .....	5
Business Writing .....	5
TRIMESTER III	
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

Students master the fundamentals of grammar, punctuation and sentence structure. Emphasis is placed on business vocabulary building, spelling and oral communication.

### Business Mathematics

This is a thorough review of basic mathematical fundamentals and their application in solving business problems.

### Fundamentals of Business

The study of business and economic concepts as they relate to business organization, banking, postal services, insurance and credit is made.

### 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 MATHEMATICS) Skills on the most widely used office machines, including the ten-key adding machine, electronic and mechanical calcula-

tors, key-punch, spirit duplicator and mimeograph machine are developed. 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 Writing**

(PREREQUISITE: BUSINESS ENGLISH) Principles of writing and the composing of business letters, memoranda and other general correspondence that may be handled by the office worker are taught.

### **Typing Lab III (Advanced)**

(PREREQUISITE: TYPING LAB II) This course provides continued development of typing skills with emphasis on medical, legal and technical typing. Transcription equipment is used 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 MATHEMATICS) 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**

(GRADUATING OFFICE EDUCATION STUDENTS ONLY) This course includes self-improvement, human relations, telephone techniques, business etiquette and professionalism. Job preparation, including opportunities, resumés, interviews, follow-up and adjusting to the office, is covered.

### **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**

(PREREQUISITE: SHORTHAND I-ABC OR GREGG) The ability to write shorthand at a rate of 70 words per minute is sought with emphasis placed on speed, accuracy, grammar and punctuation as well as transcription speed.

### **Transcription**

(PREREQUISITE: SHORTHAND II) Goal for this course is a dictation speed of 80 words per minute on new material and a transcription into mailable copy at a minimum rate of 20 words per minute.

### **Cashiering**

Use of various cash registers, including the ability to solve procedural problems that occur at a register and checkout station, is 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 reemployment. 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	} 20
Shorthand Review	
Office Machines	
Communications Review	
Business Mathematics Review	

### COURSE DESCRIPTIONS

#### Typing Review

Practice is given on the latest model electric typewriters. Letter styles, memoranda, tabulations and manuscripts are reviewed as well as typewriter operation and care. Speed and accuracy are stressed.

#### 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.

#### Business Communications

Review covers both written and oral communication. Emphasis is placed 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. Electives are available for the student desiring additional related hours of instruction.

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
RECOMMENDED ELECTIVES	
Cashiering .....	5
Business Law .....	5
Principles of Economics .....	5
Principles of Management .....	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 mechanical calculators and key-punch 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.

### **Supervised Work Experience**

Students work a minimum of 150 hours at retailing-related, teacher-approved work stations. The student trainee is paid by the cooperating employer and is supervised jointly by T-VI and the cooperating employer.

### **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, 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.

**Cashiering**

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

**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.

**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.

**Principles of Management**

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







# 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 be able to perform basic nursing skills as offered in the ten-week nursing assistant program or they will have to take the basic nursing skills course offered each trimester.

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 beginning March 1, 1977, until 350 applications have been received; and applications for the Respiratory Therapy Technician Program will be accepted only from May 2 through 27, 1977. Classes in both programs will begin in September, 1977.

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 letters of recommendation 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.

When a student is required to carry liability insurance in a clinical situation, it is the responsibility of the student to purchase such coverage.

## HOME HEALTH ASSISTANT

### (5 Weeks to 9 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 home setting. 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 demonstrate an ability to do basic nursing skills as offered in the ten-week Nursing Assistant Program. Applicants without a basic nursing skills background must register for the Basic Nursing Skills Course.

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

This program is not approved for Veterans Administration benefits.

### HOME HEALTH ASSISTANT PROGRAM

(PREREQUISITE: BASIC NURSING SKILLS—60 HOURS) OR NURSING ASSISTANT CERTIFICATE

COURSE REQUIREMENTS	TOTAL HOURS
Home Health Theory and Lab .....	83
Basic Nutrition and Lab .....	35
Field Observations and Experiences .....	<u>32</u>
Total	150

### COURSE DESCRIPTIONS

#### **Basic Nursing Skills (Prerequisite)**

Instruction covers skills used in basic nursing care with practice and demonstration.

#### **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 \$20 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 are 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 \$20 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 Theory and Lab .....	204
Patient Service Clerk Clinical Practice .....	<u>96</u>
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 T-VI/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 nursing 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. Applications for the September, 1977, class will not be accepted until March 1, 1977.

The Practical Nursing Program totals 1350 hours of instruction with students usually attending classes 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 and there may be an occasional Saturday class. Students must be able to attend classes, observations and clinical experiences as scheduled. Students plan for their own transportation to the agencies and hospitals. The first trimester, or 15-week block, consists of pre-clinical 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 fee. The fee covers the cost of required uniforms, cap, scissors, identification tag and special workshops. It does not cover the cost of an entrance physical examination, a watch with second hand, uniform shoes, liability insurance, graduation uniform, graduation pin or state board exam fees.

