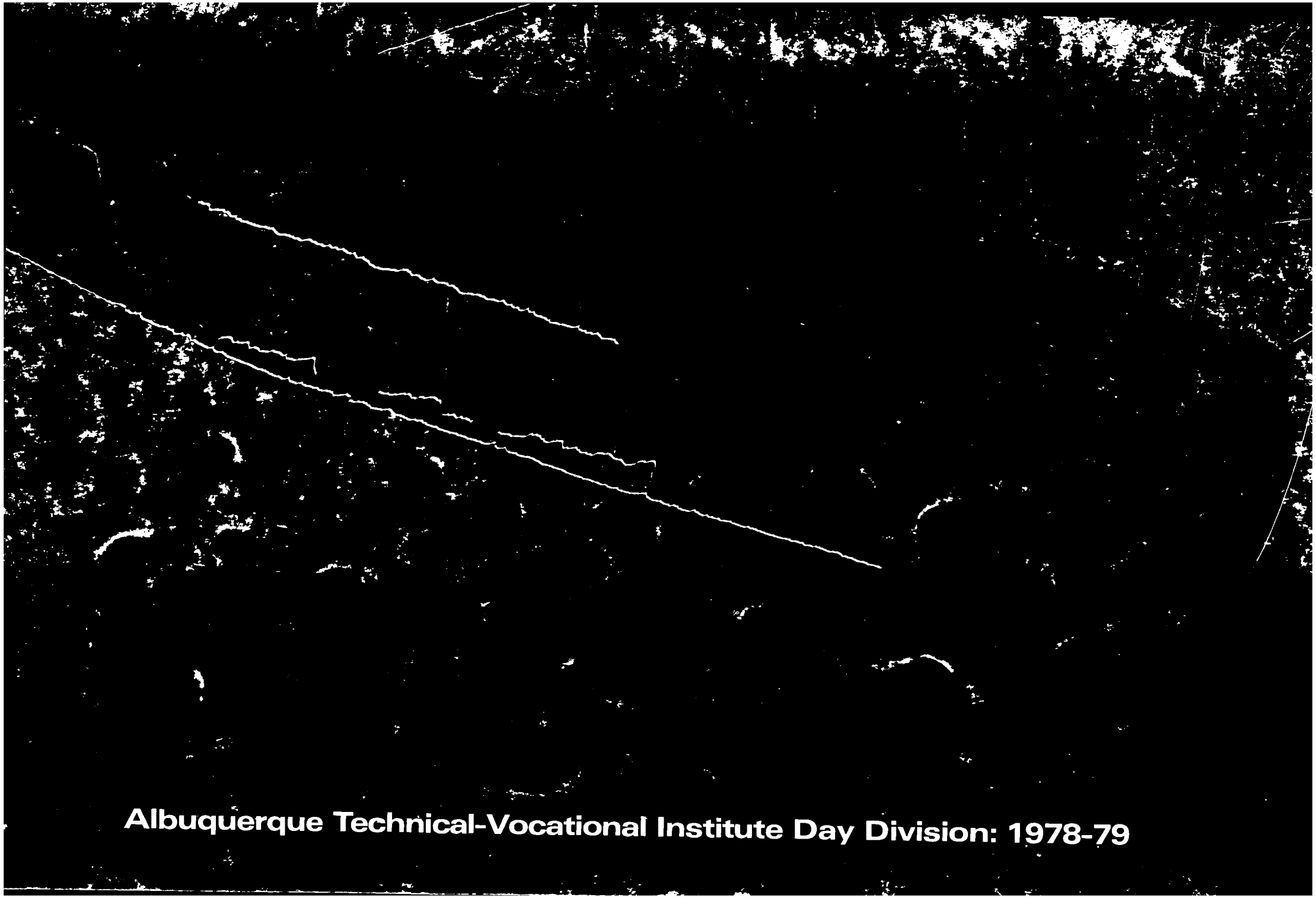
Albuquerque Technical-Vocational Institute Day Division: 1978-79

# DAY DIVISION
# 1978-79

# ALBUQUERQUE TECHNICAL-VOCATIONAL INSTITUTE

**525 Buena Vista SE**
**Albuquerque, NM 87106**

**Telephone: 843-7250**

Volume XIV

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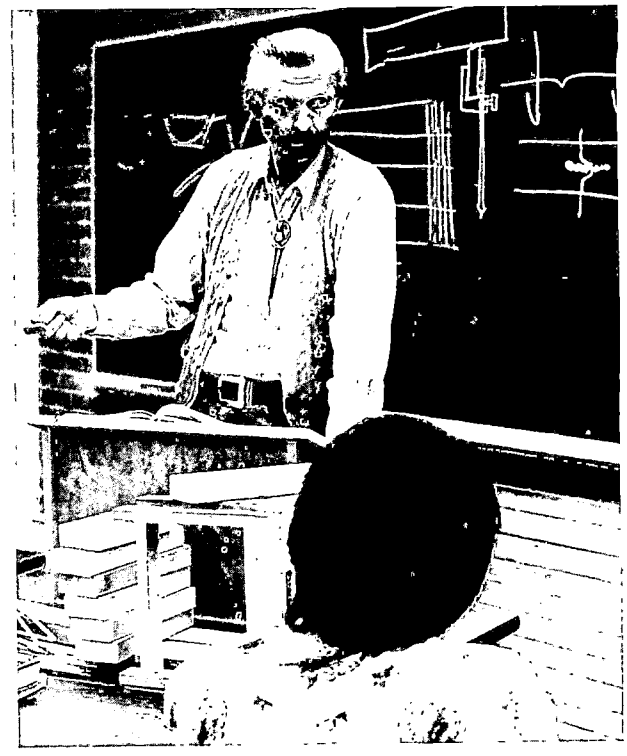


# Instructional Programs

## Contents


General Information ..... 1
School Year ..... 1
Consumer Information ..... 2
Accreditation ..... 2
Drop-out and Retention Rates ..... 2
Placement ..... 2
Educational Costs ..... 3
Food Services ..... 3
Housing ..... 3
Class Periods ..... 4
Trimester Calendar ..... 4
Instructional Programs ..... 6
Admissions Policies ..... 6
How To Enroll ..... 7
Charges and Fees ..... 8
Attendance ..... 9
Student Records ..... 9
Standards of Progress ..... 10
Testing Services ..... 11
Student Services ..... 11
Campus Conduct ..... 12
Fires ..... 12
Telephone Calls, Visitors ..... 12
Transportation, Parking ..... 12
Safeguarding of Property ..... 13
Student Government, Activities ..... 13
Financial Aids ..... 14
Map, Staff Locator ..... 16
Instructional Materials Center ..... 20
Library Services ..... 20
Adult Learning Center ..... 20
Audio-Visual Services ..... 20


**Upon enrollment, each student receives a copy of this catalog. It contains complete course descriptions for all full-time programs at T-VI and additional information about school policies**


High School Equivalency Exam Preparation ..... 18
Developmental Studies ..... 19
Preparatory Program ..... 21
Displaced Homemaker Program ..... 22
Business Occupations ..... 23
Accounting ..... 23
Business Occupations Learning Center ..... 26
Distributive Education ..... 27
Fashion Merchandising ..... 28
Office Occupations ..... 29
Real Estate ..... 31
Refresher Course for Office Workers ..... 32
Sales Management ..... 32
Small Business Operation ..... 34
Health Occupations ..... 35
Nursing Assistant ..... 36
Patient Service Clerk ..... 37
Practical Nursing ..... 37
Respiratory Therapy Technician ..... 39
Technologies ..... 41
Data Processing ..... 41
Drafting Technology ..... 43
Electromechanical Drafting ..... 45
Electronics ..... 46
Laser Electro-Optic Technology ..... 48
Trade and Industrial ..... 50
Air-Conditioning, Heating and Refrigeration ..... 51
Automotive Collision Repair ..... 53
Automotive Mechanics ..... 54
Baking ..... 56
Carpentry ..... 57
Culinary Arts ..... 59
Diesel Mechanics ..... 61
Electrical Trades ..... 63
Industrial Electricity ..... 65
Machine Trades ..... 67
Masonry ..... 69
Parts Specialist ..... 70
Plumbing ..... 72
Sheet Metal ..... 73
Small Engine Mechanics ..... 75

# 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 job skills and the related education necessary to succeed in an occupation. The Institute began operating in 1965.

T-VI's first classes were held in an elementary school, which had been closed, and in surplus army barracks and cottages. Since then, approximately $8 million worth of construction has taken place in ten phases of a master-planned campus. The campus occupies 25 acres of land on both sides of Coal Avenue SE with most of the Trades and the Department of Developmental Studies located on the south portion of the campus.

Classes and clinical experiences for the Health Occupations Department are held at the Presbyterian Hospital Center and at other local hospitals.

Planning for a satellite campus in the northeast part of the city is now underway.

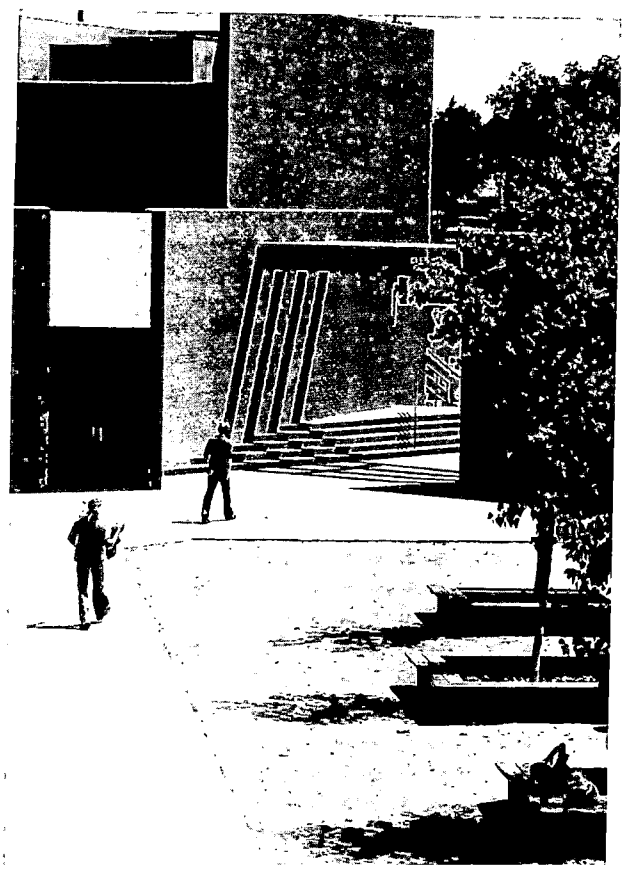
Funding for T-VI programs and most capital expenses comes from a local property tax mill levy and from an appropriation from the New Mexico State Legislature. A small amount of money for programs comes from federal funds and the funds to construct and equip the last two phases of construction have been from special federal grants.

# School Year

T-VI is a year-round school with classes meeting on a trimester basis. Each trimester contains 75 days of instruction, generally with a 10-day break between trimesters.

During 1978-79, the Day Division Fall Trimester begins on September 5, the Winter Trimester on January 3 and the Summer Trimester on May 1. The Evening Division classes generally begin the following week. All programs meet each trimester continually until they are completed.

The Displaced Homemaker class is offered twice each trimester and a few programs begin with a new class only once each year. They are Practical Nursing, Respiratory Therapy Technician, Electromechanical Drafting and Small Business Operation.



## EQUAL EDUCATIONAL OPPORTUNITY POLICY

The Albuquerque Technical-Vocational Institute, in compliance with Title VI of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972 (Higher Education Act), does not discriminate on the basis of race, color, national origin or sex in any of its policies, practices or procedures. The provision includes, but is not limited to, admissions, employment, financial aid and educational services.

# Consumer Information

As a person considers attending T-VI, or any other postsecondary school, questions will arise about the quality of the school. Information that can help judge the quality of any school includes the school's accreditation, its graduate placement record and its drop-out rate. Here is the latest information available in these areas about T-VI and its programs:

**ACCREDITATION:** The Institute is fully accredited as a certificate-granting institution by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools. This Accreditation status indicates that the institution is offering its students the educational opportunities implied in its objectives on a satisfactory level.

In addition to T-VI's North Central Association accreditation, two of the health occupations programs have been accredited by specialized medical accrediting agencies. The Practical Nursing program is accredited by the National League for Nursing and the New Mexico State Board of Nursing. The Respiratory Therapy Technician program is accredited by the American Medical Association's Council on Education.

All full-time programs of two or more trimesters in length have been approved for Veterans Administration training benefits by the New Mexico Veteran's Training Approval Agency.

**DROP-OUT AND RETENTION RATES:** At T-VI, as at any school, some students who begin a program are unable to finish the entire program for a variety of reasons.

While the number who are able to complete their program varies between the different majors, and from trimester to trimester, the overall retention rate of full-time vocational program students at T-VI during 1977 was more than 80 percent. Put another way, less than 19 percent of the students who began a trimester in 1977 had dropped out before the end of the trimester. The termination rates for the three trimesters of 1977 were: Winter–16.2 percent, Summer–20.2 percent, and Fall–18.2 percent.

**GRADUATE PLACEMENT:** Since the purpose of T-VI's full-time instructional programs is to prepare students to get a job, the graduate job placement record is an important measure of quality of the programs.

Here is the placement record–60 days after graduation–of the graduates available for employment in each T-VI program during 1977 (graduates in April, August and December 1977):

| | *Total Graduates Available for Work* | *Employed: Training Related Jobs* | *Employed: Jobs Closely Related to Training* | *Employed: Non-Training Related Jobs* | *Unemployed: 60 Days after Graduation* | *MONTHLY AVERAGE BEGINNING SALARIES (Training-Related Jobs)* |
|---|---|---|---|---|---|---|
| **BUSINESS OCCUPATIONS** | | | | | | |
| Accounting | 52 | 43 (83%) | 3 (6%) | – – | 6 (11%) | $590 |
| Distributive Education | 81 | 78 (97%) | 1 (1%) | 1 (1%) | 1 ( 1%) | $435 |
| Fashion Merchandising | 45 | 28 (62%) | – – | 3 (7%) | 14 (31%) | $411 |
| Office Occupations–Clerical | 45 | 33 (73%) | 2 (5%) | 1 (2%) | 9 (20%) | $492 |
| Office Occupations–Secretarial | 25 | 14 (56%) | 4 (16%) | – – | 7 (28%) | $562 |
| Refresher Course for Office Workers | 39 | 23 (59%) | 4 (10%) | – – | 12 (31%) | $581 |
| Retail Sales Management | 16 | 14 (88%) | – – | 1 (6%) | 1 ( 6%) | $536 |
| **HEALTH OCCUPATIONS** | | | | | | |
| Nursing Assistant | 62 | 53 (86%) | 1 (1%) | 2 (3%) | 6 (10%) | $469 |
| Patient Service Clerk | 33 | 29 (88%) | – – | – – | 4 (12%) | $492 |
| Practical Nursing | 63 | 58 (92%) | 1 (2%) | 1 (2%) | 3 ( 4%) | $578 |
| Respiratory Therapy Technician | 18 | 18 (100%) | – – | – – | – – | $634 |
| **TECHNOLOGIES** | | | | | | |
| Data Processing | 31 | 28 (90%) | 2 (7%) | – – | 1 ( 3%) | $797 |
| Drafting Technology | 64 | 57 (89%) | – – | 3 (5%) | 4 ( 6%) | $728 |
| Electromechanical Drafting | 19 | 17 (90%) | 1 (5%) | – – | 1 ( 5%) | $778 |
| Electronics | 85 | 71 (84%) | 1 (1%) | 4 (5%) | 9 (10%) | $756 |
| **TRADES & INDUSTRIAL** | | | | | | |
| Air Conditioning/Htg./Refrig. | 43 | 37 (86%) | 1 (2%) | 1 (2%) | 4 (10%) | $638 |
| Auto Collision | 24 | 20 (84%) | 2 (8%) | – – | 2 ( 8%) | $579 |
| Auto Mechanics | 42 | 31 (74%) | 3 (7%) | 3 (7%) | 5 (12%) | $546 |
| Baking | 4 | 2 (50%) | – – | 1 (25%) | 1 (25%) | $533 |
| Carpentry | 37 | 30 (81%) | 2 (5%) | 2 (5%) | 3 ( 8%) | $567 |
| Culinary Arts | 23 | 20 (87%) | 1 (4%) | – – | 2 ( 9%) | $554 |
| Diesel Mechanics | 38 | 34 (89%) | 1 (3%) | 1 (3%) | 2 ( 5%) | $843 |
| Electrical Trades | 44 | 39 (89%) | – – | 3 (7%) | 2 ( 4%) | $597 |
| Machine Trades | 31 | 29 (94%) | – – | 1 (3%) | 1 ( 3%) | $648 |
| Masonry | 13 | 12 (92%) | – – | 1 (8%) | – – | $619 |
| Plumbing | 34 | 24 (71%) | – – | 1 (3%) | 9 (26%) | $596 |
| Sheet Metal | 15 | 14 (93%) | – – | 1 (7%) | – – | $616 |
| Small Engine Mechanics | 14 | 13 (93%) | – – | – – | 1 ( 7%) | $570 |
| Welding | 28 | 24 (86%) | – – | 1 (4%) | 3 (10%) | $687 |

# Educational Costs

An important matter when considering attending T-VI full-time is what it will cost to do this. An estimated educational costs budget, including food, housing, personal and transportation expenses for a full-time student, is used by the Financial Aids Office to help determine a student's needs for financial aids.