### PRACTICAL NURSING PROGRAM

TRIMESTER I—15 WEEKS	TOTAL HOURS
Anatomy and Physiology I .....	60
Nursing Foundations Core .....	163
Nursing Skills Lab and Clinical Experience .....	120
Dosages and Solutions .....	32
Directed Studies .....	<u>75</u>
Total	450

## TRIMESTER II—18 WEEKS

Medical-Surgical Nursing in Children and Adults	
Clinical Experience .....	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 their interdependency.

### 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. It is accredited by the American Medical Association Council on Education.

Applicants must have either a high school diploma or equivalency and must score satisfactorily on 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. Applications for the September, 1977, class will not be accepted until May 2, 1977.

The Respiratory Therapy Technician Program requires a once-only payment of a \$65 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. It does not cover the cost of the school's graduation pin, pre-entrance physical examination or student liability insurance.

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 .....	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	60
Clinical Experiences I	240
Psychosocial Aspects of Patient Care	30
Respiratory Therapy Lab II	60
Total	450

## TRIMESTER III

Cardio-Pulmonary Problems	40
Pharmacology	40
Administrative Procedures	10
Clinical Experiences II	312
Respiratory Therapy Lab III	48
Total	450

## COURSE DESCRIPTIONS

### Fundamentals of Respiratory Therapy

This basic course 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

The laboratory experiences stress safe practices in the use and maintenance of regulators and gas supply systems, devices and respiratory therapy machines.

### 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 Experience I**

Supervised clinical experiences are at city hospitals. Experiences are planned to apply 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**

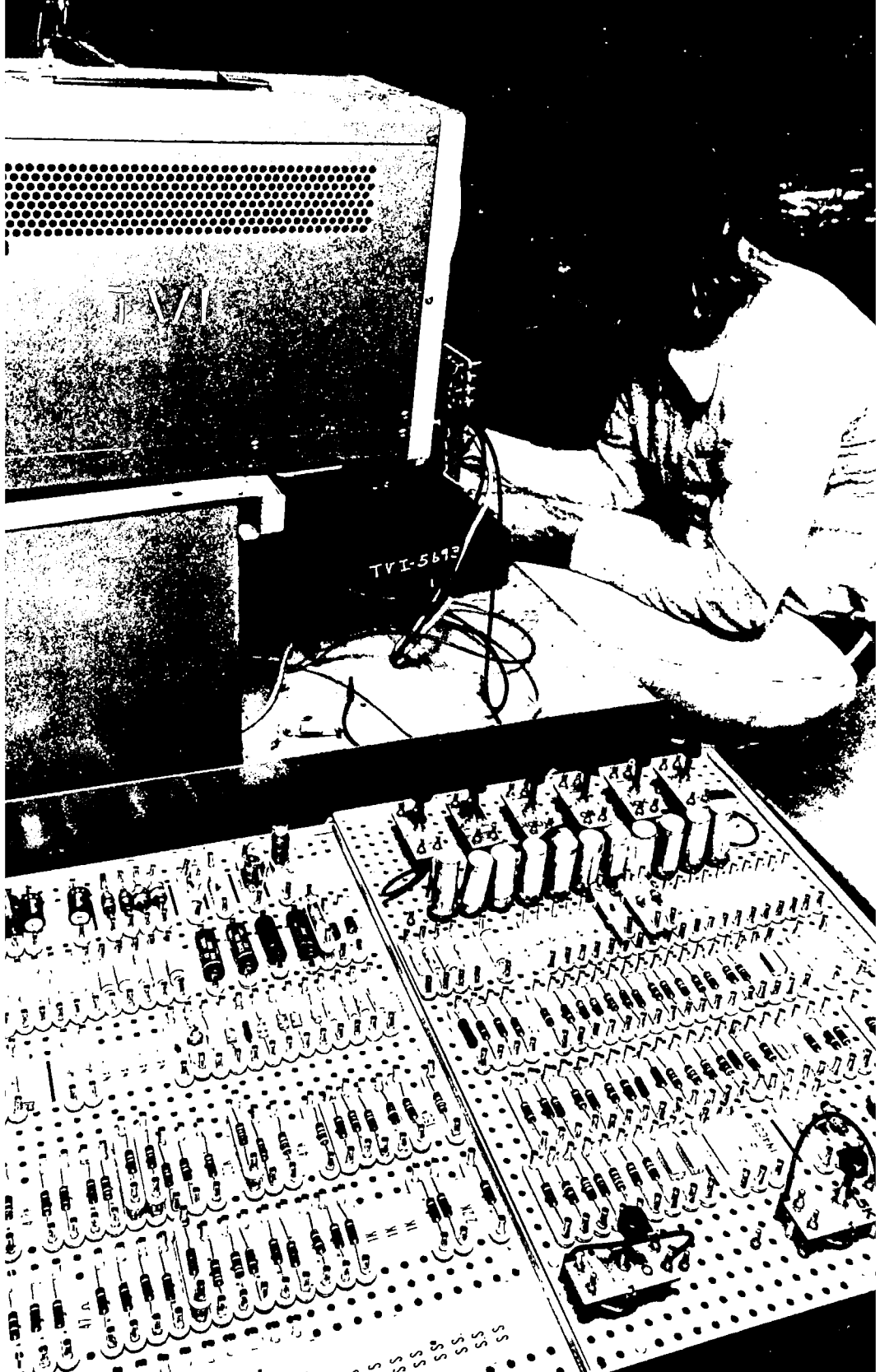
Principles and practices involved in the supervision and administration of a respiratory therapy department, supplies and finances are studied.

**Clinical Experiences II**

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

## ASSOCIATE IN APPLIED SCIENCE DEGREE

Students who complete the full sequence of courses in the diploma programs in Data Processing, Drafting Technology or Electronics may transfer their credits at no cost to the University of Albuquerque if they become candidates for the Associate in Applied Science degree. The degree will be awarded upon the completion of approximately 23 semester hours of general education requirements as specified by the University of Albuquerque.

Additional information may be obtained from the admissions offices of the University of Albuquerque or the Albuquerque Technical-Vocational Institute.

# 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 96 K memory magnetic tape, direct access mass storage devices and Wang 2200 mini-computer. Training is also offered in the field of interactive computing.

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
Accounting for Data Processing .....	5
Introduction to Computers .....	5
COBOL I .....	10
TRIMESTER II	
Technical Math III .....	5
Managerial Accounting for Data Processing .....	5
JCL, Files, Utilities and Sorts .....	5
COBOL II .....	10
FORTRAN IV .....	5
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.

### 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

(PREREQUISITE: TECH MATH I-II OR EQUIVALENT) Trigonometry plus instruction in circular functions, exponential and logarithmic functions, arithmetic and geometric progressions are included in this course.

### Managerial Accounting

(PREREQUISITE: 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.

### FORTRAN IV

(PREREQUISITE: TECH MATH I-II OR EQUIVALENT; COREQUISITE: TECH MATH III OR EQUIVALENT) This course contains the introduction of the complete FORTRAN IV SYNTAX. Also included are the programming techniques to fully utilize the features of the FORTRAN IV language.

**Assembler I with Computer Operation**

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

**Management Method 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 are included. 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; 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 (Beginners' All-purpose Symbolic Instruction Code) language, man-machine interactive systems, Culler-Fried languages, Computer Assisted Instruction, Help Routines, search and retrieval techniques and telecommunication systems.

# DRAFTING TECHNOLOGY

## (4 Trimesters)

The Drafting Technology Program is a dual-track program which allows students to select either the Construction Drafting Option or the Civil and Map Drafting Option.

The Construction Drafting Option provides students with job entry skills as architectural draftsmen, structural draftsmen, mechanical draftsmen, mechanical equipment draftsmen, and estimators and schedulers. Related technical courses are included.

The Civil and Map Drafting Option provides students with job entry skills as cartographers, photogrameters, civil draftsmen and surveyors. Related technical courses are included.

The Construction Drafting Option offers 1725 hours of instruction, including 600 hours of laboratory instruction and 1125 hours of theory and supporting courses. The Civil and Map Drafting Option offers 1770 hours with 870 hours of laboratory and 900 hours of theory and supporting courses. A diploma will be issued after completing all of the courses in either option.

All Drafting Technology students pay an equipment fee of \$25. Students who enter the Civil and Map Drafting Option must pay an additional \$25 prior to entering the second trimester.

### DRAFTING TECHNOLOGY PROGRAM

TRIMESTER I	HOURS/WEEK
Construction Drafting Lab/Theory I .....	15
Technical Math I-II .....	10
Building Materials and Methods I .....	5

### CONSTRUCTION DRAFTING OPTION

TRIMESTER II	HOURS/WEEK
Construction Drafting Lab/Theory II .....	15
Building Materials and Methods II .....	5
Technical Math III .....	5
BASIC Language Programming I .....	5
TRIMESTER III	
Structural Drafting Lab/Theory .....	15
BASIC Language Programming II .....	5
Communications .....	3
Physics .....	5
TRIMESTER IV	
Mechanical Equipment Lab/Theory .....	15
Estimating and Scheduling .....	10



## CIVIL AND MAP DRAFTING OPTION

TRIMESTER II	HOURS/WEEK
Cartography Lab/Theory .....	15
Tech Math III .....	5
BASIC Language Programming I .....	5
Beginning Plane Surveying .....	6
TRIMESTER III	
Photogrammetry Lab/Theory .....	15
BASIC Language Programming II .....	5
Surveying and Mapping Techniques .....	5
Intermediate Plane Surveying .....	6
TRIMESTER IV	
Civil Drafting Lab/Theory .....	15
Communications .....	5
Advanced Surveying .....	6

## COURSE DESCRIPTIONS

### **Construction Drafting Lab/Theory I**

This course introduces 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 and geometry concepts 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.