This is the estimated budget chart in use at T-VI during 1977-78. Costs will be slightly higher during 1978-79 due to inflation.

| *Student's Status* | *1 Trimester* | *2 Trimesters* | *3 Trimesters* |
|---|---|---|---|
| **DEPENDENT LIVING WITH PARENTS** | | | |
| Tuition and Fees* | $10 to $95* | $20 to $150* | $30 to $205* |
| Room and Board | $250 | $500 | $750 |
| Books and Supplies | $ 11 | $ 22 | $ 33 |
| Personal Expenses | $200 | $400 | $600 |
| Transportation | $120 | $240 | $360 |
| *Total* | $591 to $676* | $1182 to $1312* | $1773 to $1948* |
| **DEPENDENT LIVING WITH HEAD OF HOUSEHOLD** | | | |
| Tuition and Fees* | $10 to $95* | $20 to $150* | $30 to $205* |
| Room and Board | $575 | $1152 | $1725 |
| Books and Supplies | $ 11 | $ 22 | $ 33 |
| Personal Expenses | $200 | $ 400 | $ 600 |
| Transportation | $120 | $ 240 | $ 360 |
| *Total* | $916 to $1001* | $1834 to $1964* | $2848 to $3023* |
| **INDEPENDENT SINGLE** | | | |
| Tuition and Fees* | $ 10 to $95* | $ 20 to $150* | $ 30 to $205 |
| Room and Board | $652 | $1304 | $1956 |
| Books and Supplies | $ 11 | $ 22 | $ 33 |
| Personal Expenses | $200 | $ 400 | $ 600 |
| Transportation | $120 | $ 240 | $ 360 |
| *Total* | $993 to $1078* | $1986 to $2116* | $2979 to $3154* |
| **MARRIED, HEAD OF HOUSEHOLD**** | | | |
| Tuition and Fees* | $ 10 to $95* | $ 20 to $150* | $ 30 to $205* |
| Room and Board | $1120 | $2240 | $3360 |
| Books and Supplies | $ 11 | $ 22 | $ 33 |
| Personal Expenses | $ 375 | $ 750 | $1125 |
| Transportation | $ 125 | $ 250 | $ 375 |
| *Total* | $1641 to $1726* | $3282 to $3412* | $4923 to $5098* |
| *Additional Amounts for Each Child:* | | | |
| Room and Board | $185 | $370 | $555 |
| Personal Expenses | $125 | $250 | $375 |

*If the student is paying out-of-state tuition, add $400 per trimester.

**If the student is divorced or separated and has children, count the first child in lieu of spouse and then use the "Married, Head of Household" figures.

# Food Services

A lounge and snack bar for students and staff are located in A-35, providing a variety of short order meals and hot and cold beverages.

The snack bar is in operation from 7:45 a.m. to 3:30 p.m. weekdays, and from 6 to 8:30 p.m. Mondays through Thursdays for the benefit of evening students and instructional staff.

Vending machine service in the west end of A-35 is available at all hours when the campus is open and in the student commons area of the Trades and in the Department of Developmental Studies building on the south campus.

During the noon hour, food produced by the Culinary Arts instructional program is also offered for sale to students and staff on a first-come, first-served basis.

# Housing

T-VI has no dormitories or other housing facilities and it is the responsibility of the student to make his or her own arrangements for housing. However, the Student Activities Office maintains a list of property owners who have contacted the Institute with properties available for rent to students.

# Class Periods

The class schedule a student is given at registration shows the period of the school day, and room location, of each class.

The times for each of the class periods are as follows:

| Morning | Afternoon |
|---|---|
| Period A– 5:20 to 6:15 | Period 5–12:20 to 1:15 |
| Period B– 6:20 to 7:15 | Period 6– 1:20 to 2:15 |
| Period 0– 7:20 to 8:15 | Period 7– 2:20 to 3:15 |
| Period 1– 8:20 to 9:15 | Period 8– 3:20 to 4:15 |
| Period 2– 9:20 to 10:15 | Period 9– 4:20 to 5:15 |
| Period 3–10:20 to 11:15 | Period 10– 5:20 to 6:15 |
| Period 4–11:20 to 12:15 | Period 11– 6:20 to 7:15 |

# Trimester Calendar 1978-79

## FALL TRIMESTER, 1978

| | |
|---|---|
| Evening Division Preregistration | July 24-August 11 |
| Day Division Registration | August 8, 9, 10 |
| Evening Division Registration | August 30-31 |
| Day Division Classes Begin | September 5 |
| Evening Division Classes Begin | September 11 |
| Mid-Trimester Grades Due | October 25 |
| Teacher Inservice (No Classes) | October 26-27 |
| Thanksgiving Holiday | November 23-24 |
| Withdrawal Deadline | December 7 |
| Last Day of Classes | December 22 |
| Trimester Break | December 23-January 2 |

## WINTER TRIMESTER, 1979

| | |
|---|---|
| Evening Division Preregistration | November 20-December 8 |
| Day Division Registration | December 13, 14, 15 |
| Evening Division Registration | December 27-28 |
| Day Division Classes Begin | January 3 |
| Evening Division Classes Begin | January 8 |
| Mid-Trimester Grades Due | February 22 |
| Holiday | February 23-26 |
| Withdrawal Deadline | April 5 |
| Last Day of Classes | April 19 |
| Trimester Break | April 20-30 |

## SUMMER TRIMESTER, 1979

| | |
|---|---|
| Evening Division Preregistration | March 26-April 6 |
| Day Division Registration | April 10, 11, 12 |
| Evening Division Registration | April 25-26 |
| Day Division Classes Begin | May 1 |
| Evening Division Classes Begin | May 7 |
| Memorial Day Holiday | May 28 |
| Mid-Trimester Grades Due | June 22 |
| Independence Day Holiday | July 4-8 |
| Withdrawal Deadline | August 3 |
| Last Day of Classes | August 17 |

# 1978

## SEPTEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

Labor Day, Sept. 4

## OCTOBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

Mid-term, Oct. 25
In-service, Oct. 26-27

## NOVEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

Thanksgiving, Nov. 23-24
Trimester Break, Dec. 23-Jan. 2

# 1979

## DECEMBER

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | | | | | | |

## JANUARY

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| 28 | 29 | 30 | 31 | | | |

## FEBRUARY

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | | | |

Mid-term, Feb. 22
Holiday, Feb. 23-26

## MARCH

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

## APRIL

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | | | | | |

Trimester Break, Apr. 20-30

## MAY

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

Memorial Day, May 28

## JUNE

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | | | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

Mid-term, June 22

## JULY

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

Independence Day Holiday, July 4-8

## AUGUST

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

Trimester Break, Aug. 18-Sept. 3

=Non school day

# Instructional Programs

The DAY DIVISION program at the Institute provides full-time instruction leading to certificates of completion in 33 career fields listed in the table of contents.

A Preparatory Program is offered for persons who do not qualify for immediate entry into one of the vocational programs.

It is also possible to study for the high school equivalency examinations in a General Educational Development program offered during the day by the T-VI Evening Division.

Full-time students in the Day Division attend classes four to six hours a day. They may also enroll in any additional courses on a space-available basis. Persons not working towards a certificate may enroll on a part-time basis as special students in specific courses if space is available.

The EVENING DIVISION offers close to 100 *Skill Improvement* classes to part-time students in business, trade and industrial areas, health and technical occupations. The *Adult Basic Education* section offers a variety of classes for improvement of 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 labor-management Joint Apprenticeship Committees.

A *Vocational Enrichment Program,* providing vocational classes for high school students at their schools after regular school hours, is also sponsored by T-VI's Evening Division.

In some cases, Evening Division classes may be taken to satisfy requirements for related courses in diploma programs in the Day Division. Students should check with their counselors and program coordinators to insure that the evening class may be utilized.

**Complete information about the evening programs, which are also tuition-free to New Mexico residents, is**

# Admissions Policies

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 an instructional program 25 to 30 hours per week. To enter the Day Division, a student should be either 18 years of age or a high school graduate. However, persons less than 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. All of the programs have minimum requirements in math and communication skills and some applicants may need to enter the Preparatory Program to strengthen these skills before beginning a vocational program. Some programs have additional requirements listed with the program descriptions which must be met before the applicant may be admitted to that particular program.

*No person shall be denied admission to any T-VI program on the basis of ethnic background, sex or creed.*

The 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 program in which the condition will not pose a hazard or prevent the student from doing required assignments.

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

The 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 classes.

A person who does not attend the first two days of classes will be withdrawn automatically as a "no show" and will be re-admitted only if there is still space avail-

# How To Enroll

If you want to enroll in T-VI's Day Division you need to complete these four steps as soon as possible. Some programs fill quickly. If you miss a test date or an interview, your admission will be delayed and you may have to wait a trimester or more to get into the program you want.

**1. FILL OUT THE APPLICATION FORM.**

Application forms are available at the T-VI reception desk and at most high school counseling offices in the state. You may apply for all but two of the full-time T-VI programs at any time. The earlier you apply, the better your chances of getting into a program during the trimester you want. Mail or bring your completed application to the T-VI Admissions Office between 8 a.m. and 5 p.m. Monday through Friday. If you want more information before deciding on which program you would like, ask to see an admissions counselor.

The two programs with special application periods are Practical Nursing (March 1, 2 and 5, 1979, from 8 a.m. until noon for the class that begins in September), and Respiratory Therapy Technician (May 2-30, 1979, for the September class). There is only one class each year in these programs.

**2. COMPLETE YOUR ADMISSIONS TEST.**

When you turn in your application you will be given a testing appointment. Until you have completed the testing, you cannot complete steps 3 or 4.

**3. HAVE AN ADMISSIONS INTERVIEW.**

This will be scheduled for you when you complete the admissions test. Your counselor will explain the test results and tell you the programs you are qualified to enter. During the orientation and interview you will also get to visit with the coordinator of the program you have chosen.

**4. PAYMENT OF FEES.**

This must be done before you are fully admitted and may be done as soon as the counselor has approved your program. If the program you want is filled for the coming trimester, you will be admitted on a "standby" basis for that trimester and given a reservation for the next trimester when that program has openings.

The fees which must be paid to complete your admission are the $10 pre-registration fee, which is not refundable; the $10 textbook deposit, which is refundable; and the personal equipment fee, if any, for the program you are entering.

If your fees are going to be paid directly to the school by a support agency, you must bring a written authorization from that agency in order to complete the admissions process.

There is no tuition charge for New Mexico residents of one year or longer. The out-of-state tuition charge of $400 per trimester does not have to be paid at admission but must be paid before your class registration.

When you have completed all four steps, you will be told when to come for your class registration. Your class schedule will be ready for you at that time, and once you have registered you will be ready to report to classes

# Charges and Fees

**TUITION**: For non-residents of New Mexico (persons who have not lived in the state for the 12 months preceding the start of classes) the tuition charge is $400 per trimester, or $18 per trimester hour for schedules of less than 22 hours per week.

For New Mexico residents—which by law includes members of the armed forces stationed on active duty in New Mexico and their dependents—there is no tuition charge.

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

Anyone who has paid tuition 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 T-VI.

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

The pre-registration fee is a charge for processing the applicant's admission *and is not refunded once it has been paid.* A refund of the pre-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 students to buy personal equipment, such as uniforms in the health occupations and tool kits in the trades and technologies. The equipment, purchased by T-VI at the best possible prices, is issued during the early part of the program and becomes 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 will be made.

In some programs, there is a personal equipment fee at the beginning of the first trimester only. In other programs additional equipment fees are charged at each level, as the students need to add to their equipment at the advanced levels.

Personal equipment fees in effect during 1978-79 are as follows:

| | Trimester I | II | III | IV | V |
|---|---|---|---|---|---|
| PREPARATORY | none | | | | |
| BUSINESS OCCUPATIONS | none | | | | |
| TECHNOLOGIES | | | | | |
| Drafting Technology | $30 | $30—(Civil/Map option only) | | | |
| Electromechanical Drafting | $30 | | | | |
| Electronics | $20 | | | | |
| HEALTH OCCUPATIONS | | | | | |
| Nursing Assistant | $25 | | | | |
| Patient Service Clerk | $25 | | | | |
| Practical Nursing | $65 | | | | |
| Respiratory Therapy Technician | $65 | | | | |
| TRADES AND INDUSTRIAL | | | | | |
| Air-Conditioning, Heating and Refrigeration | $75 | $45 | $45 | | |
| Auto Collision Repair | $75 | $45 | | | |
| Auto Mechanics | $75 | $45 | $45 | | |
| Baking | $45 | | | | |
| Carpentry | $75 | $45 | | | |
| Culinary Arts | $75 | $45 | | | |
| Diesel Mechanics | $75 | $45 | $45 | $45 | $45 |
| Electrical Trades | $75 | $45 | | | |
| Industrial Electricity | $75 | $45 | | | |
| Machine Trades | $85 | $45 | $45 | | |
| Masonry | $75 | $45 | | | |
| Parts Specialist | $45 | | | | |
| Plumbing | $75 | $45 | | | |
| Sheet Metal | $75 | $45 | | | |
| Small Engine Mechanics | $75 | $45 | | | |
| Welding | $75 | $45 | | | |

**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

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

**CREDIT CARDS**: The Institute accepts Visa, Entree and Master Charge credit cards for payment of tuition

# Attendance

Anyone admitted to T-VI agrees 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.

While it is recognized that a student who is ill or has a family emergency cannot attend school that day, T-VI does not classify absences as "excused" or "unexcused." The attendance record simply shows how many hours of instruction have been missed, regardless of the reason.

Students who have been absent are responsible for contacting their instructors to arrange for makeup of work missed. Such makeup work will be recorded by the instructor in the grade book.

**TARDIES:** A student who arrives in class during the first 10 minutes after the period starting time is marked tardy. A student who arrives in class more than 10 minutes after the starting time is marked absent for the entire period. However, no instructor may exclude a student from attending the rest of the class hour because of tardiness.

The fifth time a student is marked tardy in any class the instructor will convert the five tardies to one hour of absence and will report the absence to the Attendance Office. Additional tardies will continue to be charged as absences each fifth time the student is late.

**EXCESSIVE ABSENCES:** Students who do not attend classes regularly will be sent a warning letter when absences reach 40 hours to let them know that additional absences will endanger their standing at T-VI and will result in loss of financial aids.

**CONDITIONAL ENROLLMENT:** A student whose absences reach 60 hours will be placed on Conditional Enrollment status and will no longer be considered in good standing at T-VI. Two things happen when a student is placed on Conditional Enrollment: (1) financial aids are terminated at that point and VA benefits are interrupted for a 30-day period, and (2) the student must appear before a Student Appeals Committee in order to prevent being suspended for the balance of the trimester.

**STUDENT APPEALS COMMITTEE:** A student placed on Conditional Enrollment for excessive absences, or suspended for disruptive behavior, has the right to appeal the suspension before a Student Appeals Committee (SAC) made up of students plus one instructor.

A Conditional Enrollment student who does not appear before the SAC will be suspended for the balance of the trimester.

A Conditional Enrollment student who appears before the SAC will have the opportunity to indicate why the suspension should not be carried out. After hearing the appeal, the SAC must recommend to the Institute Vice President one of two courses of action: (1) suspension for the rest of the trimester, or (2) continuation of the Conditional Enrollment status, with terms of possible future suspension in the event of further absences or disruptive behavior incidents.

A student placed on Conditional Enrollment after the SAC hearing may be suspended for the balance of the trimester if terms of the SAC probation are violated. At that point, the suspension is not subject to further appeal.

**READMISSION:** A suspended student may apply to re-enter T-VI the following trimester by repeating the regular admissions procedure. However, re-admission will

# 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. Attendance records and the student's original application are also permanent records.

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.*

A student may examine any and all documents in his or her cumulative records during the normal hours of operation in the Student Records Center. Free copies of attendance records or transcripts will be provided to students and former students at their request.

All other uses of student records will be in accordance with the federal Family Educational Rights and Privacy Act of 1974 and its amendments. Copies of T-VI's procedures for meeting the requirements of this act are

# Standards of Progress

Requirements for graduation in each full-time program are detailed in the Day Division catalog for the academic year when the student entered the program. It is important that each student keep a copy of that year's catalog in order to be able to check whether all of the graduation requirements are being met.

Diplomas or certificates of completion are given to students who successfully complete all of the requirements listed under the program descriptions in the catalog. Some programs have different exit levels and different certificates can be awarded for completing different levels.

**GRADE REPORTS:** Progress reports are given each student at the midpoint 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 the skills mastered which are related to each of the specific objectives for the class. The rating sheets are the progress reports for these classes, and those with sufficient achievement also result in a 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 for which the unsatisfactorily completed course is a prerequisite. An "I" grade may be converted to a credit grade by satisfactorily completing the missing work, usually within the next two trimesters, although some programs allow less time than this to make up incomplete work.

A "U" grade can be made up only by repeating the entire course.

**ACADEMIC PROBATION:** A student who receives an "I" or "U" final report in any course is automatically 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 has received an "I" or "U" in any course, the student may not be allowed to continue in the same T-VI program.

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

**CREDIT BY WAIVER:** Credit toward graduation is usually earned by taking a course and receiving a satisfactory final grade or proficiency rating. However, an applicant or student can also be given waiver credit for any course where he or she can demonstrate the knowledge or skills required for successful completion of the course. Two types of credit by waiver are available.

The first is by examination, and a person who already has the knowledge and skills to pass the final proficiency tests or examinations for a course may obtain waiver credit for that course by examination. However, a student who has a final grade of "U" in a course may not be given a waiver credit for that course.

The second type of credit by waiver may be granted if a student obtains a full-time training-related job during the last half of the final trimester in a program of two or more trimesters in length. Such waivers will be granted only if the student has satisfactory mid-trimester grades, is not on academic probation and is not on Conditional Enrollment status because of excessive absences.

Waiver credit application forms are available in all department offices. Waiver credits require the approval of the class instructor(s), program coordinator, department chairman and associate director of student services. The student applying for waiver credit must continue to attend the class until all of these approvals have been obtained.

Credit by waiver constitutes full and successful completion of the course, meets diploma and certificate requirements, meets prerequisite requirements for ad-

# Testing Services

T-VI's Testing Center provides several services free of charge, including administration of the General Educational Development (GED) examinations for the 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 Spanish or English.

Interested persons are given a brief sample exam to see if they are ready to take the five-part GED examinations. Those who need some study before they are ready for the GED may take free classes either day or evening to prepare for the exams.

Information about the GED testing schedule can be obtained by calling the T-VI Testing Center at 843-7250, extension 217.

The Testing Center also gives tests to applicants to T-VI's full-time programs to help the applicant and counselors determine which T-VI programs may best match the applicant's abilities and aptitudes.

# 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 and transcripts, student financial aids and job placement.

**COUNSELING AND GUIDANCE:** Professional counselors are ready to help applicants choose a career field and get into the instructional program that will meet their needs. They also advise students about any problems they may be having that keep them from doing their best in T-VI's classes. Both applicants and students should feel free to see a counselor at any time. Counselors and advisors are located in the Administration Building, Trades Building, Health Occupations facility at Presbyterian Hospital Professional Building and the building housing the Department of Developmental Studies.