### **Construction Drafting Lab/Theory II**

(PREREQUISITE: BASIC CONSTRUCTION DRAFTING LAB/THEORY I) A continuation of Basic Construction Drafting with major emphasis on heavy construction, students in this course spend time in developing large commercial projects from design through construction document production.

### **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.

**BASIC Language Programming I**

(PREREQUISITE: TECHNICAL MATH I-II) This introduction to BASIC (Beginners' All-purpose Symbolic Instruction Code) Programming statements includes input and output, the use of FOR NEXT LOOPS, computational programming statements and the development of algorithms associated with engineering computations.

**Structural Drafting Lab/Theory**

(PREREQUISITE: CONSTRUCTION DRAFTING LAB/THEORY II) 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 concrete structures.

**BASIC Language Programming II**

(PREREQUISITE: BASIC LANGUAGE PROGRAMMING I) This extension of BASIC I includes instructions in the use of magnetic tape and paper tape storage, report and display formats and the application of the extended BASIC commands with particular emphasis on string manipulation.

**Communications**

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

**Physics**

(PREREQUISITE: TECHNICAL MATH III) 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.

**Mechanical Equipment 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.

**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.

**Cartography Lab/Theory**

(PREREQUISITE: BASIC CONSTRUCTION LAB/THEORY) This course provides the fundamental concept in the use of scale, a coordinate system, intricacies of map projection, methods of computation and symbolization, elements of design, typography and lettering, map reproduction and up-to-date concepts of scaling observational data (nominal, ordinal, interval and ratio).

**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.

**Photogrammetry Lab/Theory**

(PREREQUISITE: CARTOGRAPHY) This course introduces topics such as cameras, photographic geometry, stereoscope, parallax, radical-line triangulation, ground control and stereoscopic plotting instruments. Units on ortho, terrestrial, oblique and panoramic photos are included. Photogrammetric bridging and remote sensing are also covered.

**Surveying and Mapping Techniques**

This course presents an overview of modern surveying methods. Extensive practice in the use of the New Mexico State Coordinate systems 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.

**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.

**Civil Drafting Lab/Theory**

(PREREQUISITE: PHOTOGRAMMETRY) This course introduces students to up-to-date development and calculation techniques to produce highway and earth movement drawings. This course is offered in conjunction with Advanced Surveying.

**Advanced Surveying**

(PREREQUISITE: INTERMEDIATE PLANE SURVEYING) The course covers offset, slope and structure staking, design and calculation of sanitary sedimentation facilities, vertical and horizontal curve design, easement spirals, super elevations, roadbed template design and dirt quantity calculations.

## **ELECTRONICS**

### **(4 Trimesters)**

The Electronics 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 1800 hours of instruction of which 975 are electronics theory and related course work and 825 hours of laboratory work. It provides additional training in advanced electronics principles, applications and logic, or color television theory and repair.

Students may select alternate electro-mechanical-type courses from other programs in place of the Digital Circuits II and III. Permission must be granted by the Electronics Department Coordinator for this substitution.

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 I .....	5
TRIMESTER II	
Electronics Theory II .....	5
Electronics Lab II .....	10
Digital Circuits II .....	5
Technical Math III/FORTRAN IV .....	10
*Physics .....	5
TRIMESTER III	
Electronics Theory III .....	5
Electronics Lab III .....	10
Circuit Analysis I .....	5
Semiconductor Principles and Applications .....	5
Digital Circuits III .....	5
*Technical Math IV .....	5
TRIMESTER IV	
Electronics Theory IV .....	5
Electronics Lab IV .....	6
Electronics Instruments .....	5
Industrial Applications .....	5
Industrial Applications Lab .....	5
Licensing Examination Preparation .....	2
Microwave Technology .....	2
*Technical Math IV .....	5

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

## COURSE DESCRIPTIONS

### Electronics Theory/Lab I

This course covers DC 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 Circuits 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 AC 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.

### Digital Circuits II

(PREREQUISITE: DIGITAL CIRCUITS I) The following topics will be covered in this course: counters, decoders, adders, memory circuits, digital voltmeters and frequency counters. Approximately half the time will be spent in theory and half in lab.

### Technical Math III/FORTRAN IV

(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.

### 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.

### 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 collector amplifiers and an introduction to linear amplifiers.

### **Digital Circuits III**

(PREREQUISITE: DIGITAL CIRCUITS II) This is a continuation of the material covered in Digital Circuits II with the major emphasis on lab work. Topics covered will include decoders, multiplexers, LED displays, RAM and ROM memories.

### **Technical Math IV**

(PREREQUISITE: TECHNICAL MATH III) Covered are 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 IV programs are assigned where relevant.

### **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.

### **Electronics Instruments**

(PREREQUISITE: ELECTRONICS THEORY/LAB III) This course involves the study of selected electronics instruments, together with the procedures for their calibration, maintenance and repair in accordance with manufacturers' specifications.

### **Industrial Applications**

(COREQUISITE: ELECTRONICS THEORY/LAB IV) Topics which will meet the current needs of the industrial community such as instrumentation, computer technology and television theory are included. Practical experience in these areas is provided in the Industrial Applications Lab course.

### **Industrial Applications Lab**

(COREQUISITE: INDUSTRIAL APPLICATIONS) Students will learn the repair and maintenance of various electronic equipment which will be encountered when placed on a job such as computer, pulse code modulation, color television and video tape recorder circuits. The course will complement the theoretical course work done in Industrial Applications.

### **Licensing Examination Preparation**

(PREREQUISITE: ELECTRONICS THEORY/LAB III) Students prepare to take Federal Communications Commission (FCC) commercial license examination or other required licensing such as certified electronics technicians exams 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, 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.

New students may enter most of the trades programs 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. Normal color vision and depth perception correctable in both eyes are required in several major fields of study.

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.

## SUPERVISED WORK EXPERIENCE

Supervised work experience is for students who have acquired most of the required skills and work attitudes needed to succeed in an entry job in an occupation. In two trimester programs, students apply for this option during the final half-trimester; in longer programs, during the final trimester.

Supervised work experience may be substituted for the laboratory portion of a program and follows a training plan developed by the cooperating employer and the T-VI instructional staff. Before beginning in a supervised work experience, the student must obtain the approval of the instructor, program coordinator, counselor, department chairman and the Director of Student Services.



# 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 performing 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 an equipment fee of \$115, \$65 before entering the first trimester and \$25 before each additional trimester.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
3. Must have an interview with the program coordinator and admissions counselor.

## 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 Welding .....	5
TRIMESTER II	
Air-Conditioning, Heating, Refrigeration Lab II .....	15
Air-Conditioning, Heating, Refrigeration Theory II .....	5
Trade Math II .....	5
Control Circuitry I .....	5

**TRIMESTER III**

Air-Conditioning, Heating, Refrigeration Lab III .....	10
Air-Conditioning, Heating, Refrigeration Theory III .....	5
Business Relationships .....	5
Blueprint Reading I .....	5
Control Circuitry II .....	5

**COURSE DESCRIPTIONS****Air-Conditioning, Heating, Refrigeration Lab/Theory I**

Beginning students are instructed in shop safety; basic tools and equipment; introduction to physics and chemistry; electrical circuits and laws of electricity; magnetic circuits-electric meters; test and measuring equipment; and installation, maintenance and service knowledge for residential-type heating and cooling systems.

**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 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 welding to air-conditioning, heating and refrigeration repairs.

**Air-Conditioning, Heating, Refrigeration Lab/Theory II**

(PREREQUISITE: ALL TRIMESTER I COURSES) Instruction is provided in the installation, maintenance and service of light commercial air-conditioning, heating and refrigeration systems. Emphasized are electrical problems and controls, gas-electric packages, compressors, condensers, pressure reducing devices, load calculations, heat transfer, psychometrics and safety code for mechanical refrigeration.

**Trade Math II**

(PREREQUISITE: TRADE MATH I) 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 are studied in this course.

**Control Circuitry I**

This course is designed to reinforce the background knowledge required in diagnosis and service of environmental equipment with emphasis on the function and understanding of electrical control circuitry. Included are transformers, motors, relays, contactors, starters and circuit protection.

**Air-Conditioning, Heating, Refrigeration Lab/Theory III**

(PREREQUISITE: ALL TRIMESTER II COURSES OR EQUIVALENT) The installation, maintenance and service of commercial air-conditioning, heating and refrigeration systems are included. 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 I**

(PREREQUISITE: ALL TRIMESTER I COURSES) Instruction covers terminology; free-hand sketching of orthographic and isometric drawings; construction details; abbreviations and symbols; electrical constants and unit prefixes; schematics and color code for piping; building trade symbols; types of building construction and insulation; duct systems; ventilation plans; interpretation of mechanical and electrical plans; codes; and design concepts.

**Control Circuitry II**

(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 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.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory diseases.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

## 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 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.

# 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 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-conditioning systems. During a third trimester, brakes, front suspensions, steering, alignment, transmissions and drive train mechanisms are emphasized.

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 equipment fee, \$65 prior to entering the first trimester and \$25 before each additional trimester.

### ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory diseases and allergies to automotive fuels and solvents.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

### AUTOMOTIVE MECHANICS PROGRAM

OPTION I	HOURS/WEEK
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
Welding .....	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 system 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. An operational understanding of automotive DC circuits, temperature-pressure relationships of gases, hydraulics, forces and stresses, and power transmission are also covered.