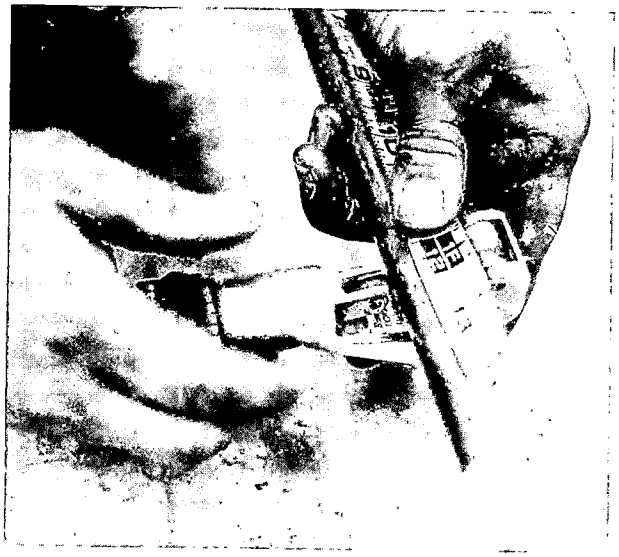
**HEALTH AND NURSING SERVICES:** The student health center is located at Room A-127 and is staffed by a Registered Nurse and a secretary trained in first aid procedures. Services available are first aid for minor injuries and emergency assistance for other injuries and illnesses, counseling about any health problems, vision and hearing testing, and information about such problems as venereal disease and drug addiction. The facility has cots available for persons who become ill while attending school.

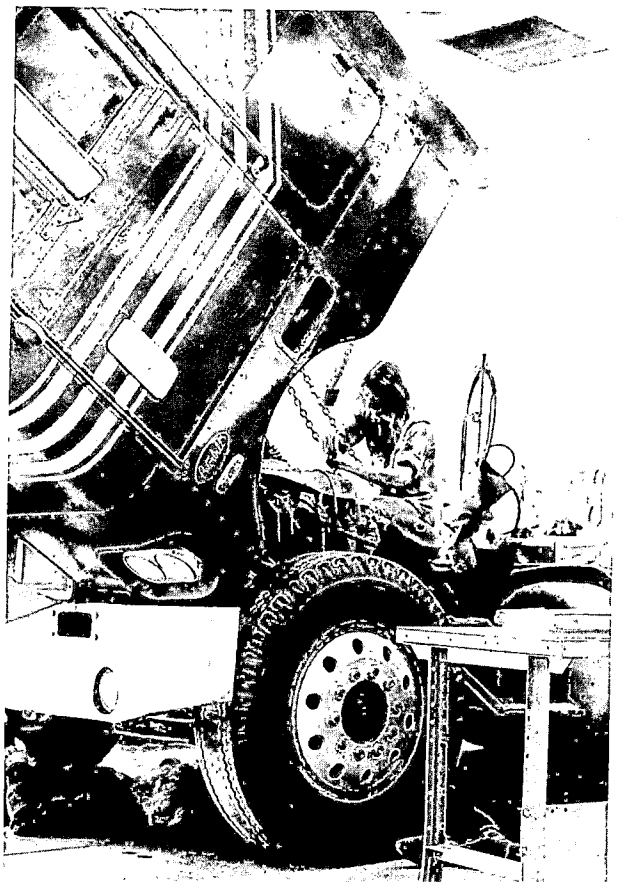
**STUDENT RECORDS:** Any student or former student may examine his or her records at any time during the regular working hours of the Student Records Center (Room A-120). The center also provides, free of charge, transcript copies requested by students or former students for employers and other educational institutions.

**JOB PLACEMENT:** Responsibility for finding a job after completing a program at T-VI is up to the graduate. However, the Institute does have a Placement Services office to help.

Graduates are urged to use the services of the New Mexico State Employment Service, a public agency which charges no fees and which is the official placement service available to T-VI graduates.

The T-VI Placement Services office maintains files of all graduates who are looking for jobs. This office also has the New Mexico State Employment Service's "job bank" listing of available jobs—a list which is updated





# Campus Conduct

Unsafe or disruptive behavior anywhere on the campus, including the parking area, is grounds for dismissal from T-VI. This same guideline applies to any field trip taken under the supervision of a member of T-VI's instructional staff.

**FOOD AND BEVERAGES:** Drinking and eating are prohibited in all classrooms and labs.

**SMOKING:** Not permitted in any classroom, laboratory or shop, smoking is permitted on campus and in the designated area of the student lounge. Each student is expected to keep the campus safe and clean by using the containers provided for smoking litter. Students are also reminded that smoking is hazardous to their health.

**STUDENT DRESS:** Students are to come to class dressed appropriately for the job for which they are training.

Any student or visitor not wearing a shirt or footwear is denied entrance to all buildings on the T-VI campus.

**ANIMALS:** Dogs and other pets are not permitted in any building on the T-VI campus.

**LAW VIOLATIONS:** Violation of laws by anyone on campus will be handled by appropriate law enforcement agencies, just as it would be anywhere else.

**ALCOHOLIC BEVERAGES:** Since T-VI is a public school, it is against New Mexico law to drink, or be in possession of, alcoholic beverages anywhere on the campus, including the parking areas.

# Fires

Because of the nature of many activities at T-VI, the potential for fires is greater than in other schools. And fires have occurred in the past, usually as a result of carelessness.

The Institute does not hold fire drills. An evacuation plan for each classroom is located in that room and should be checked at the beginning of the trimester.

Also, the fire alarm is a continuous, loud bell. Everyone must evacuate the T-VI buildings, move well away from the buildings and stay away until an all clear—a series of three bells—has been sounded.

# Telephone Calls and Visitors

Students will not be called from class to receive telephone calls or visitors.

Pay telephones are provided at various places on cam-

# Transportation and Parking

**VEHICLE REGISTRATION:** All vehicles a student plans to drive to school must be registered during the regular T-VI registration. T-VI provides a numbered decal, free of charge, for each vehicle which should be attached to the back side of the rear-view mirror so that it can be seen through the windshield. Window decals are also available for vans or other vehicles without inside rear-view mirrors. On motorcycles, the decal should be put on the rear fender near the license plate or on another clearly visible location if the rear fender location is not possible.

Only vehicles which display a T-VI decal are allowed to park in the Institute parking lots.

Because student parking is limited, students are urged to form car pools and to use city buses whenever possible.

**PARKING LOTS:** Students are advised not to park on public streets or private parking lots near the campus. Cars parked in private lots, or which block the driveway to a home or business, may be towed away at the vehicle owner's expense.

Free student parking lots are available on the south side of Coal Avenue between Buena Vista and University Boulevard. There is a small lot located behind the former gas station at 1900 Coal Place and an additional lot on the east side of the building housing the Department of Developmental Studies on the south campus.

The parking lots north of Coal Avenue are for staff and visitor parking only—not for student use.

Cars should be locked at all times and valuables locked in the trunk or hidden from view. T-VI's security service patrols all campus parking lots; but the Institute is not liable for thefts, vandalism or other losses which take place while vehicles are parked on the campus.

Violations of parking regulations will result in citations by the security service, and students receiving three or more citations will be referred to the Student Senate Judiciary Committee, with further action depending upon the committee's recommendation. It can range from a warning to suspension from the Institute. Most common violations are parking on T-VI lots without display of the proper decal, student parking in a staff or visitor zone, blocking a driveway or another vehicle and parking in a "no parking" zone.

**CITY BUS PASSES:** The Albuquerque Transit Department, which operates city buses, has special student passes for full-time post-secondary students which are very economical. Two kinds of passes can be purchased: (1) a trimester pass good for unlimited city bus use for the entire 15 weeks of the trimester for $28 or (2) a calendar month pass good for unlimited city bus use for the month for $8.

The trimester passes may be bought at the City Transit Department, 619 Yale SE, with a requirement that a T-VI student identification card be presented. The monthly passes are sold in the office of T-VI s Financial Aids Manager (A-119) as well as the City Transit Department.

Students with severe financial needs may apply for financial assistance for the city bus passes through the Financial Aids Manager.

**VALENCIA COUNTY BUS:** A free bus is available for students who live in the Belen, Los Lunas and southern Bernalillo County areas. It arrives at T-VI each day in time for 1st period classes and departs the campus each day after 7th period. Information about routes and

David Chavez 28401



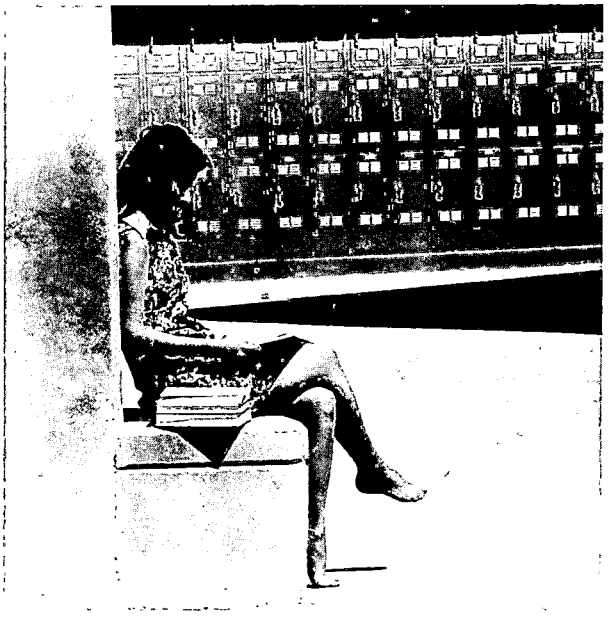
# Safeguarding of Property

A student is responsible for the books and learning materials loaned to him or her and must pay for any which are lost or damaged. Each student is required to make a $10 textbook deposit at the time he or she enters T-VI. Cost of any books lost or damaged will be deducted from the deposit, and the student will be required to re-deposit the $10 before being allowed to register for another trimester. The deposit will remain in effect until the student leaves T-VI, at which time it will be refunded upon return of the remaining textbooks checked out to him or her.

Students are also held responsible for any damage to Institute buildings or equipment as a result of misconduct or negligence.

**STUDENT LOCKERS:** Lockers are available in the South Building, Trades Building, West Building and North Building. A student may make use of any empty locker by simply providing a lock for it. However, the lock must be taken off and possessions removed from the locker the last day of each trimester. Locks remaining on lockers will be cut off and removed during the break between trimesters, and locker contents will be turned over to the Support Services Office, M-103. Unless possessions are claimed in M-103 within 30 days from the end of the trimester, it will be assumed that they have been abandoned and T-VI will dispose of them.

**LOST AND FOUND:** The lost and found location is the Student Activities Office, Room A-36.



# Student Government and Activities

Student self-government at T-VI is in the form of a Student Senate made up of one delegate elected at the beginning of each trimester by each section of a program. Their job is to carry the ideas of their fellow students to the weekly Senate meetings and to report back after each Senate meeting on what is taking place. Service as a Senator is entered on the student's permanent transcript.

The Senate works in any way possible to make T-VI a better place for both students and staff. It is the channel for expressing student concerns about campus conditions and the instructional program, for helping develop school policies and procedures, and for sponsoring a variety of student activities and the student newspaper.

Leadership of the Senate is provided by a student body president and vice president, who are elected by the entire student body for two-trimester terms. During 1978-79, elections will be held late in the Summer 1978 and Winter 1979 trimesters.

Faculty advisor to the Senate is Pamela Micker, a member of the counseling staff. She attends all Senate meetings and serves as the liaison between the student government and the T-VI faculty and staff.

All students are welcome to attend any Senate meeting. However, motions may be made only by elected

**STUDENT ACTIVITIES:** A limited student activities program is available to interested students and staff members. The Student Senate—using funds raised by the coin-operated games in the West Building recreation room—sponsors all-student activities such as dances and picnics.

Other clubs and activities are supported by T-VI's activities budget. The school sponsors various city league athletic teams—basketball, baseball and softball—and various co-curricular and extracurricular clubs.

One important activity is publication of the student newspaper, *The Hemisphere.* Any student interested in working on the newspaper is urged to contact the editor and sponsor at the Student Activities Office (Room A-36).

An effort is made to establish any type of extracurricular club or activity in which at least 15 students are interested. Such a club or activity can be formed if a faculty or staff member is located to serve as the sponsor and if appropriate facilities can be located at reasonable costs. Persons interested in forming an extracurricular club should contact the Student Activities Secretary in Room A-36.

Facilities of T-VI may be used for student clubs and activities at any time they are not in use for instructional programs (generally after 3:15 p.m.) on the condition that the facilities are left as they were with regard to

# Financial Aids

Financial help to attend school is available to T-VI students through several federal and state programs. Some of the financial aids are available through agencies, some through the T-VI Financial Aids Office. Each financial aid program has its own purpose and system of determining need and eligibility.

*Those aid programs for which application is made directly to the agency, rather than T-VI Financial Aids Office, include:*

**VETERANS ADMINISTRATION (VA):** T-VI full-time programs of two or more trimesters in length are approved 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 any course for which he or she already has required skills, regardless of where those skills were learned, without specific VA permission.

Information about eligibility for VA education benefits can be obtained at any Veterans Administration office or from the representative of the Albuquerque Regional VA Office stationed on the T-VI campus during daytime hours.

**SOCIAL SECURITY ADMINISTRATION:** Full-time students up to and including 22 years of age who are children of retired, disabled or deceased workers covered by the Social Security and Railroad Retirement Acts are eligible for Social Security support. The Albuquerque office is located at 1816 Carlisle Boulevard NE (phone 766-2531).

**NEW MEXICO DIVISION OF VOCATIONAL REHABILITATION (DVR):** Persons with disabilities may be eligible for education and training assistance from DVR. The Albuquerque office is located at 5600 Domingo Road NE (phone 842-3985).

**OFFICE OF CONCENTRATED EMPLOYMENT TRAINING ADMINISTRATION (OCETA):** Education and training assistance is provided for unemployed, underemployed economically-disadvantaged persons by this federal agency, which has offices located throughout New Mexico. Information is available from the nearest service center of the New Mexico Employment Security Commission. The OCETA Training Control Center in Albuquerque is located at 1500 Walter Street SE.

**BUREAU OF INDIAN AFFAIRS (BIA):** Indian students may be eligible for education and training benefits through the BIA. For information, contact the Albu-

*Those financial aid programs for which application is made through the T-VI Financial Aids Office (Room A-119, open 8 a.m. to 5 p.m. Mondays through Fridays) are:*

**BASIC EDUCATIONAL OPPORTUNITY GRANT (BEOG):** U.S. citizens with financial needs who will be attending a Day Division program of two or more trimesters in length, and who do not already have a degree from another institution, may apply for a federal BEOG. This program provides grants of up to half of the student's instructional costs.

The application form for the BEOG is the College Scholarship Service (CSS) Financial Aid Form. Completed forms are mailed to CSS, whose national service will analyze financial need and assign the applicant an aid index number. If the aid index number shows that the student is entitled to a BEOG, the T-VI Financial Aid Office issues the grant.

There is no charge if the CSS form is being used only to apply for BEOG. The form is available at most high schools and also from T-VI's Financial Aids Office.

The T-VI student eligible for a BEOG will be given equal monthly installments of the grant so long as he or she continues as a student in good standing.

The BEOG is intended to be the base upon which other kinds of financial aid may be added as needed, and a student who has not made a BEOG application cannot be considered for other aids.

During 1977-78, the largest grants for which T-VI students were eligible totaled about $760 per year.

**NEW MEXICO STATE STUDENT INCENTIVE GRANT (SSIG):** This state and federally-funded program also provides grants to needy full-time students who must be legal residents of New Mexico. Amount of the SSIG, if the applicant is eligible, is between $200 and $500 per year.

Application is by the same process as that described above for the BEOG.

**NEW MEXICO STUDENT LOAN (NMSL):** New Mexico residents enrolled in a vocational program of two or more trimesters in length may apply for a NMSL loan.

Maximum loans are $750 per trimester, and no student may receive loans totaling more than $2000 in any calendar year.

In addition to having applied for a BEOG, the applicant must also complete additional forms to apply for NMSL. The forms are available at the T-VI Financial Aids Office in Room A-119.

T-VI students awarded an NMSL must place their loan in an escrow fund, and they will be issued equal monthly installments of their loan so long as they remain in good standing at T-VI. If the student withdraws, or is placed on Conditional Enrollment and is no longer in good standing, the unused part of the NMSL will be refunded to the state and the student will owe only that amount actually issued to him or her.

*The NMSL is a loan and must be repaid by the student.*

The repayment program must be at least $30 per month and must begin within 12 months after the last date attended. The loan interest rate is 7 percent per year, but the federal government pays the interest while the student is still in school.

**COLLEGE WORK-STUDY (CWS):** Students with severe financial needs, and who meet other federal requirements, may be employed by T-VI during non-class times under the CWS program.

The number of CWS positions available is very small because of limited funds. Those employed may work up to 20 hours per week at $2.65 per hour. Pay periods are every two weeks.

Application forms for CWS are available in the Financial Aids Office.

**SCHOLARSHIPS:** A very limited number of small scholarship awards may be made each year from the T-VI Scholarship Fund. They are for one-time emergency needs and usually do not exceed $75. They are for students in good attendance and academic standing. Scholarship application forms are available from any counselor.

**CITY BUS PASSES:** Needy students who ride Albuquerque city buses to and from T-VI may apply for assistance in the form of a monthly postsecondary student City Transit pass.

The passes are provided by T-VI to students whose needs are severe and who have not received other forms of financial aid which are designed to cover transportation costs.

Applications for the city bus pass aid are available in the Financial Aids Office.