### 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; and charging, ignition, fuel and emission control systems. Automotive air-conditioning will be studied as a separate service unit of instruction.

### 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 automotive repairs.

**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: BASIC 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, finish carpentry, basic construction and installation of cabinets, millwork 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 students must pay a \$90 equipment fee, \$65 prior to entering the first trimester and an additional \$25 prior to the second trimester, and must provide their own carpenter's overalls or nail apron.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic wood or wood product allergies.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have a personal interview with the program coordinator and admissions counselor.

## 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**

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 are included.

### **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, finish carpentry, basic construction and installation of cabinets and millwork.

### **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 and commercial buildings 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 sauté cook after the first trimester or dinner cook upon completion of the full program.

In the first trimester, students learn 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, proper care, and 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 equipment fee of \$65.

### ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic allergies to detergents and soap.
3. Must have an interview with the program coordinator and admissions counselor.
4. Health Requirement: Persons enrolled in this program must present to the school authorities, upon their initial enrollment, a certificate stating that they are free from tuberculosis in a transmissible form. The certificate must be signed by a licensed 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
Sauté Cook Lab .....	15
Sauté 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

### **Sauté 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.

### **Sauté Cook Theory**

Instruction is provided in sautéed 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 sauté frying, broiling of sea foods and methods of serving.

### **Food Service Math**

Basic arithmetic is studied in this course. 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: SAUTÉ COOK LAB AND THEORY) Included in this course are 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 1350 hours are laboratory work and 900 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 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.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory diseases and allergies to diesel fuels and solvents.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

## 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
<b>TRIMESTER II</b>	
Diesel Fuel Injection Lab .....	15
Diesel Fuel Injection Theory .....	5
Trade Math and Physics .....	5
Basic Machine Tool Practice .....	5

<b>TRIMESTER III</b>	
Diesel Engine Overhaul Lab .....	20
Diesel Engine Overhaul Theory .....	5
Welding .....	5
<b>TRIMESTER IV</b>	
Diesel Transmissions, Final Drives, Clutches and Brakes Lab .....	20
Diesel Transmissions, Final Drives, Clutches and Brakes Theory .....	5
Business Realltions .....	5
<b>TRIMESTER V</b>	
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: ALL TRIMESTER I COURSES) 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.

### **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 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. Principles of metallurgy as they relate to diesel metals; sleeves, crankshaft materials and alloys, piston rings, rods, piston alloys, and main and connecting rod bearings; processes, terminology, structure and properties of metal and alloying elements; and failure analysis of diesel engine parts and accessories are thoroughly covered.

### **Welding**

This laboratory practice 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 diesel repairs.

### **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 converters, final drives, crawler tractor under-carriages, 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) 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 equipment fee, \$65 prior to entering the first trimester and an additional \$25 prior to the second trimester.

### ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
3. Must have a personal interview with the program coordinator and admissions counselor.
4. Must possess normal color vision.

### 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; and 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 receiving Veterans Administration or other support agency benefits will receive only partial benefits.

Machine Trades students must pay a \$115 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.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory diseases and allergies to oils, solvents and cutting fluids.
3. Must possess physical capability to stand on concrete floors for eight to ten hours per day.
4. Must have depth perception correctable in both eyes.
5. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
6. Must have a personal interview with program coordinator and admissions counselor.

## 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, engine lathe and vertical band saw.

### **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 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, operations of taper turning, threading, introduction to four-jaw chuck work and basic introductions to tracer lathes; basic milling machine operations; surface grinding; tool and cutter grinding; introduction by cylindrical grinding; and manual numerically-controlled (N/C) operation. Metric dimensioned drawings and utilization of true position dimensioning will also be covered.

### **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, 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 than in Trimester II. Students are given practical experience in

utilizing precision measuring equipment as it applies to the inspection of manufactured parts. Basic off-set four-jaw chuck work, internal single point threads, basic turret lathe setup and operation, basic boring, introduction to cutting of acme threads, cylindrical grinding, and tool and cutter grinding are included. True position dimensioning, the metric system and assembly drawings 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 in formula manipulation in dealing with problems arising from shop related right triangle problems, as well as mathematical operations from the 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**

### **(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 an equipment fee of \$90, \$65 before entering the first trimester and \$25 before entering the second trimester.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic lime or cement product allergies.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have a personal interview with the program coordinator and admissions counselor.

## 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**

Instruction includes 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 and 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 equipment fee, \$65 prior to entering the first trimester and an additional \$25 prior to the second trimester.

### **ENTRANCE REQUIREMENTS**

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory disease and allergies to plumbing fluxes, oils, glues and plastic compounds.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have a personal interview with the program coordinator and admissions counselor.