## TERMINATION OF FINANCIAL AIDS

T-VI policy for determining that a student is no longer making satisfactory progress and is no longer eligible to receive federally-supported financial aids is as follows:

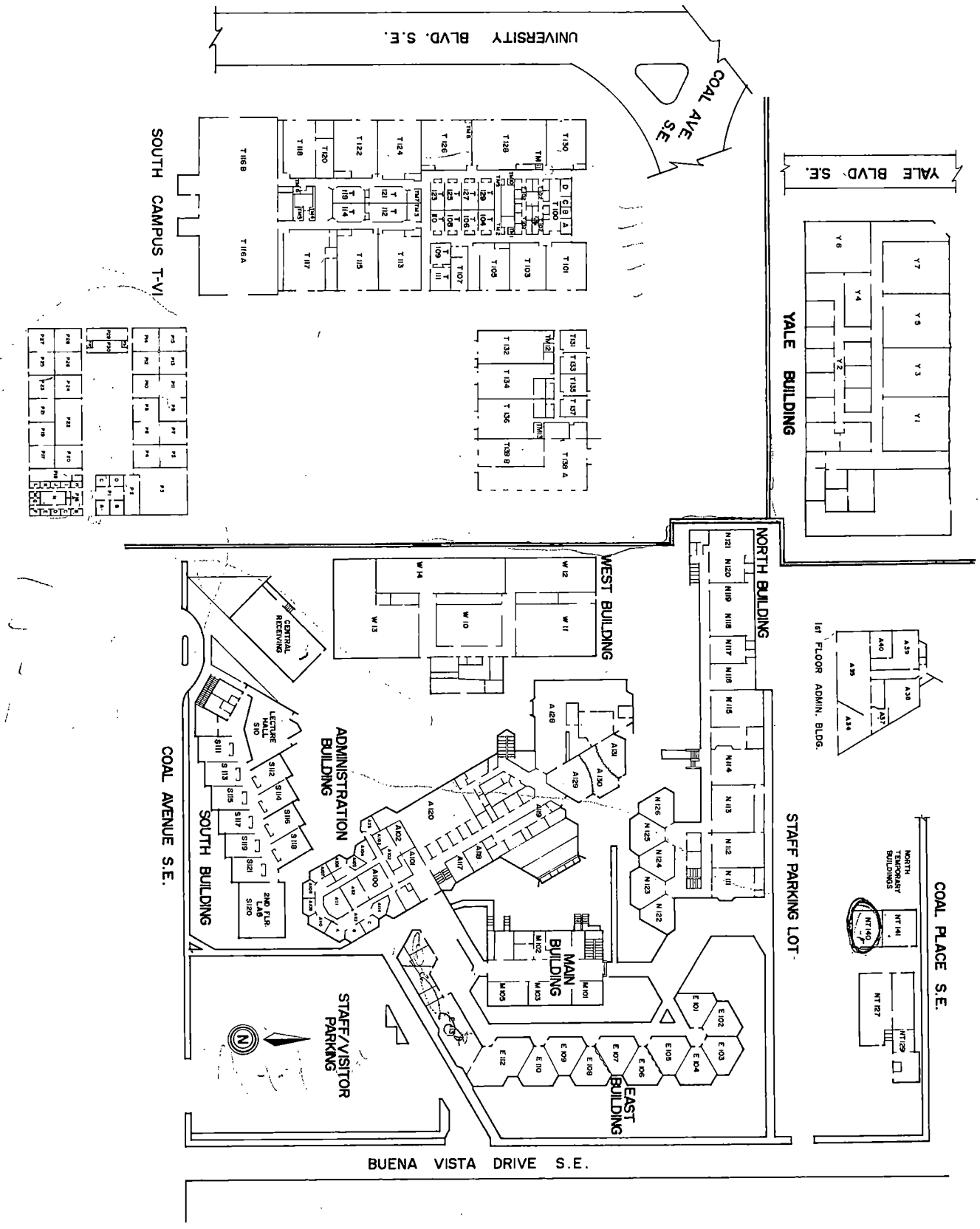
1. A student who is placed on Conditional Enrollment status because of poor attendance will be regarded as no longer making satisfactory progress and financial aids will be terminated at that point.

2. A student who is making a second change of program at T-VI will be considered as no longer making satisfactory progress and will not be eligible to receive student financial aid to enroll in a third program.

3. A student placed on Academic Suspension will have all student financial aid terminated at that point.

**REINSTATEMENT:** A student terminated from financial aids at T-VI may re-establish eligibility for financial aids by successfully completing all requirements toward graduation during one trimester of full-time at-

# Map and Staff Locator




| What | Who | Where |
|---|---|---|
| Activities | Megan Davis, Secretary | A-36 |
| Admissions | Barbara Silva, Coordinator | A-121 |
| | Terrie Kreideweis, Staff Assistant | A-122 |
| Adult Learning Center | Preciliano Garcia, Director | P-1B |
| Attendance Records | Monica Eissele, Secretary | A-120 |
| Conference Rooms, Reservations | | |
| Darrow Room (A-118) | Christina Chavez | A-113 |
| Martinez Room (A-117) | | |
| Luna Room (A-100) | Virginia Peña | A-113 |

| | | |
|---|---|---|
| Counseling | Ben Anzures | T-102 |
| | John E. Baca | A-125 |
| | Ester Chavez | A-127 |
| | Julio Chiaramonte | A-119 |
| | Ray Noble | A-124 |
| | Larry Perez | A-119 |
| | Pamela Micker | T-102 |
| | Del Valdez | A-119 |
| | Ruben Vigil | Pres. Hosp. |
| Curriculum Coordinators | Accounting, Carol Dunkin | M-205 |
| | Air Cond./Sheet Metal, Ruben Roybal, Teacher | T-102 |
| | Auto Collision Repair, Eugene Scarbrough, Teacher | T-102 |
| | Auto Mechanics, Gordon Hock | T-102 |
| | Construction Trades, Todd Blue | T-102 |
| | Culinary Arts, Doug Dunning | A-35 |
| | Data Processing, Dan Fullerton | A-102 |
| | Diesel Mechanics, George Roberts | T-102 |
| | Drafting | A-102 |
| | Food Services, Ray Burns | A-35 |
| | Electronics, Charles Meuser | A-102 |
| | Health Occupations, June May | Pres. Hosp. |
| | Machine Trades, Richard Schoenbeck | T-102 |
| | Office Education, Barbara Logan | M-205 |
| | Preparatory, Wilfred Sawyier | P-1D |
| | John Winterink | P-1C |
| | Sales Education, Paul Davidson | M-205 |
| | Small Engine Repair, Arnold Garcia, Teacher | T-102 |
| | Welding Trades, Dennis Ross | T-102 |
| | Related Trades, Paul Van Baak | T-104 |
| Day Division | Richard Rounds, Director | A-112 |
| | Robert Dorak, Associate Director | T-100 |
| | Loren Omness, Program Specialist | T-100 |
| Department Chairmen | Dale E. Kerby, Business Occupations | M-205 |
| | Jan Micali, Health Occupations | Pres. Hosp. |
| | Philip Callow, Technologies | A-102 |
| | Robert Dorak, Trade and Industrial | T-100 |
| | Preciliano Garcia, Developmental Studies | P-1B |
| Evening Division | Harold W. Jackson, Director | A-26 |
| | Tony Galaz, Associate Director | A-26 |
| | Cleto Duran, Adult Basic Education | A-26 |
| Financial Aids, Loans | Carl Newlen, Manager | A-119 |
| | Carol Tiefa, Assistant Manager | A-119 |
| First Aid, Health Problems | Ester Chavez, Nurse | A-127 |
| Library | Gary House, Instructional Materials Center Director | A-128 |
| Lost and Found | Megan Davis, Activities Secretary | A-36 |
| Personnel Office | Dolores Rozzi | M-102 |
| Placement Services | Cathy Cruz, Secretary | A-119 |
| Preparatory Program Advisor | Rita Powdrell | P-1A |
| Public Information | Denis Cummings, Director | M-102 |
| Recreation Room (W-10) | Megan Davis, Activities Secretary | A-36 |
| Snack Bar | Frances Trujillo, Manager | A-35 |
| Student Senate Advisor | Pamela Micker, Counselor | T-102 |
| Student Records Center | Isabel Gelsinger, Manager | A-120 |
| Student Services Division | David Smoker, Director | A-111 |
| | Del Valdez, Associate Director | A-119 |
| Support Services Division | Marvin Burianek, Director | M-201 |
| | Joe Perea, Maintenance | M-103 |
| | Andy Garcia, Operations | M-103 |
| | David Grife y Vigil, Purchasing Agent | M-103 |
| | Manuel Gutierrez, Teacher Services | A-27 |
| | Irv Christenson, Security and Inventory | M-103 |
| | Mike Olona, Business Manager | M-101 |
| | Karla Whaley, Programmer | M-103 |
| Testing Services | Marge Webb, Manager | A-31 |
| Veterans Affairs, Office of | Pat Lueras, Counselor Aide | A-119 |
| | Bob Bellmaine, VA Representative | A-126 |
| | Monica Eissele, Attendance | A-120 |
| Vice President | Louis E. Saavedra | M-102 |

# GENERAL EDUCATIONAL DEVELOPMENT COURSE (GED)

## (High School Equivalency Exam Preparatory)

By taking this course, students without a high school diploma can prepare for the GED test, also known as the high school equivalency exam.

Upon successful completion of the GED exam, the New Mexico Department of Education issues an official high school diploma which is recognized by colleges and universities, labor unions, state and federal agencies and the armed services as an official high school diploma meeting all requirements of the State of New Mexico.

There are no registration, equipment or testing fees required in the GED preparatory course and the GED exams are given free on a scheduled basis to any interested person. All persons requesting the GED program will be pre-tested to determine the classes needed.

Contact the Evening Division office at T-VI concerning registration for the GED. Hours are noon to 9 p.m. on Mondays through Thursdays and 8 a.m. to 5 p.m. on Fridays.

Students may choose either a morning or afternoon schedule which meets three hours a day, five days a week, on the following schedule.

### MORNING SCHEDULE

Mathematics (Monday, Wednesday, Friday) ..... 8:15-10 a.m.
Social Studies/Science (Tuesday, Thursday) ..... 8:15-10 a.m.
English/Spelling/Literature (Monday through Friday) ..... 10:15-11:15 a.m.

### AFTERNOON SCHEDULE

Mathematics (Monday, Wednesday, Friday) ..... 12:15-2 p.m.
Social Studies/Science (Tuesday, Thursday) ..... 12:15-2 p.m.
English/Spelling/Literature (Monday through Friday) ..... 2:15-3:15 p.m.

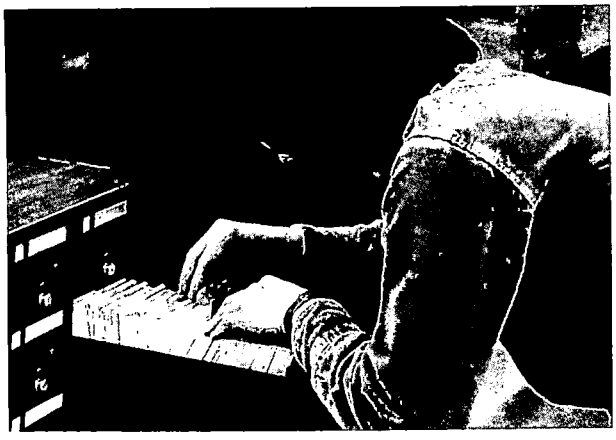
Instruction in the GED program will be on an individual approach and students will work at their own speed. When both instructor and student feel that he or she is ready to take the GED exam, arrangements will be made to have it given at the next scheduled testing session.

**Another option for GED students is also available for those persons who are not able to attend classes during the day. The T-VI Evening Division also offers GED review classes on Mondays, Tuesdays and Wednesdays from 7 to 9 p.m.**

# DEPARTMENT OF DEVELOPMENTAL STUDIES

# Instructional Materials Center

The 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. Located on T-VI's main campus, the center is open from 7:45 a.m. to 8:45 p.m. weekdays except Friday when it closes at 5 p.m. The IMC is not open on weekends.



## LIBRARY SERVICES

Library materials may be checked out for home use between 7:45 a.m. and 5 p.m. daily, except on weekends. Many kinds of books, pamphlets, maps, newspapers, magazines, encyclopedias and dictionaries are available which offer information, recreation, new ideas, stories of the past, issues of the day and views to the future. Special collections of learning materials are maintained in all vocational subject areas taught at T-VI.

Additional services include personal assistance in locating materials, instruction in how to use the library, study facilities, inter-library loan, a copy machine, magazine back issues and many other types of assistance designed to provide the information you want when you need it.

## ADULT LEARNING CENTER

ALC services are offered free of charge to any adult in the community who wants to develop basic education skills.

This center also contains materials for persons entering a variety of vocational fields.

Audio-visual materials are used extensively and specially-trained personnel is on duty at all times to help a person develop and pursue his or her individual program of study.

Basic education areas included are English as a Second Language, reading, spelling, English, mathematics, consumer education, Beginning Spanish and human relations.

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

## AUDIO-VISUAL SERVICES

These services, used primarily by staff members, provide 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

# Preparatory Program

All vocational programs at T-VI require certain minimum math and communications skills for success, and a large number of students who enroll discover that they need to improve those skills before they may enter a vocational program.

The Preparatory Program is designed to help these students develop in math and communications so that they can meet the entry requirements in a vocational program.

A number of electives are also offered to assist students in making a vocational choice and to improve their chance of success in a vocation.

Through individual instruction and counseling, Preparatory students usually qualify to begin their vocational major in one trimester, or four months. However, a student may continue in a second trimester of the Preparatory Program if more help is needed.

A student may enter the Preparatory Program anytime during the first 10 weeks of the trimester or until the classes are full.

Graduation requirements for vocational programs are not met through the Preparatory Program classes; however, the student's attendance and participation in these classes are recorded on permanent T-VI records.

A full-time schedule in the Preparatory Program consists of 20 instructional class hours per week, as outlined in the recommended schedule.

Students under the sponsorship of a specific agency must take a full schedule of at least 20 hours to qualify for full benefits. Other students may take as many classes per week as wanted for their personal needs. The Preparatory Program is not eligible for Veterans Administration benefits for dependent children attending under Chapter 35 of the GI Bill.

## PREPARATORY PROGRAM

| *Recommended Schedule* | *Hours/Week* |
|---|---|
| Mathematics | 10 |
| Communications | 5 |
| Exploratory | 5 |
| Electives | 5 |

*Electives (These classes are open to any interested person.)*

| | |
|---|---|
| Enrichment Cluster | 5 |
| Introduction to Typing | 5 |
| Human Relations | 5 |
| Operating Your Own Business | 5 |
| Personal Financial Management | 5 |
| Reading Improvement | 5 |
| Thinking Skills Development | 5 |
| English as a Second Language (audit only | |

## COURSE DESCRIPTIONS

**Mathematics**

Upon entering the Preparatory Program, the student is placed in the mathematics course that best meets his or her needs, interests and abilities. Each student begins at the start of the program no matter when he or she enters and progresses at his or her own rate with the objective of meeting—or exceeding—entry-level mathematics skills for the vocational field selected. The program begins with basic arithmetic and includes whatever special or advanced topics are needed in that field. All instruction is on an individual basis.

Mathematics courses in the Preparatory Program include foundations (basic arithmetic) and mathematics for Business Occupations, Health Occupations, Technologies and Trades.

**Communications**

This refresher course in communications includes skills in writing, speaking, reading and listening. The stress is on vocational applications with special emphasis on the student's intended vocational program.

**Exploratory**

All career fields available at T-VI are reviewed and exploratory experiences are provided for each student in the field of his or her choice. A student may change exploratory fields at any time he or she wants to investigate a different career possibility. A student is thus enabled to make a more realistic decision as to a vocational choice.

### The following electives are open to any interested person.

**Enrichment Cluster**

This is a series of units, each meeting five weeks for one hour daily, which can help the student understand and get along better with himself and others, especially in a work situation. The student may choose any three units from the enrichment cluster.

- **How To Study**
  Included in this unit are how to take tests and notes, to increase study skills, to use resource facilities, to organize study time and to evaluate oneself.

- **Community Resources**
  In this unit students learn about various agencies in the city through class instruction, speakers, audio-visual materials and field trips.

- **Consumer Education**
  This unit can help the student become a wise buyer and money manager in today's complicated economy.

- **Personal Development**
  Emphasis in this unit is 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**
  Students may qualify for a three-year Red Cross certificate following this basic first aid course, which is useful to those encountering special safety require-

- **Preparatory Spanish**
  Conversational Spanish for non-Spanish-speaking students who will be working in a bilingual society is taught in this unit. Information about the Spanish culture and an appreciation of its customs and traditions are included.

- **Vocabulary and Spelling Development**
  This unit is for the student who needs to improve spelling abilities and expand written and oral vocabulary.

**Introduction to Typing**
This course is for students who want or need to learn the skill of typewriting. Students in Business Occupations who have been identified as having probable and/or unique difficulties in learning typewriting may also enroll. This course is not eligible for Veterans Administration benefits.

**Human Relations**
Human behavior is explored to help the student develop a more positive attitude. Applications to work situations are stressed.

**Operating Your Own Business**
This course provides an introduction to the world of small business for those interested in owning their own businesses. Topics reviewed range from personnel and credit management to bookkeeping and income tax for the small business.

**Personal Financial Management**
This course delves into the realm of domestic financial concerns such as food shopping, budgeting, credit, income tax, insurance and housing. Related topics of class interest are discussed as time permits.

**Reading Improvement**
The primary objective of this course is to help students understand what they read. Students with special reading problems are counseled to take this course.

**Thinking Skills Development**
This is a basic course in thinking skills development for those who want to improve their general thinking abilities. Several thought processes will be explored and applied to general problem solving situations, math word problems and group processes.

**English as a Second Language**
**(Not for credit, audit only)**
This class is for students who have not taken a class in English or for persons who cannot speak any English.

# Displaced Homemaker Program

This five-week class is designed for persons who have spent a considerable amount of time in the home and who need or want to go to work or return to school.

The class is offered twice each trimester and meets two hours each day. To accommodate different schedules, the class is offered at different times of the day.

Any interested person may enroll and space is available on a first-come, first-served basis.

The curriculum deals with the positive aspects that occur when a homemaker changes from the home to employment or school, a self-assessment of marketable skills, resumé writing, interviewing techniques, a look at the local job market and community resources, and assistance with personal decisions related to vocational and educational choices.

Discussion, testing, counseling and audio-visual resources are all used as aids in the program.

Following completion of the Displaced Homemaker Program, a student may enter a GED program, the Preparatory Program, a vocational program at T-VI, other educational programs in the community or a job.

Only charge for this class is the regular $10 preregistration fee at T-VI.

# BUSINESS OCCUPATIONS

## Accounting

**4 Trimesters**

The Accounting Program is an excellent field of study for persons who are looking for a career that is a challenge and has the potential for unlimited personal growth. It is one of the largest programs at T-VI and has an excellent record for placement of graduates.

Accounting labs include chalkboards, overhead projectors and screens, electronic calculators and electric adding machines.

This program begins with the basic principles of bookkeeping and progresses to more complicated accounting theory. The graduate is prepared for entry-level job opportunities ranging from payroll clerk to full-charge bookkeeper. The potential for advancement into jobs with increasing responsibility is good.

The four-trimester program offers up to 1,800 hours of instruction.

Students may select any of the electives listed which best prepare them for their employment goals. At least one elective must be an accounting course. Not all courses will be offered each trimester and a minimum enrollment of 15 students is required for an elective to be offered.

Students acquire an employable skill after the successful completion of all courses listed under Trimesters I and II. If for any reason a student must interrupt training after this point, a bookkeeping certificate will be awarded upon request.

An Accounting Diploma is awarded to those students who satisfactorily complete all of the courses listed under Trimesters I, II, III and IV plus 300 hours of electives including 75 hours in accounting. All students are given a proficiency certificate for each course.

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

## ACCOUNTING PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Accounting Principles Lab I | 10 |
| Accounting Math | 5 |
| Office Machines | 5 |
| Typing I | 5 |
| *Trimester II* | |
| Accounting Principles Lab II | 10 |
| Principles of Data Processing | 5 |
| Business Communications I | 5 |
| Typing II | 5 |
| *Trimester III* | |
| Intermediate Accounting Lab I | 10 |
| Tax Accounting | 5 |
| Business Communications II | 5 |
| *Trimester IV* | |
| Intermediate Accounting Lab II | 5 |
| Managerial Accounting | 5 |
| *Recommended Electives* | |
| Cashiering | 5 |
| Supervised Work Experience | 10 |
| Principles of Economics | 5 |
| RPG II | 5 |
| Principles of Management | 5 |
| ANSI COBOL I for Accounting | 5 |
| ANSI COBOL II for Accounting | 5 |
| Business Law | 5 |
| Records Management* (7½ weeks) | 5 |
| Advanced Accounting | 5 |
| Auditing | 5 |
| Accounting Systems Design | 5 |
| Governmental Accounting | 5 |
| Cost Accounting | 5 |
| BASIC | 5 |

*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**
Skill is developed in the touch method of operating the most widely used office machines.

**Typing I**
Individual instruction permits a student to progress at his own pace. At the end of the course, a beginning student should be able to type a minimum of 25 words per minute.

**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.

**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, and digital and analog computers.

**Business Communications I**
The student learns to communicate effectively through the study of writing fundamentals. Students will also have the opportunity to develop oral and listening skills.

**Typing II**
(*Prerequisite: Typing I*) Students type business letters, accounting reports and business forms. Emphasis is on the typing skills the student is most likely to use in an accounting job. Students should be able to type a minimum of 40 words per minute at the end of the course.

**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**
(*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 will write effective business letters, reports and memoranda. Continued use of oral communications and listening skills is stressed.

**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.

**Managerial Accounting**
(*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.

**RPG II**
(*Prerequisite: Principles of Data Processing*) This course will introduce the student to the procedures and techniques of processing basic accounting applications using the RPG II programming language.

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

**ANSI 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 Structured ANSI COBOL programming.

**ANSI COBOL II for Accounting**
(*Prerequisite: ANSI COBOL I for Accounting*) The student will continue writing Structured ANSI COBOL programs directly related to the processing of accounting data.

**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.

**Records Management (7½ weeks)**
Filing, operational and managerial duties of the office worker are studied in this course.

**Advanced Accounting**
(*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**
(*Prerequisite: Accounting Principles Lab II*) Auditing procedure, reports and working papers used in financial procedure, and 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**
(*Prerequisite: Accounting Principles Lab II*) This course deals with the design of a chart of accounts, an accounting manual, flow charts, the system of internal control and reports to management.

**Governmental Accounting**
(*Prerequisite: Accounting Principles Lab II*) This course provides the student with additional accounting training for government and other non-profit entities.

**Cost Accounting**
(*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.

**BASIC**
(*Prerequisite: Principles of Data Processing*) The student will learn how to code, debug, create, update, store and retrieve accounting programs and data using the BASIC computer language. Maximum use of the conver-


# Business Occupations Learning Center

The BOLC is designed to serve T-VI students and members of the general public who want to review or learn a particular subject or skill on an individual basis.

Students may begin using this center at anytime during the trimester and stop going to the center when personal objectives have been met. Hours are arranged to suit individual needs.

The center is open from 7:15 a.m. to 8:30 p.m. weekdays except Friday when it closes at 4:30 p.m.

A fee of $10 is required of students who are not attending T-VI full-time in courses of study which require consumable text-workbooks or lab materials. Several areas require no fees.

Instruction is offered on new equipment including electric typewriters, electronic office machines, transcribing machines, text-editing typewriters and audio-visual training equipment.

## SUBJECT/SKILL AREAS

**Typing I**
Students having no prior formal typing courses are encouraged to enroll in a Typing I course for techniques before entering this area which includes a review of keyboard and basic techniques with instruction on mechanics, letters and tabulation.

**Typing II**
(*Prerequisite: Typing I or placement test*) This continuation of Typing I emphasizes speed, accuracy and

**Typing III**
(*Prerequisite: Typing II or placement test*) This is a continuation of Typing II.

**Machine Transcription**
Instruction in the use of transcribing machines in the preparation of mailable business correspondence is provided.

**Word Processing**
(*Prerequisite: Demonstrated English and Typing skills*) Training is on text-editing, magnetic keyboard typewriters with emphasis on the capabilities and mechanics of the machines.

**Medical Transcription**
(*Prerequisite: Machine Transcription*) This area develops familiarity with medical terminology and transcription.

**Legal Transcription**
(*Prerequisite: Machine Transcription*) Familiarity with legal terminology, forms and transcription is developed.

**Records Management**
This area provides basic principles of filing.

**Office Machines**
Skill is developed on electronic calculators.

**Communications Review**
Instruction is in grammar, spelling and punctuation.

**Shorthand Review**

# Distributive Education

**1 Trimester**

Persons who need to learn a skill quickly and find a job as soon as possible should consider this cashier-sales program. The 15-week program is designed with half days of classroom instruction and a minimum of 150 hours at an approved station for Supervised Work Experience.

The cashier-sales laboratory teaches the skills of salesmanship, cash register operation touch system and human relations.

Operational skills are taught on various makes and models of both electro-mechanical and electronic cash registers as well as produce calculating scales.

It is a course for those preparing for distribution of goods and services to the public, including all retail, wholesale and service occupations. It also is a good place for students to begin who want to explore sales as a possible career.

Applicants are 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 are given proficiency certificates for the course, and special recognition is given those students completing the entire course.

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

# Fashion Merchandising

2 Trimesters

The Fashion Merchandising program is a good beginning 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 fashion background. Entry-level jobs range from retail salesworkers to assistant department managers. Some graduates have been promoted to fashion coordinators and store managers.

The fashion lab is equipped with mannequins, various display furniture and related fashion items. Electronic and electro-mechanical cash registers are also utilized.

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

Students acquire a basic employable skill upon satisfactory completion of all courses offered the first trimester. If a student leaves for a full-time training-related job after this point, a Sales Certificate may be requested.

Students successfully completing all required courses in the two trimester program will receive a Diploma in Fashion Merchandising. All students are given a proficiency certificate for each course. Participation in a "seminar of work" is required of students electing to waiver to a training-related job after mid-term of the last trimester.

## FASHION MERCHANDISING PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Fashion Lab I | 10 |
| Fashion Communications | 5 |
| Introduction to Business | 5 |
| Salesmanship | 5 |

| *Trimester II* | |
|---|---|
| Fashion Lab II | 10 |
| Principles of Retailing | 5 |
| Advertising and Display | 5 |
| Merchandising Math | 5 |

| *Recommended Electives* | |
|---|---|
| Cashiering | 5 |
| Supervised Work Experience | 5-10 |
| Principles of Management | 5 |
| Business Law | 5 |

## COURSE DESCRIPTIONS

**Fashion Lab I**
This course introduces the student to the world of fashion merchandising, including basic fashion terminology and industry practices; the historical development of fashions; and the components of fashion, including elements of design, apparel construction, basic apparel,

**Fashion Communications**
This course builds listening and speaking skills with emphasis in the fashion merchandising field. Writing, spelling and vocabulary building will be included.

**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 textiles and the coordination and merchandising of fashion, including buying, styling and trend reporting. Projects, 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**
(*Prerequisite: Principles of Salesmanship*) This lab is designed to cover 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.

**Merchandising Math**
This course is a review of arithmetic fundamentals, equations, percent, commercial discounts, markup, markdown and turnover. Basic office machines will be used in the solving of problems.

**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.

**Supervised Work Experience**
(*Prerequisite: Fashion Merchandising I classes*) Students work a minimum of 75 hours in a fashion-related supervised work situation. The trainee is paid by the cooperating firm and is supervised jointly by T-VI and the cooperating employer.

**Principles of Management**
This introductory course develops the student's understanding of the five basic management functions of planning, organizing, staffing, directing and controlling.

**Business Law**
This course provides the student with a basic knowledge of law as it applies to business in our society. Since the law permeates all aspects of business, this course applies to both individual business transactions and to partnership and corporation types of business organizations.

The student will become aware of the legal environment under which a business must function. The student will be able to recognize the need for competent counsel

# Office Occupations

**3 Trimesters**

Career opportunities in office occupations are unlimited. More and more businesses are actively looking for office workers—both men and women—who have the potential to be promoted to administrative positions. The office worker has a choice of many fields in which to work: legal, medical, governmental, technical, service and educational.

Since office workers represent their employers and companies, it is important that persons in this field enjoy working with people. They should also be interested in routine office work.

The Office Occupations program provides students with skills through which they can gain employment in receptionist, clerical, clerk-typist and typist positions. In addition, the program provides elective courses beyond the required courses which will qualify graduates for secretarial and stenographic entry positions.

Students acquire an employable skill upon successful completion of the first trimester. If a training-related work, a clerical certificate may be requested.

Students successfully completing all of the required courses in the three-trimester program will receive a Diploma in Clerical Occupations. Those who also complete the requirements for Transcription (Shorthand III) will receive a Diploma in Secretarial Occupations.

Proficiency certificates are presented to students for each course when at least one area of study has been successfully completed.

The program provides 1,125 hours of instruction. An additional 225 hours of elective offerings may be taken, if desired.

Office Occupations labs and classrooms contain modern equipment including electric typewriters exclusively, electronic calculators, transcribing machines, text editing typewriters and individualized learning equipment.

An entering student who has a strong background in clerical or secretarial skills may waive any course by examination and may substitute a

## OFFICE OCCUPATIONS PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Typing Lab I | 10 |
| Office Communications I | 5 |
| Business Mathematics | 5 |
| Fundamentals of Business | 5 |

| *Trimester II* | |
|---|---|
| Typing Lab II | 10 |
| Office Communications II | 5 |
| Secretarial Accounting | 5 |
| Office Machines (7½ weeks) | 5 |
| Records Management (7½ weeks) | 5 |

| *Trimester III* | |
|---|---|
| Typing Lab III | 10 |
| Office Communications III | 5 |
| Fundamentals of Data Processing | 5 |
| Business Relations | 5 |

| *Electives** | |
|---|---|
| Shorthand I** | 5 |
| Shorthand II** | 5 |
| Transcription (Shorthand III)** | 5 |
| Cashiering | 5 |
| Principles of Economics | 5 |
| Principles of Management | 5 |
| Business Law | 5 |
| ANSI COBOL I | 5 |
| RPG II | 5 |
| Individualized Instruction | Variable |

*Will be an additional course each day.
**Required for a Secretarial Diploma.

## 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.

**Office Communications I**
This is an introduction to oral and written communications with emphasis placed on vocabulary building, spelling communication, grammar, punctuation, oral expression and listening skills.

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

**Fundamentals of Business**
This is an introduction to business organization and operation, including banking, insurance, credit and economic concepts.

**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 Communications II**
(*Prerequisite: Office Communications I*) This course is a continuation of Office Communications I with greater emphasis on punctuation and sentence and para-

**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.

**Office Machines (7½ weeks)**
(*Prerequisite: Business Mathematics*) Skill is developed on the most widely used office machines.

**Records Management (7½ weeks)**
This course involves basic principles and management procedures of filing.

**Typing Lab III (Advanced)**
(*Prerequisite: Typing II*) This course provides continued development of typing skills including legal, medical and technical typing. The typing goal is a speed of 60 words per minute.

**Office Communications III**
(*Prerequisite: Office Communications II*) Principles of writing and composing of business correspondence are covered. Continued emphasis is placed on grammar, punctuation, spelling, and oral communication and listening skills.

**Fundamentals of Data Processing**
Basic data processing terminology, preparation of source data (including key-punch) for processing and other aspects of automation are covered.

**Business Relations**
(*Graduating Office Occupations students only.*) Office procedures, human relations and job preparation are included in this course.

**Shorthand I (Gregg)**
This introductory course covers the theory and writing of Gregg shorthand. A writing speed of 50 words per minute is attained upon completion of the course.

**Shorthand I (Alphabetic)**
Reading and writing of ABC Stenoscript shorthand is learned. A writing speed of 50 words per minute is achieved upon completion of the course.

**Shorthand II**
(*Prerequisite: Shorthand I*) 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 (Shorthand III)**
(*Prerequisite: Shorthand II*) Goal for this course is a minimum dictation speed of 80 words per minute on new materials and 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.

**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**
This introductory course helps the student develop an understanding of the basic management functions, including planning, organizing, staffing, directing and con-

**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.

**ANSI COBOL I**
(*Prerequisite: Fundamentals of Data Processing*) The student will record transactions, produce reports, develop management data, keep inventories and accounts receivable and other accounting procedures using Structured ANSI COBOL I programming.

**RPG II**
(*Prerequisite: Fundamentals of Data Processing*) This course will introduce the student to the procedures and techniques of processing basic accounting applications using the RPG II programming language.

**Individualized Instruction**
Basic and supplementary instruction in typing, word processing, office machines, machine transcription, medical transcription and legal transcription is given on an individualized basis.

# Real Estate

The Real Estate courses are designed for persons currently in real estate careers and allied fields and for persons contemplating entering the profession. All courses have been approved by the New Mexico Real Estate Commission for licensing and recertification. Classes will be held on Saturdays only and are not eligible for Veterans Administration benefits.

Each class will be offered if 20 or more persons are enrolled. There is a $3 preregistration fee per trimester plus the cost of a textbook purchase.

## FALL TRIMESTER

*September 30, October 7, 14, 21
**October 28, November 4, 11, 18

*Real Estate Practice ..... 30 Hours
**Real Estate Law ..... 30 Hours

## WINTER TRIMESTER

*February 3, 10, 17, 24
**March 3, 10, 17, 24

*Real Estate Appraisal ..... 30 Hours
**Real Estate Finance ..... 30 Hours

## SUMMER TRIMESTER

*June 2, 9, 16, 23
**June 30, July 7, 14, 21

*Real Estate Practice ..... 30 Hours

## COURSE DESCRIPTIONS

**Real Estate Practice**
This course in real estate covers all aspects of the field in general and is planned for those individuals who need to review and for those desiring a basic knowledge of the real estate business and the basic tools needed for real estate practice.

**Real Estate Law**
The course is designed to establish in the student's mind the rights and obligations of the real estate agent with regard to his contractual and fiduciary duties owed to the parties he represents. Major topics include Ownership Rights, Law of Agency and Law of Contracts.

**Real Estate Appraisal**
An introduction to accepted methods for estimating the value of real property, this course covers fundamentals of real estate appraisal of both land and improved property and techniques used by professional appraisers.

**Real Estate Finance**
This is a study of methods of financing real property, the money market, sources and cost determinants of mortgage money, financial leverage, value of existing mortgages in relation to the current market and pur-

# Refresher Course for Office Workers

The Refresher Course is for persons who need a review of office skills and procedures in order to go back to work. Students entering this program must have a minimum of two years full-time secretarial or general office experience.

Students may enter this program as space is available and may leave upon completion of their training objective. Students are awarded a proficiency certificate showing their achievements, and special recognition is given those completing the program.

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, mathematics, filing, human relations and job preparation.

All work is on the most modern electric typewriters, electronic calculators and dictation equipment.

This program is not eligible for Veterans Administration benefits.

REFRESHER COURSE PROGRAM

| | *Hours/Week* |
|---|---|
| Typing Review | 20 |
| Shorthand Review | |
| Office Machines | |
| Communications Review | |
| Business Mathematics Review | |
| Filing Review | |
| Human Relations/Job Preparation | |

COURSE DESCRIPTIONS

**Typing Review**
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.

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

**Communications Review**
Review covers both written and oral communication. Emphasis is placed on punctuation, grammar, letter writing and telephone communication.

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

**Filing Review**
A review of procedures and methods of filing.

**Human Relations/Job Preparation**
Office procedures, human relations and job preparation are covered.

# Sales Management

**2 Trimesters**

The Sales Management Program is for those persons interested in the huge field of retailing and sales or for those who want to go in business for themselves. Graduates are prepared for employment as management trainees in small businesses, variety and discount stores, large department stores, specialty stores and professional selling.

The sales lab is equipped with mannequins and a wide selection of display furniture and fixtures. Electronic and electro-mechanical cash registers are also utilized.

The two-trimester program offers up to 750 hours of instruction in promotion of goods and services, buying, pricing, stock control and salesstanding come from offerings in business mathematics, accounting, marketing and principles of management. Electives are available for the student desiring additional related hours of instruction.

Students acquire a basic employable skill upon satisfactory completion of all courses offered the first trimester. If a student leaves for a full-time training-related job after this point, a Sales Certificate may be requested.

Students satisfactorily completing all required courses in the two-trimester program will receive a Diploma of Sales Management. All students are given a proficiency certificate for each course. Participation in a "seminar of work" is required of students electing to waiver to a training-

## SALES MANAGEMENT PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Principles of Salesmanship Lab | .5 |
| Merchandising Math | .5 |
| Introduction to Business | .5 |
| Merchandising | .5 |
| Store Operations | .5 |
| *Trimester II* | |
| Principles of Management | .5 |
| Principles of Marketing Lab | .5 |
| Advertising and Display | .5 |
| Sales Management Communications | .5 |
| Basic Accounting | .5 |
| *Recommended Electives* | |
| Cashiering | .5 |
| Business Law | .5 |
| Principles of Economics | .5 |
| Principles of Data Processing | 5 |
| Supervised Work Experience | 5-10 |

## 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.

**Merchandising**

The areas covered include ordering, receiving, pricing, marking, promoting and selling to the customer.

**Store Operations**

Store locations and store layout are emphasized along with such operational concerns as employee selection and training, customer services, security, inventory and financial control.

**Principles of Management**

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

**Principles of Marketing Lab**

This lab is designed to study the total marketing picture, from the production of goods to the potential customer, from a management point of view.

**Advertising and Display**

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

**Sales Management Communications**

This course builds listening and speaking skills. Writing, spelling and vocabulary building are included.