### **PLUMBING PROGRAM**

<b>TRIMESTER I</b>	<b>HOURS/WEEK</b>
Plumbing Lab I .....	15
Plumbing Theory I .....	5
Trade Math I .....	5
Blueprint Reading I .....	5
<b>TRIMESTER II</b>	
Plumbing Lab II .....	15
Plumbing Theory II .....	5
Basic Welding .....	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, use of rules and formulas, ratio and proportion, area calculations, volumes, pressure and capacities, hydraulics and pipe length calculations, heat loss problems, and surface and direct measurements.

### **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.

### **Basic 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 residential plumbing repairs.

### **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 equipment fee of \$65.



## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory diseases and allergies to sheet metal fluxes and metals.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

## 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

Instruction is provided 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

Basic instruction in working drawings and blueprints is offered in this course. 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; and 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 construction, 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.



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## 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. Included in the second trimester are 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.

New classes will be accepted for the program for the fall trimester, 1976, and the summer trimester, 1977.

The two-trimester program consists of 900 hours of instruction, of which 600 hours are laboratory 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.

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

### ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory diseases and allergies to fuels and solvents.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

### 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; and

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: ALL TRIMESTER I COURSES) 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.

## **URBAN HORTICULTURE**

### **(2 Trimesters)**

The Urban Horticulture program is designed to prepare students for successful job entry into the horticultural specialties of turfgrass management and landscape development.

In one trimester, students are instructed in maintenance of residential, institutional, athletic field, golf course and special turfgrass areas.

During the other trimester, students are given instruction in proper use of agricultural chemicals and equipment; landscape establishment and maintenance; and identification, classification and use of plant materials commonly used for landscape plantings. Units are adjusted according to the seasons.

A beginning group will be accepted for the winter trimester of 1977.

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

The student may leave the program at any time upon completion of a training objective and level of proficiency desired from the course. Students will 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 Urban Horticulture students must pay a once-only equipment fee of \$65 and provide their own shop clothes.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must be free of chronic respiratory diseases and allergies to agricultural chemicals.
3. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
4. Must have a personal interview with the program coordinator and admissions counselor.

## URBAN HORTICULTURE PROGRAM

TRIMESTER I	HOURS/WEEK
Turfgrass Management Lab .....	15
Turfgrass Management Theory .....	5
Horticultural Mathematics .....	5
Basic Horticultural Chemistry and Botany .....	5
TRIMESTER II	
Landscape Design and Development Lab .....	15
Landscape Design and Development Theory .....	5
Horticultural Science .....	5
Business Relationships .....	5

## COURSE DESCRIPTIONS

### **Turfgrass Management Lab/Theory**

This combined laboratory and related theory class provides instruction in safe use of hand and power tools; proper use of agricultural chemicals and equipment; kinds of turfgrass and their use; planning and establishing new turfgrass areas; soil conditions for healthy turf; practical use of fertilizers; drainage and irrigation systems; and maintaining residential, institutional, athletic field, golf course, cemetery and special turf areas.

### **Horticultural Mathematics**

This course reviews basic arithmetic. Basic estimating and financial problems, differential leveling and basic surveying are applied to the horticultural industry.

### **Basic Horticultural Chemistry and Botany**

Students are introduced to the fundamental laws of chemistry as they apply to agricultural chemicals, including commercial fertilizers, materials used to protect turfgrass and landscaping plants, other soil amending agents and the process of degradation. This course also provides an elementary understanding of plant classification, plant growth and development, propagating media, soil sterilization, plant propagation, plant limiting factors, the identification of common pests and diseases transmitted by insects.

### **Landscape Design and Development Lab/Theory**

(PREREQUISITE: ALL TRIMESTER I COURSES) Instruction will emphasize safe use of tools; small gasoline engines; chemical equipment safety; selection and care of plant materials; and safety checklist for applying herbicides and pesticides. Blueprints, laying-out the landscape plan, grading the site, constructing landscape and irrigation structures, and soil modification are presented.

Supervised work experience may be substituted for this lab during the final half-trimester. All students taking part will follow a training plan developed by the cooperating employer and the Urban Horticulture staff.

### **Horticulture Science**

(PREREQUISITES: ALL TRIMESTER I COURSES) Techniques and procedures are studied to modify, complement and supplement the total plant environment so the student may propagate, produce and maintain plants and plantings. Laboratory exercises are reviewed in order to develop specific skills dealing with plant growing, transplanting and pruning.

### **Business Relationships**

Course content includes business terminology, business organizations and operations, problems of distributing goods and services, physical facilities, finance, keeping records, invoice and billing procedures, managing merchandise, customer and personnel relations, prospective employer communications and occupational opportunities in the urban horticulture industry.

## **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 semi-automatic cutting, pipe welding, welding fabrication and production work.

During the first trimester, students study 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 750 hours are laboratory practice and 600 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 an equipment fee of \$90, \$65 before entering the first trimester and an additional \$25 before entering the second trimester.