**Basic Accounting**

Instruction is provided in accounting fundamentals. Included are the accounting cycle, accounting state-

**Cashiering**

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

**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.

**Supervised Work Experience**

(*Prerequisite: Sales Management I classes*) Students work a minimum of 75 hours in a sales-related supervised work situation. The trainee is paid by the cooperating firm and is supervised jointly by T-VI and the co-

# Small Business Operation

1 Trimester

The Small Business Operation program is designed for persons who plan to open a small business and for persons owning or managing a small business who are interested in further training. The program places special emphasis on areas directly affecting the businessman in his day-to-day operation. Courses will be tailored to the specific needs of the enrollees.

All students completing the program will be issued a certificate.

The program is offered during the Summer Trimester only and is not approved for Veterans Administration training benefits.

## SMALL BUSINESS OPERATION PROGRAM

| *Course Requirements* | *Hours/Week* |
|---|---|
| Economics/Business Law/Salesmanship | 5 |
| Retailing | 5 |
| Accounting | 5 |
| Management | 5 |

## COURSE DESCRIPTIONS

**Economics/Business Law/Salesmanship**

The first segment will cover the current local and state economic picture. The business law segment will emphasize contracts, sales, commercial paper and insurance. The last five weeks will be devoted to sales techniques and salesmanship.

**Retailing**

The first five weeks is concerned with merchandising techniques. The second five weeks will cover advertising and its application to small businesses, and the final five weeks will deal with customer public relations.

**Accounting**

The first ten weeks will provide an insight into the theory and practice of accounting as it relates to the small business. The ability to read and interpret financial statements will be stressed. The last five weeks will be concerned primarily with how to acquire the necessary local, state and federal licenses; employer's tax numbers; and tax report procedures.

**Management**

The techniques involved in the development of individual business plans and the procedures necessary to implement these plans will be covered.

Management techniques for the small business owner or manager will be reviewed with emphasis on the hiring and training of employees and credit and collection

# HEALTH OCCUPATIONS

T-VI's Health Occupations Department, located on the first two levels of the Presbyterian Professional building, 201 Cedar SE, includes four programs: Nursing Assistant, Practical Nursing, Respiratory Therapy Technician and Patient Service Clerk.

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

Applicants for the Nursing Assistant and the Patient Service Clerk programs follow the regular T-VI admission procedures noted at the beginning of this catalog. The Nursing Assistant Program is offered each trimester while the Patient Service Clerk Program is offered during the winter and summer trimesters only.

The other two programs, Practical Nursing and Respiratory Therapy Technician, admit beginning groups only once a year. Special application forms are used for both programs.

Applications for the Practical Nursing Program will be taken only between 8 a.m. and noon on March 1, 2 and 5, 1979. Application must be made at the T-VI campus in person by the applicant or a representative. Challenge applications will be taken from September 18, 1978, to October 31, 1978, at the Presbyterian Professional Building, Health Occupations Office. The challenge examinations will be given November 6, 1978.

Respiratory Therapy Technician applications will be accepted beginning May 2, 1979, and must be made in person by the applicant or a representative.

Classes in both programs will begin in September, 1979.

Because these two programs are very demanding, and because the number of applicants far exceeds the number of student training positions available, an admissions process is used to establish a Practical Nursing Class of 90 students and a class of 22 Respiratory Therapy Technician students.

One-third of the students selected for the Practical Nursing class will be those scoring highest on the admissions test and having a health occupations background. A second portion of the class will be made up of alternates selected but not called for the previous year's class. The last portion of the class will be made up of persons randomly selected by computer from the remaining applicants who meet the requirements of qualifying scores, having an interview and submitting letters of recommendation.

For the Respiratory Therapy Technician class, the admissions process used is a combination of 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.

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.

All of the health occupations programs have theory classes in one of the modern classrooms located in the Presbyterian Professional Building. The Helene Fuld Library and Media Center is one of the best health occupations libraries in the area with a large collection of books and audiovisual materials and equipment. Two learning laboratories are equipped with hospital furnishings and supplies, respiratory therapy machines, and life-like anatomy models and simulators which provide students the opportunity to practice basic skills needed for their clinical experiences.

Students have supervised clinical experiences at a variety of local community health agencies. Some of the facilities used are Anna Kaseman Hospital, Bernalillo County Medical Center and Mental Health Center, Presbyterian Hospital, St. Joseph Hospital, Lovelace-Bataan Clinics, Hospital-Home Health Care Agency and the Visiting Nurse Service.

must provide their own transportation to the various health care agencies and patients' homes. Public transportation is usually inadequate for this purpose.

A $25 fee covers the cost of the required uniform and laboratory tests. A watch with a second hand and uniform shoes are required but not provided.

The 15-week program totals 328 hours of instruction with nine weeks of classroom and laboratory work followed by six weeks of extensive supervised clinical training in local hospitals and home health agencies.

The program is not approved for Veteran's Administration training benefits.

# Nursing Assistant

**15 Weeks**

This program provides the basic nursing skills required for the care and comfort of the sick in hospitals, nursing homes, public health agencies, private medical and dental offices and in the home setting.

Persons completing the program successfully will receive dual certification—as Nursing Assistants and as Home Health Assistants.

When working in a home setting, Nursing Assistants are supervised by a home health care registered nurse or appropriate registered/certified therapist. They help home-bound patients achieve and maintain a maximum level of independence by adapting nursing skills to private homes.

Good communication skills are necessary in the program as well as cleaning and cooking abilities. Applicants are encouraged to have a valid New Mexico driver's license because students

## NURSING ASSISTANT PROGRAM

| *Course Requirements* | *Total Hours* |
|---|---|
| Nursing Assistant—Home Health Assistant Lab and Theory | 90 |
| Nutrition Lab and Theory | 21 |
| Health Communications | 12 |
| Anatomy and Physiology | 18 |
| Math | 45 |
| Hospital Clinical Experiences | 88 |
| Home Health Clinical Experiences | 54 |
| Total | 328 |

## COURSE DESCRIPTIONS

**Nursing Assistant—Home Health Theory and Lab**

During the first nine weeks, students attend lectures on basic nursing skills used in health care agencies and learn adaptation of skills for the home environment. Practice of these skills is provided in the laboratory.

**Nutrition Theory and Lab**

Concepts of basic nutrition and adaptation of regular and modified diets for use in the hospital and home settings are discussed. Home management, community resources, purchasing food and preparing foods are also included. Lab experiences are directly related to the theory.

**Health Communications**

Medical terminology, abbreviations, communication skills, selected readings and special assignments relevant to the nursing field are combined in this course.

**Anatomy and Physiology**

This course provides a basic concept of the structure and normal function of the body systems and their interdependency. It also covers some of the abnormalities that affect these systems.

**Math**

Basic math is reviewed in this course with practice in working selected problems related to the students' activities.

**Hospital Clinical Experiences**

Hospital experiences are a four week portion of the last six weeks of the program and will include specialized training and application of acquired skills in hospitals throughout the city.

**Home Health Clinical Experiences**

Home Health experiences are a two-week portion of the last six weeks of the program and include field observations and experiences in selected home settings.

# Patient Service Clerk

**10 Weeks**

The program for Patient Service Clerk, sometimes called ward clerk or service secretary, trains persons to serve as the hub of communications in a hospital unit, primarily transcribing physicians' written and verbal orders, answering the telephone and giving 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 helpful. Physical stamina is essential because the job requires moving about quickly and easily in an area of intense activity.

There is a $25 fee which covers the required uniform and laboratory tests. The 300-hour program is ten weeks long with six weeks of classroom theory and four weeks of clinical practice in local hospitals. A certificate is awarded upon successful completion.

The Patient Service Clerk Program will be offered only in the winter and summer trimesters.

This program is not approved for Veterans Administration benefits.

### PATIENT SERVICE CLERK PROGRAM

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

### COURSE DESCRIPTIONS

**Patient Service Clerk Theory and Lab**

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

**Clinical Practice**

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

# Practical Nursing

**3 Trimesters**

This program prepares students to care for patients in a variety of health care facilities under the supervision of registered nurses and physicians. Employment possibilities for practical nurses continue to be extensive. Men and women who want to work in a field in which they can provide help to others should find practical nursing a satisfying choice.

The T-VI/Presbyterian Hospital School of Practical Nursing is sponsored jointly by T-VI and Presbyterian Hospital Center and is accredited by the National League for Nursing and the New Mexico State Board of Nursing (NMSBN).

After the completion of the three-trimester program, students are eligible to take the state practical nursing license examination given by the NMSBN.

Practical Nursing applicants must have either a high school diploma or equivalency and score well on achievement tests to be considered for the program. Applications for the September, 1979, class will be accepted between 8 a.m. and 12 noon on March 1, 2 and 5, 1979, and must be made in person by the applicant or a representative at that time.

The program totals 1,350 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 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 and 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 $65 fee which supplies required uniforms, cap, scissors and identification tag. It does not cover the cost of an entrance physical examination, a watch with second hand, uniform shoes, stethoscope, liability insurance, graduation uniform, graduation pin or state board exam fees. **Liability insurance is required and must be purchased in the first trimester.**

## PRACTICAL NURSING PROGRAM

| *Trimester I–15 Weeks* | *Total Hours* |
|---|---|
| Anatomy and Physiology I | 60 |
| Nursing Foundations Core | 163 |
| Nursing Skills Lab and Clinical Experience | ~~185~~ 195 |
| Dosages and Solutions | 32 |
| Total | 450 |
| *Trimester II–18 Weeks* (Jan 3 to May 21, 1979) | |
| Medical-Surgical Nursing for Children and Adults | |
| Clinical Experience | 360 |
| Theory | 180 |
| Total | 540 |
| *Trimester III–12 Weeks* (May 22 to August 17, 1979) | |
| Maternal–Infant Nursing | |
| Clinical Experience | 80 |
| Theory | 40 |
| Advanced Nursing | |
| Clinical Experience | 160 |
| Theory | 80 |
| Total | 360 |

## COURSE DESCRIPTIONS

**Anatomy and Physiology I**
This course gives the student a basic concept of the general plan, structure and the normal function of the body systems and their interdependency.

**Nursing Foundations Core**
People'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 Experience**
Practice situations in the laboratory and experiences in hospital clinical units 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**
People's needs during illness are expanded in the theory presentations of the 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 prenatal, labor, delivery and postpartum care are introduced in this course. Care of the newborn and a study of the more common anomalies seen in the newborn are covered. Clinical experiences accompany the classes.

**Advanced Nursing**
This course focuses on patients experiencing complex medical-surgical problems. Students, with the help of the instructors, select learning experiences which will meet their own learning needs.

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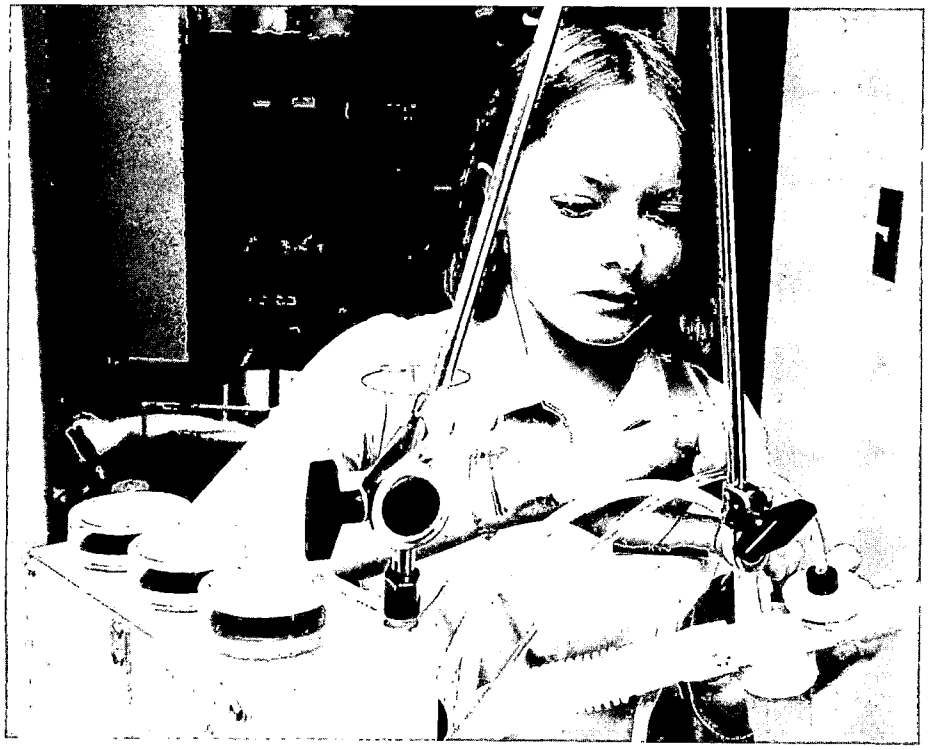
## PRACTICAL NURSING CHALLENGE

Persons with health occupations backgrounds and the ability to perform basic nursing skills may apply to challenge portions of the Practical Nursing Program. Interested individuals with a high school diploma or equivalency wishing to challenge must apply at the Department of Health Occupations office, take the challenge examinations, score satisfactorily on the tests and become a fulltime student for a minimum of 12 weeks and a maximum of 30 weeks. Residency in the program provides the faculty an opportunity to evaluate each student's performance.

Students will be admitted to the practical nurse program on the basis of vacancies, performance on challenge examinations, prior experiences and approval of the faculty. The faculty will recommend or not recommend students for graduation based on satisfactory or unsatisfactory completion of the behavioral objectives of the program. Challenge students who meet the objectives are considered full graduates of the program and are recommended for state board examinations.

The challenge examinations are given once a year on the first Monday in November. The next test will be given November 6, 1978. Applications for challenge will be accepted between Septemper 18, 1978, and October 31, 1978, in the Department of Health Occupations office. Four tests are given. The first two tests cover primarily first trimester content of the Practical Nursing Program. Applicants must score satisfactorily on the first two tests. The other two tests cover material taught in the second and third trimesters and are used to determine an applicant's theory and clinical experience needs.

Challenge students accepted into the Practical Nursing Program must submit transcripts of prior education or proof of equivalency, pay the required T-VI fees, purchase their own school uniforms and other needed equipment and have a physical examination prior to admission.



# Respiratory Therapy Technician

**3 Trimesters**

The Respiratory Therapy Technician Program teaches the special skills required for treatment, management, control and care of patients with deficiencies and abnormalities associated with breathing. The program is one year long 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 make a qualifying score 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, 1979, class will be accepted beginning May 2, 1979.

Respiratory Therapy Technician students pay a $65 fee when they begin the program. It covers the costs 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. **Liability insurance is required and must be purchased in the first trimester.**

The program totals 1,350 hours of instruction with students attending classes Monday through Friday, usually six hours a day. However, clinical experiences generally have to be scheduled at different hours so the hours of classes and clinical experiences may vary from day to day.

Students must provide their own transportation to the clinical facilities.

**RESPIRATORY THERAPY PROGRAM**

| *Trimester I* | *Total Hours* |
|---|---|
| Anatomy and Physiology I | 60 |
| Chemical and Physical Principles of Respiratory Therapy | 75 |
| Fundamentals of Respiratory Therapy | 60 |
| Introduction to Patient Care | 45 |
| Respiratory Therapy Lab I and Clinical Experiences I | 210 |
| Total | 450 |
| *Trimester II* | |
| Anatomy and Physiology II | 45 |
| Clinical Experiences II | 300 |
| Microbiology and Demonstration Lab | 60 |
| Psychosocial Aspects of Patient Care | 45 |
| Total | 450 |
| *Trimester III* | |
| Cardio-Pulmonary Problems | 30 |
| Clinical Experiences III | 360 |
| Pharmacology | 45 |
| Respiratory Therapy Seminar | 15 |
| Total | 450 |

## COURSE DESCRIPTIONS

**Anatomy and Physiology I**
This course gives the student a basic concept of the general plan, structure and normal function of the body systems and the dependency of one on another.

**Chemical and Physical Principles of Respiratory Therapy**
Physics, chemistry and mathematics pertinent to respiratory therapy are included in this general survey course.

**Fundamentals of Respiratory Therapy**
This basic course surveys respiratory therapy as a paramedical profession—the personal qualifications, ethics, expectations and opportunities—and also presents basic procedures.

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

**Respiratory Therapy Lab and Clinical Experiences I**
The laboratory experiences stress safe practices in the use and maintenance of regulators and gas supply systems, devices and respiratory therapy machines. Beginning clinical experiences held in city hospitals introduce the student to the clinical setting and the patient, as well as practice in basic skills.

**Anatomy and Physiology II**
This course emphasizes more advanced knowledge of the anatomy and physiology of the circulatory, pulmonary, renal and nervous systems and their relationship to each other.

**Clinical Experiences II**
Supervised clinical experiences continue with experiences in administering various respiratory therapies and maintenance and care of equipment.

**Microbiology and Demonstration Lab**
Study in this course includes some of the microorganisms related to sickness and health, particularly those affecting patients with respiratory problems. The microbes discussed in class are studied during the lab and cleaning of respiratory therapy equipment is practiced.

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

**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.

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

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

**Respiratory Therapy Seminar**
Case presentations, ethics, and organization and administration of respiratory therapy departments are discussed.

# TECHNOLOGIES

### ASSOCIATE IN APPLIED SCIENCE DEGREE

Students who complete the full sequence of courses for a diploma 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

**4 Trimesters**

Persons who would enjoy the challenging and interesting activity of solving information and management problems using computer hardware and techniques should consider a career in the field of automated data processing. This program serves as a springboard to enter and succeed in such a career. Graduates are qualified for jobs as business application programmers.

The computer hardware currently being used at T-VI are IBM-M-30, 96K Memory, four 2311 disk drives, two 2401 tape drives, printer, reader, IBM-29 punch and Univac 1710 keypunches.

The first and second trimesters give the student a sound background in fundamental computer skills used on a wide variety of computer and computer-related equipment. The third and fourth trimesters continue to build computer application skills with a great deal of emphasis upon problem solving techniques and the man-machine interface. Mini computer and mainframe environments are used in teaching five widely used programming languages.

A Data Processing Trainee certificate is awarded after completing the first and second trimesters. To earn a diploma and qualify to enter a programmer analyst career, a student must complete the full 16-month program of 1,770 hours.

### DATA PROCESSING PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| ANSI COBOL | 10 |
| Introduction to Computers | 5 |
| Accounting I | 5 |
| Algebra/Management Math | 10 |
| *Trimester II* | |
| Advanced ANSI COBOL | 10 |
| RPG II | 5 |
| JCL, Files, Utilities and Sorts | 10 |
| Data Processing Communications | 5 |
| *Trimester III* | |
| Assembler | 10 |
| Advanced RPG II | 5 |
| Systems Analysis I | 5 |
| Management Methods I | 5 |
| Accounting II | 5 |
| *Trimester IV* | |
| Computer System Software | 10 |
| Advanced Programming Techniques | 5 |
| Systems Analysis II | 5 |
| Management Methods II | 5 |
| Conversational Computers | 3 |
| *Optional Course* | |
| Reading Improvement | 5 |
| FORTRAN IV Programming | 5 |

## COURSE DESCRIPTIONS

**ANSI COBOL**
Projects directly related to programming business and accounting applications are coded, debugged and executed in structured ANSI COBOL programming.

**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.

**Accounting I**
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 ANSI COBOL.

**Algebra/Management Math**
Algebra fundamentals are covered in this course along with selected business and management mathematical applications.

**Advanced ANSI COBOL**
(*Prerequisite ANSI COBOL or equivalent*) This course continues development of programming skills in the ANSI COBOL language with emphasis on more complicated statements, clauses and concepts.

**RPG II**
This course introduces the student to the RPG II programming language used in a business organization.

**JCL, Files, Utilities and Sorts**
(*Corequisite: Advanced ANSI COBOL*) The various operating systems, utilities, control languages, as well as standard mass storage devices and data file organization are studied in this course.

**Data Processing Communications**
Students learn to read, write, and speak effectively the basic technical language of automated data processing.

**Assembler**
(*Prerequisite: Introduction to Computers*) This machine oriented language is essential to the professional programmer. The student acquires an understanding of programming techniques necessary to write and refine efficient programs.

**Advanced RPG II**
(*Prerequisite: RPG II*) The remaining features of the RPG II language are included with emphasis on more sophisticated business applications.

**Systems Analysis I**
(*Prerequisite: Advanced ANSI COBOL*) 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.

**Management Methods I**
(*Prerequisite: Algebra/Management Math, Advanced ANSI COBOL*) The application of graphic techniques and descriptive statistics to a variety of computerized business and management applications are included in this course.

**Accounting II**
(*Prerequisite: Accounting I*) This continuation course develops the vocabulary and concepts used in the accounting field. Emphasis is placed on the more common applications in which computers are being used.

**Computer System Software**
(*Prerequisite: Assembler*) The techniques and uses of systems and service programs are studied. Procedures for implementing and effectively using the computer libraries are emphasized.

**Advanced Programming Techniques**
(*Prerequisite: Advanced ANSI COBOL*) This course prepares the student to use the more sophisticated aspects of the various programming languages and systems.

**Systems Analysis II**
(*Prerequisite: Systems Analysis I*) All necessary data collection, refinement and editing procedures for selected projects are designed and implemented. Procedure manuals and run books are prepared to document all input, output forms, programs and procedures.

**Management Methods II**
(*Prerequisite: Management Methods I*) This is a continuation of the application of statistics and mathematical techniques in a business environment.

**Conversational Computers**
(*Prerequisite: Introduction to Computers or equivalent*) This course includes the philosophy and techniques of time shared systems, the BASIC language, man-machine interactive systems, help routines, search and retrieval techniques and telecommunication systems.

**Reading Improvement**
The primary objective of this course is to help students understand what they read. Students with special reading problems are counseled to take this course.

**FORTRAN IV Programming**
This is an introductory course to FORTRAN Pro-

# Drafting Technology

**4 Trimesters**

Drafting Technology is a dual-track program which allows students to select one of two related fields which lead to different kinds of jobs.

The Drafting lab contains modern drafting machines, drafting stations, theodolities, levels and a Wang 2200 mini-computer.

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

The Civil and Map Drafting Option provides students with job-entry skills as cartographers, photogrammeters, civil drafters and surveyors and also includes related technical courses.

The Construction Drafting Option offers 1,725 hours of instruction, including 600 hours of laboratory instruction and 1,125 hours of theory and supporting courses. The Civil and Map Drafting Option offers 1,680 hours with 810 hours of laboratory and 870 hours of theory and supporting courses. A diploma will be issued after completing all of the courses in either option.

A Certificate in Basic Drafting will be given after completion of two trimesters of the Construction Option.

All Drafting Technology students pay an equipment fee of $30. Students who enter the Civil and Map Drafting Option must pay an additional $30 before entering the second trimester.

## DRAFTING TECHNOLOGY PROGRAM

*Trimester I* — *Hours/Week*

| | |
|---|---|
| Construction Drafting Lab/Theory I | 15 |
| Drafting 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 |
| Applied Construction Math III | 5 |
| BASIC Language Programming I | 5 |

*Trimester III*

| | |
|---|---|
| Structural Drafting Lab/Theory | 15 |
| Communications | 5 |
| Applied Physics | 5 |

*Elective (Choose one during Trimester III)*

| | |
|---|---|
| BASIC Language Programming II for Construction | 5 |
| Pipe Drafting Techniques | 5 |
| Civil Drafting Techniques | 5 |

*Trimester IV*

| | |
|---|---|
| Mechanical Equipment Lab/Theory | 15 |
| Construction Analysis | 10 |

## CIVIL AND MAP DRAFTING OPTION

*Trimester II* — *Hours/Week*

| | |
|---|---|
| Cartographic Techniques Lab/Theory | 15 |
| Applied Math III for Civil and Map | 5 |
| BASIC Language Programming I | 5 |
| Beginning Plane Surveying | 6 |

*Trimester III*

| | |
|---|---|
| Photogrammetric Techniques Lab/Theory | 9 |
| BASIC Language Programming II for Civil and Map | 5 |
| Surveying and Mapping Techniques | 5 |
| Intermediate Plane Surveying | 6 |

*Trimester IV*

| | |
|---|---|
| Civil Drafting Lab/Theory | 15 |
| Communications | 5 |
| Advanced Surveying | 6 |

*Optional Course*

| | |
|---|---|
| Reading Improvement | 5 |

## 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.

**Drafting 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. Blueing, material estimates and financing are included in this course.

**Constructing Drafting Lab/Theory II**
(*Prerequisite: Construction Drafting Lab/Theory I*) A continuation of Basic Construction Drafting with major emphasis on heavy construction, students in this course spend time developing large commercial projects from layout through construction document production.

**Building Materials and Methods II**
(*Prerequisite: Building Materials and Methods I*) With major emphasis on heavy construction, students study various aspects of commercial building applications in-

**Applied Construction Math III**
(*Prerequisite: Drafting Math I-II*) This applied approach to trigonometry is related to surveying and mechanical problems and supports the applications programmed in the BASIC Language Programming I course and includes basic surveying techniques. Construction estimating is also introduced.

**BASIC Language Programming I**
(*Prerequisite: Drafting Math I-II*) This introduction to BASIC, a beginning computer programming course, includes use of input and output statements, arithmetic operations, comparison and branching commands, use of subroutines and the library functions. Algorithms are developed associated with surveying and 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.

**Communications**
Speaking, writing, listening and editing skills are reviewed through simulated industrial situations.

**Applied Physics**
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.

**BASIC Language Programming II for Construction**
(*Prerequisite: BASIC Language Programming I*) This extension of BASIC I includes units on magnetic tape and disk files, formatted output, character string manipulation, plotting routines and the development of interactive programs emphasizing data editing and error detection routines. Programs are related to construction problems.

**Pipe Drafting Techniques**
A basic introduction to process piping with emphasis on equipment and terms, data, nomenclature and flow diagrams. Inking and Leroy lettering are also covered.

**Civil Drafting Techniques**
A basic introduction to map drawing techniques followed by practice in inking, lettering (Leroy) and negative scribing.

**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. Energy conservation code calculations and requirements and solar energy fundamentals are covered.

**Construction Analysis**
Construction project planning and management are presented in this course. Heavy construction estimating, blueprint reading, project planning and the application of the computer in the construction field are provided.

**Cartographic Techniques Lab/Theory**
(*Prerequisite: Construction Drafting Lab/Theory I*) This mapping course includes an introduction to mapping followed by practice in inking lines and lettering (Leroy) on vellum and drafting film. Tracings are made of topographic, geological, cadastral and plan and profile and format development precede techniques and practice in negative scribing, preparation and reproduction of mechanical separations.

**Applied Math III for Civil and Map**
(*Prerequisite: Drafting Math I-II*) This applied approach to trigonometry is related to surveying and mechanical problems and supports the applications programmed in the BASIC Language Programming I course.

**Beginning Plane Surveying**
(*Corequisite: Applied Math III for Civil and Map*) The student is introduced to the basic techniques and equipment used in surveying including tape, level, theodolite and the engineering transit. Field work and related computations are done in leveling, distance and angle measurement related to mapping.

**Photogrammetric Techniques Lab/Theory**
(*Prerequisite: Cartographic Techniques Lab/Theory*) This course includes theory and practice in aerial photography, geometry of single vertical photographs and overlapping aerial photos, flight planning, ground control and photograph rectification. Students have introductory experience in the use of modern stereoscopic plotting instruments and map compilation leading to the preparation of maps from aerial photos.

**BASIC Language Programming II for Civil and Map**
(*Prerequisite: BASIC Language Programming I*) This extension of BASIC I includes units on magnetic tape and disk files, formatted output, character string manipulation, plotting routines and the development of interactive programs emphasizing data editing and error detection routines. Programs are related to surveying problems.

**Surveying and Mapping Techniques**
An overview of modern surveying methods is presented relating surveys of the U.S. Public Lands, land grants, and small holding and mining claims to contemporary surveys. Extensive practice in the use of the National Geodetic Survey (NGS) Horizontal and Vertical Networks and the use of the New Mexico State Plane Coordinate System is provided.

**Intermediate Plane Surveying**
(*Prerequisite: Beginning Plane Surveying*) Instruction includes practice in the use of one-second theodolities, EDM equipment and data reduction by computer preceding topographic, stadia and control surveys and the field checking of a topographic map. A concentrated unit on mine surveying and measurement methods is included and a retracement survey is conducted.

**Civil Drafting Lab/Theory**
(*Prerequisite: Photogrammetric Techniques Lab/Theory*) Students practice up-to-date development and calculation techniques to analyze route surveys and produce highway and utility plan and profile drawings. A unit on subdivision design including drainage plans and sanitary sewers is included. This course is offered in conjunction with Advanced Surveying.

**Advanced Surveying**
(*Prerequisite: Intermediate Plane Surveying*) Included are horizontal and vertical curve calculations and design, earthwork measurements, subdivision staking using two instruments, offset staking, slope staking, and construction surveys and inspection.

**Reading Improvement**
The primary objective of this course is to help students understand what they read. Students with special

# Electromechanical Drafting

3 Trimesters

Electromechanical Drafting is a complex field of drafting for persons with a strong interest in electronics and mechanical design. Graduates are prepared for jobs as electromechanical drafters with a background in conceptual and applied experiences which will allow growth and development in typical industrial situations.

This program is unique in that it presents drafting fundamentals in electrical and electronics applications and also includes specialized mechanical drafting and design concepts.

The program lab contains modern drafting stations, drafting machines, process camera and other typical drafting equipment.

The year-long program includes 450 hours of laboratory instruction and 795 hours of drafting theory and supporting courses. A new class will be accepted at the beginning of summer trimester only.

Students who successfully complete the program, combining the two fields of electronics and mechanical design, are awarded a diploma in Electromechanical Drafting.

A personal equipment fee of $30 is required when entering the program.

## ELECTROMECHANICAL DRAFTING PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Electromechanical Assemblies Lab/Theory | 15 |
| Technical Writing | 5 |
| Algebra | 10 |
| *Trimester II* | |
| Electronics Drafting Lab | 10 |
| Trigonometry | 5 |
| Logic Circuit Fundamentals | 5 |
| Manufacturing Processes | 3 |
| Basic Electricity and Electronics | 5 |
| *Trimester III* | |
| Mechanical Definition Lab/Theory | 15 |
| Introduction to Mechanical and Tool Design | 10 |
| *Optional Course* | |
| Reading Improvement | 5 |

## COURSE DESCRIPTIONS

**Electromechanical Assemblies Lab/Theory**
This is a beginning course in orthographic projection, isometric projection and mechanical assemblies related to the electromechanical industry.

**Technical Writing**
Students practice verbal and written communications that they will use in industrial situations. Included are public speaking, oral presentations, practice job interviews, writing from notes, technical research projects and use of technical data in a technical report format.

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

**Electronics Drafting Lab**
(*Prerequisite: Electromechanical Assemblies Lab/Theory*) This lab incorporates the fundamental concepts of the electrical/electronics field. Students learn to use correct symbology, designations and layout techniques in accordance with military and ASA standards to describe formal schematics, logic diagrams, wiring layouts, cabling diagrams, single-sided and double-sided printed circuit boards.

**Trigonometry**
(*Prerequisite: Algebra*) An applied approach to trigonometry based on mechanical computational needs.

**Logic Circuit Fundamentals**
Basic principles of symbolic logic, design function and design of elementary logic circuitry, primarily of a switching function, are taught. This course is closely linked to the Basic Electricity and Electronics course.

**Manufacturing Processes**
This course teaches students to relate varied production processes to characteristics of a given part. Emphasis is on providing compatibility between the design function and production function through graphic data.

**Basic Electricity and Electronics**
This course supplements the Electronics Drafting Lab by providing basic concepts of electricity and electronics relevant to electromechanical drafting. Circuitry characteristics, functions of components, typical circuitry applications, and the composition of discrete and integrated circuitry are studied.

**Mechanical Definition Lab/Theory**
(*Prerequisite: Electronics Drafting Lab*) Concepts and functional applications of definition techniques in accordance with mechanical drafting standards are presented. The student learns to prepare drawings requiring standard systems of views and dimensionally define them with respect to design and production capabilities. Students practice incorporating technical data relative to manufacturing processes, materials or hardware definition. True position dimensioning is an integral part of the course.

**Introduction to Mechanical and Tool Design**
This course coordinates the basic elements of physics with mechanical design applications. Students identify design considerations of varied materials and mechanisms and provide fundamental data to support the graphic definition. Practice is included in designing various tooling components for different job functions including component inspections. Computer-aided design graphics will be introduced and their industrial applications reviewed.

**Reading Improvement**
The primary objective of this course is to help students understand what they read. Students with special reading problems are counseled to take this course.

# Electronics

**4 Trimesters**

Electronics technicians must be capable of working and communicating with engineers and production personnel and of moving into positions of increasing responsibility. Persons interested in becoming electronics technicians should also have some skills in elementary algebra.

The Electronics program prepares graduates for employment as technicians, beginning with a firm foundation in electricity, basic electronics and the principles of computer circuits provided during the first two trimesters.

Trimesters three and four build directly on this background while introducing such specific areas of study as communications, consumer electronics and computer systems, including programming. There is a strong emphasis on laboratory work throughout the curriculum.

Lab facilities for the Electronics Program contain equipment for testing, trouble-shooting, calibrating, analyzing and designing electronic circuits contained in equipment ranging from television to minicomputers.

Some courses are offered as options to be taken in addition to the required courses. Students are encouraged to take these to broaden their education at T-VI.

To qualify for a Diploma in Electronics Technology, the student must successfully complete all four trimesters of the required courses which consist of 900 hours of laboratory and 900 hours of theory. A Certificate in Electronics Testing may be awarded after completion of all of the courses required in the first three trimesters.

A personal equipment fee of $20 is required

## ELECTRONICS PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Electronics I | 15 |
| Electronics Math I | 5-10 |
| Digital Circuits I | 5 |
| *Trimester II* | |
| Electronics II | 15 |
| Digital Circuits II | 5 |
| Electronics Math II | 10 |
| *Trimester III* | |
| Electronics III | 15 |
| Electronics Systems Analysis | 5 |
| Semiconductor Principles and Applications | 5 |
| Digital Circuits III | 5 |
| *Trimester IV* | |
| Electronics IV | 15 |
| Electronics Instruments | 5 |
| Industrial Applications | 10 |
| *Optional Courses* | |
| Physics | 5 |
| Calculus for Electronics | 5 |
| Introduction to Minicomputers and Microprocessors | 5 |
| Shop Practices | 5 |
| Reading Improvement | 5 |

## COURSE DESCRIPTIONS

**Electronics I**

In this course, students learn the basic concepts of direct current electricity, including Ohm's Law, Kirchoff's Law, and Thevenin's and Norton's theorems. The laboratory provides an opportunity to make observations concerning the topics covered in theory. Basic skills with meters and tools are important parts of the lab.

**Electronics Math I**

Students study the concepts of number systems, beginning and advanced algebra and Boolean Algebra, the algebra upon which computer circuits are based. The objective is for each student to become skilled in algebraic manipulation and to understand the base 10, base 2 and other number systems relevant to the study of electronics. Shop Practices may be substituted for half of this course with permission of the instructor.

**Digital Circuits I**

This course covers the logic units used in digital circuits which may be applied to an understanding of the computer and their routine use in the operations of a computer system.

**Electronics II**

(*Prerequisite: Electronics I and Electronics Math I*) The study of basic circuit laws is extended to alternating current in order that students understand the effects of various circuit elements. Inductance, capacitance, vacuum tubes and semiconductors are introduced. The lab provides the opportunity to verify theoretical concepts by making observations with resonant circuits, fil-

**Digital Circuits II**

(*Prerequisite: Digital Circuits I*) In this course, students become skillful with the actual devices used in computer circuits and learn how these devices are used together to produce a working system. Design of memory, counting and adding circuits is also a major part of this course.

**Electronics Math II**

(*Prerequisite: Electronics Math I*) This course includes the study of basic trigonometry, periodic functions, elementary vector analysis and complex numbers. Students acquire a mathematical basis for understanding observations made in the study of AC circuits. During the last half of the course, circuit problems will be solved using computer languages.

**Electronics III**

(*Prerequisite: Electronics II*) Principles of operations 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. The objective is to have students relate basic concepts, learned in Electronics I and II, to useful circuitry.

**Electronics Systems Analysis**

(*Prerequisite: Electronics II*) This course involves the analysis of analog circuits such as those used in communications receivers. Practical applications are presented in laboratory exercises.

**Semiconductor Principles and Applications**

(*Prerequisite: Electronics II*) This is a thorough course in transistor theory and application including design techniques using the common emitter, common base and common collector configurations. In addition, other devices such as the FET, MOS, unijunction, light emitters and detectors are introduced.