## ENTRANCE REQUIREMENTS

1. Must demonstrate an acceptable proficiency on the Mathematics Inventory.
2. Must possess the ability to lift materials and equipment weighing up to 50 pounds.
3. Must be free of chronic respiratory diseases.
4. Must have a personal interview with the program coordinator and admissions counselor.

## WELDING PROGRAM

	HOURS/WEEK
<b>TRIMESTER I</b>	
Welding Lab I .....	15
Welding Metallurgy I .....	5
Trade Math I .....	5
Blueprint Reading I .....	5
<b>TRIMESTER II</b>	
Welding Lab II .....	15
Welding Metallurgy II .....	5
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## 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 covers basic arithmetic. Surface and direct measurements, graphs and charts, and payroll calculations are thoroughly studied and applied.

### **Blueprint Reading 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 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 practices 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 post-heating, 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 II**

(PREREQUISITE: 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.

**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.

**Industrial Electricity**

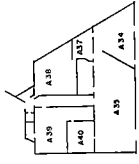
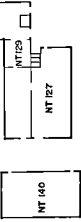
This practical course provides instruction in the basic principles of electricity; terminology; electrical components and symbols; schematic reading; conductors; insulators; resistors; Ohm's law and Watt's law; series, parallel and series-parallel circuits; alternating and direct current; transformers;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

**Strength of Welding Materials**

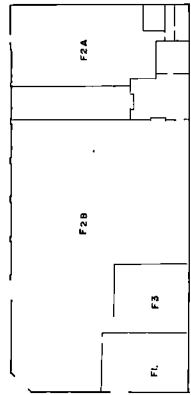
(PREREQUISITE: WELDING METALLURGY II AND TRADE MATH II) This combination laboratory and theory course provides instruction in math as applied to destructive and non-destructive testing, advanced fabrications, welding equipment troubleshooting and advanced metallurgy theory.



COAL PLACE S.E.



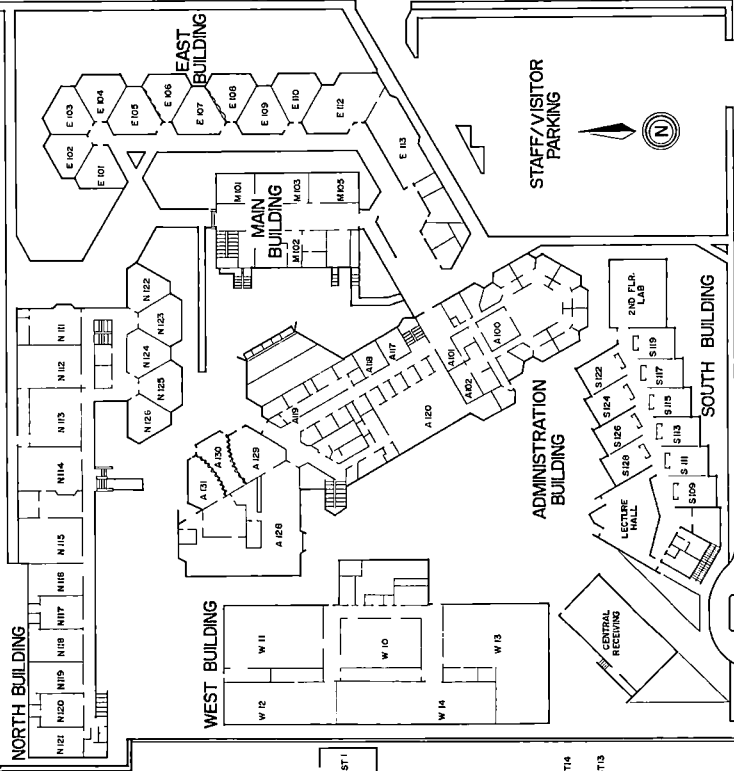
1st FLOOR ADMIN. BLDG.



FOODWAY BUILDING

YALE BLVD S.E.

STAFF PARKING LOT



STAFF/VISITOR PARKING

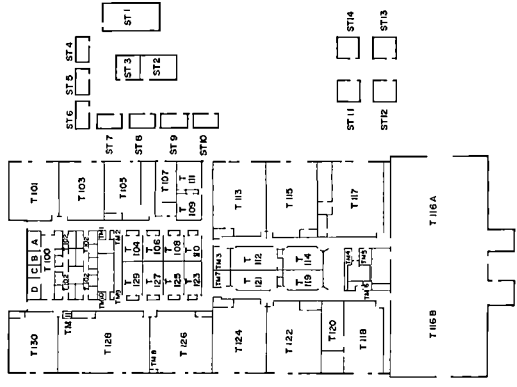


BUENA VISTA DRIVE S.E.

COAL AVENUE S.E.

COAL AVE S.E.

UNIVERSITY BLVD. S.E.



SOUTH CAMPUS T-VI

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