**Digital Circuits III**

(*Prerequisite: Digital Circuits II*) Students learn the organization of a computer system including the CPU, bus structures, memory, instruction sets, programming, and applications of micro- and minicomputers.

**Electronics IV**

(*Prerequisite: Electronics III and Semiconductor Principles and Applications*) This course includes advanced semiconductor theory and application. Students design circuits using transistors, FET's, SCR's, linear IC's and other devices. Applications related to digital circuitry will also be discussed. Students are provided the opportunity to study for the FCC Radio Telephone Licensing Examination during part of the course.

**Electronics Instruments**

(*Prerequisite: Electronics III and Semiconductor Principles and Applications*) The objective of this course is to help the students understand the procedures of instrument calibration, maintenance and repair in accordance with manufacturers' specifications.

**Industrial Applications**

(*Corequisite: Electronics IV*) Students learn the maintenance of various electronics equipment which will be encountered when entering a job. Emphasis is on locating problems and using proper methods for replacing defective components. The course includes theoretical work to complement the laboratory assignments.

**Physics**

(*Prerequisite: Electronics Math I*) Basic principles of mechanics, heat, light, sound, electricity, atomic and nuclear physics are covered. Emphasis is placed on

**Calculus for Electronics**

(*Prerequisite: Electronics Math II*) Topics covered are the basic concepts of limits, derivatives, integrals, areas, volumes and centroids. These concepts will be applied to electronics problems and computer programs will be used where relevant.

**Introduction to Minicomputers and Microprocessors**

Emphasis is on the architecture and programming of minicomputers and microprocessors. Students who complete the course will have knowledge basic to understanding minicomputers.

**Shop Practices**

(*Prerequisite: Permission of the Electronics Math I instructor or completion of Electronics Math I*) In this course, students develop skills in safety and the use of common machine tools and bench tools. Nomenclature, measurement, drawing, dimensioning and schematic layout are topics which are covered. Students who take this optional course will be given first consideration for admission into the Laser Electro Optic Technology Program. Students may take this course in place of one hour of Electronics Math I.

**Reading Improvement**

The primary objective of this course is to help students understand what they read, and students with

# Laser Electro-Optic Technology

**4 Trimesters**

The emerging technologies of lasers and electro-optics require special training for those persons interested in entering a career in this rapidly growing industry. Lasers and electro-optic devices are used in a variety of areas, including construction and excavation, welding and cutting operations, communications systems, laboratory testing and measurement, data processing, photography, medicine, military and space projects, and research and development.

To enter the program, students must have completed at least one trimester of Electronics at T-VI or have equivalent knowledge and skills. Entering students will be accepted during the winter trimester only.

The entire program leading to a diploma in Laser and Electro-Optic Technology is four trimesters, or 1,800 hours, in length. *This includes the first trimester spent in the Electronics Program.*

The program is offered in the Yale Annex Building. The facilities include modern classrooms and laboratories containing state-of-the-art lasers, lenses, mirrors and analytical test equipment.

## ELECTRONICS PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Electronics I | 15 |
| Electronics Math I | 5/10 |
| Digital Circuits I | 5 |

## LASER ELECTRO-OPTIC TECHNOLOGY PROGRAM

| *Trimester II* | *Hours/Week* |
|---|---|
| Electronics II | 15 |
| Optics | 5 |
| Math for LEOT | 5 |
| Introduction to Lasers | 5 |
| *Trimester III* | |
| Electronics III | 15 |
| Laser Technology | 5 |
| Digital Circuits II | 5 |
| Laser and Electro-Optic Components | 5 |
| *Trimester IV* | |
| Electronics Instruments | 5 |
| Digital Circuits III | 5 |
| Laser Projects | 10 |
| Devices and Applications | 5 |
| Laser and Electro-Optic Measurements | 5 |
| *Optional Course* | |
| Computer Programming | 5 |
| Shop Practices | 5 |

## COURSE DESCRIPTIONS

**Electronics I**
In this course, students learn the basic concepts of direct current electricity, including Ohm's Law, Kirchoff's Law, and Thevenin's and Norton's theorems. The laboratory provides an opportunity to make observations concerning the topics covered in theory. Basic skills with meters and tools are important parts of the lab.

**Electronics Math I**
Students study the concepts of number systems, beginning and advanced algebra and Boolean Algebra, the algebra upon which computer circuits are based. Shop Practices may be substituted for half of this course with permission of the instructor.

**Digital Circuits I**
This course covers the logic units used in digital circuits which may be applied to an understanding of the computer and their routine use in the operations of a computer system.

**Electronics II**
(*Prerequisite: Electronics I and Electronics Math I*) The study of basic circuit laws is extended to alternating current in order that students understand the effects of various circuit elements. Inductance, capacitance, vacuum tubes and semiconductors are introduced. The lab provides the opportunity to verify theoretical concepts by making observations with resonant circuits, filters, power supplies and amplifier circuits.

**Optics**
(*Corequisite: Math for LEOT and Introduction to Lasers*) This course includes the study of geometric and wave optics principles. Techniques in the care and use of optical components are emphasized in the laboratory.

**Math for LEOT**
(*Prerequisite: Electronics Math I*) This course includes the study of basic trigonometry, periodic functions, elementary vector analysis and complex numbers. Students acquire a mathematical basis for understanding observations made in the study of AC circuits and geometric optics.

**Introduction to Lasers**
(*Prerequisite: Admission to LEOT Program*) This course introduces the new student to the operation of a laser, the principles of a laser, its output characteristics and safe operating practices. Laboratory work includes the use of the low helium-neon laser.

**Electronics III**
(*Prerequisite: Electronics II*) Principles of operation of AM, FM and SSB communications equipment are presented and circuits typically found therein are studied and analyzed. Fundamentals of transmission line theory pertaining to high frequency signal transmission are also covered. The objective is to have students relate basic concepts learned in Electronics I and II to useful cir-

**Laser Technology**

(*Prerequisite: Introduction to Lasers*) In this course, specialized groupings of lasers are studied along with power supplies, flash lamps and other power sources which are used in the technology. Laser systems which are studied are ION gas lasers, molecular gas lasers, solid-state lasers, semi-conductor lasers and organic dye lasers.

**Digital Circuits II**

(*Prerequisite: Digital Circuits I*) In this course, students become skillful with the actual devices used in computer circuits and learn how these devices are used together to produce a working system. Design of memory, counting, and adding circuits is also a major part of this course.

**Laser and Electro-Optic Components**

(*Corequisite: Optics*) This course deals with the tools of the technology. Lenses, filters and other components are studied from the point of view of quality and cost. Students gain the practical knowledge useful in choosing the proper component for a job.

**Electronics Instruments**

(*Prerequisite: Electronics III*) The objective of this course is to help the student understand the procedures of instrument calibration, maintenance and repair in accordance with manufacturers' specifications.

**Digital Circuits III**

(*Prerequisite: Digital Circuits II*) Students learn the organization of a computer system including the CPU, bus structures, memory, instruction sets programming, and applications of micro- and minicomputers.

**Laser Projects**

(*Prerequisite: Optics and Laser and Electro-Optic Components*) Students gain experience with a wide variety of materials, fabrication and calibration methods in this class. They are encouraged to use their own ingenuity in solving design problems. The importance of keeping an accurate notebook is stressed.

**Devices and Applications**

(*Prerequisite: Laser Technology and LEO Components*) The purpose of this course is to study the theory and application of special purpose devices used to measure laser output parameters, to manipulate laser beams and to modulate or Q-switch lasers.

**Laser and Electro-Optic Measurements**

(*Corequisite: Laser Projects*) In this course, emphasis is on standard measurement techniques in Laser Electro-Optics Technology. The principles which underlie the operation of spectrophotometers and interferometers are studied.

**Computer Programming**

The purpose of this course is to introduce the student to a programming language. Also included are the study and use of programming techniques.

**Shop Practices**

(*Prerequisite: Permission of the Electronics Math I Instructor or completion of Electronics Math I*) In this course, students develop skills in safety and the use of common machine tools and bench tools. Nomenclature, measurement, drawing, dimensioning and schematic layout are topics which are covered. Students who take this optional course will be given first consideration for admission into the LEOT Program. This course may be taken in place of one hour of Electronics Math I.

**Reading Improvement**

The primary objective of this course is to help students understand what they read and students with

# TRADE and INDUSTRIAL

Most classes in the trade and industrial field, the largest skill cluster at T-VI, meet in two trades buildings at Coal and University SE which contain classrooms, lab space and a live work area. Programs not housed there meet across Coal Avenue on the main campus.

New students may enter all of the trades programs at the beginning of each 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 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 majors.

Each applicant must have an interview with the admissions and must make a satisfactory score on the pre-admissions mathematics and reading

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 skills and work attitudes needed to succeed in an entry-level 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.

This on-the-job 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 a supervised work experience, the student must obtain the approval of the instructor, program coordinator, counselor, department chairman and the Director of Student Services.

The supervised work experience option is not eligible for VA benefits.

# Air-Conditioning, Heating and Refrigeration

3 Trimesters

The Air-Conditioning, Heating and Refrigeration Program prepares 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.

In the lab, students are introduced to condensing units, evaporator units, compressors, vacuum pumps, temperature analyzers, ice makers, temperature recorders, transport refrigeration units, volt-ohm-amp meters, domestic heating and cooling equipment, commercial heating and cooling equipment and many other types of equipment used in the industry.

The year-long program totals 1,350 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 skills mastered in the program. A diploma is given to those students completing all of the course requirements in the program.

Air-Conditioning, Heating and Refrigeration students must pay an equipment fee of $75 before entering the first trimester and $45 before each additional trimester, totaling $165.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be able 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 and Refrigeration Lab I ..... 15
Air-Conditioning, Heating and Refrigeration Theory I ..... 5

*Trimester II*

Air-Conditioning, Heating and Refrigeration Lab II ..... 15
Air-Conditioning, Heating and Refrigeration Theory II ..... 5
Supporting/~~Elective~~ Courses ..... 10

*Trimester III*

Air-Conditioning, Heating and Refrigeration Lab III ..... 10
Air-Conditioning, Heating and Refrigeration Theory III ..... 5
Supporting/~~Elective~~ Courses ..... 15

Required

*Supporting Courses*

Air-Conditioning, Heating and Refrigeration Math I ..... 5*
Control Circuitry I ..... 5*
Air-Conditioning, Heating and Refrigeration Math II ..... 5
Control Circuitry II ..... 5
Blueprint Reading I ..... 5
Oxyacetylene Welding ..... 5
Systems Design ..... 5

*Electives* ~~Alternate~~ Alternate Supporting Courses

Industrial Safety ..... 3
~~Job Relations~~ ..... In theory ..... 2
Technical Report Writing ..... 3
Transport Refrigeration ..... 2
Math III ..... 3

*Recommended for beginning Air-Conditioning stu-

## COURSE DESCRIPTIONS

**Air-Conditioning, Heating and Refrigeration Lab/Theory I**

Beginning students learn shop safety; basic tools and equipment; introduction to physics and chemistry; electrical circuits and laws of electricity; motor control devices and electric meters; test and measuring equipment; and installation, maintenance and service knowledge for domestic refrigerators and freezers and residential-type heating and cooling systems.

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

(*Prerequisite: Trimester I Lab and Theory or equivalent*) Instruction is provided in the installation, maintenance and service of light commercial air-conditioning, heating and refrigeration systems. Emphasized are heat pumps, electrical problems and controls, gas-electric packages, compressors, condensers, pressure-reducing devices, load calculations, heat transfer, temperature-humidity charts and safety code for mechanical refrigeration.

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

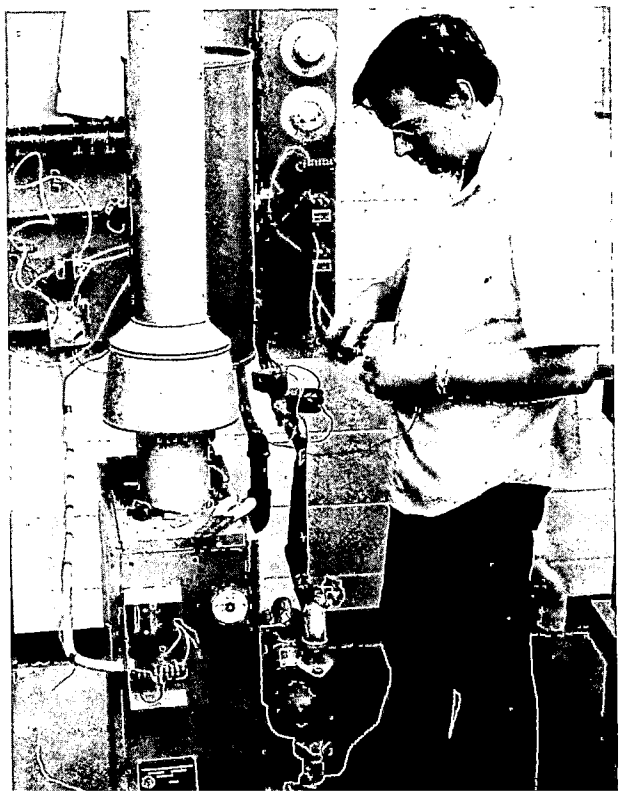
(*Prerequisite: Trimester II Lab and Theory or equivalent*) The installation, maintenance and service of commercial air-conditioning, heating and various refrigeration systems, including transport refrigeration, are covered.

**Air-Conditioning, Heating and Refrigeration Math I**

This course covers basic arithmetic, percentage, powers and roots, direct measurement, basic metrics, simple formulas, basic electrical formulas and ratios and proportions as applied to the Air-Conditioning, Heating and Refrigeration field.

**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 and Refrigeration Math II**

(*Prerequisite: Air-Conditioning, Heating and Refrigeration Math I or equivalent*) Rules and formulas related to volumes, areas, ratio and proportion; geometric construction; velocity and pressure; and various mathematical laws are applied.

**Control Circuitry II**

(*Prerequisite: Control Circuitry I 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.

**Blueprint Reading I**

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.

**Oxyacetylene 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.

**Systems Design**

This course includes the study of the design, layout and application of air distribution duct systems for air-conditioning. Instructional emphasis will be on basic principles of physics, psychrometric theory related to human comfort, the principles of fluid flow and the thermodynamics of the refrigeration cycle.

**Industrial Safety (3 Hours/Week)**

This course will include training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification will be issued upon successful completion. Occupational safety will be stressed.

**Job Relations (2 Hours/Week)**

A course to aid students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations will be discussed.

**Technical Report Writing (3 Hours/Week)**

Students will develop reports on conditions of existing equipment. Reports of recommendation and/or rejection for purchase orders, work orders and billings will be emphasized. Written reports as they relate to blueprints, sketches and schematics will also be covered.

**Transport Refrigeration (2 Hours/Week)**

This course is designed to cover the refrigeration cycle of transport units with emphasis on the electrical systems of the diesel powered units. The course will help the student to understand better the complete wiring diagram to provide a ready reference of the relationships between each of the circuits.

**Math III**

(*Prerequisite: Air-Conditioning, Heating and Refrigeration Math II or equivalent*) This course includes basic algebraic manipulation of signed numbers, order of operation, inverse operation, linear equations, straight-line graphs, monomials, polynomials, factoring, algebraic functions, fractional equations, exponents and quadratic equations.

# Automotive Collision Repair

2 Trimesters

The Automotive Collision Repair Program prepares 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 or her 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 advanced metal man and painting areas. The metal man does more complex removal and replacement (R and R) of panels and front-end sections, and 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 Auto Collision Repair lab contains sanders, buffers, air chisels, paint sprayers, welding equipment, paint booths, frame machines and many other factory and dealership training units.

The eight-month program totals 900 hours of instruction, of which 525 are laboratory work and 375 hours are supporting courses.

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

Automotive Collision Repair students must pay a $75 equipment fee before entering the first trimester and an additional $45 before the second trimester, totaling $120, and must provide their own industrial safety glasses.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory diseases.
3. Must be able 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 ..... 15
Auto Collision Repair Theory I ..... 5

*Trimester II*

Auto Collision Repair Lab II ..... 20
Auto Collision Repair Theory II ..... 5
Supporting/~~Elective~~ Courses ..... 5

*Supporting Courses*

Oxyacetylene Welding ..... 5*
Auto Collision Repair Math ..... 5*
Introduction to Frame Repair ..... 5

~~*Electives*~~ *alternative Supporting Courses*

Industrial Safety ..... 3
Job Relations ..... 2
~~Fundamentals of Electricity~~ ..... 3
Estimating ..... 2

*Recommended for beginning Automotive Collision students.

## COURSE DESCRIPTIONS

**Automotive Collision Repair Lab/Theory I**

This laboratory practice course teaches 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.

Theory 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 Repair Lab/Theory II**

(*Prerequisite: Auto Collision Repair Lab and Theory I or equivalent*) The laboratory practice in this course covers body section replacement and alignment, interior trim removal and replacement (R and R), spray painting procedures and processes, surface buffing and polishing, 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 areas.

**Oxyacetylene Welding**

This laboratory practice class includes safety practices, general tools and equipment, sources of heat, operational procedures, metals and their properties, and applications of oxyacetylene welding.

**Auto Collision Repair Math**

This course reviews basic arithmetic operations including surface measurements and direct measurements, ratio and proportion, and percentage. Rules and formulas, volume, basic crash book estimating, work orders, flat rate costs and the metric system are thoroughly covered.

**Introduction to Frame Repair**

This course provides instruction in assessing frame damage by the use of self-centering gauges, datum gauges, tracking gauges and the basic procedures for repairing damage.

**Industrial Safety (3 Hours/Week)**

This course will include training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification will be issued upon successful completion. Occupational Safety will be stressed.

**Job Relations (2 Hours/Week)**

A course to aid students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations will be discussed.

**Fundamentals of Electricity (3 Hours/Week)**

This course provides instruction in the basic principles of electricity; terminology; electrical components and symbols; schematic reading; conductors, insulators and 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.

**Estimating (2 Hours/Week)**

(*Prerequisite: Auto Collision Repair Math or equivalent*) This combination laboratory and theory course is designed to provide a detailed study of the procedures of estimating. Emphasis will be placed on appraisal of auto damage both by visual inspection and use of the crash book.

# Automotive Mechanics

1 to 3 Trimesters

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

The three options are nonsequential—a student may take them in any order if space in the class is available during the trimester chosen and specific entrance requirements and prerequisites have been met.

In one trimester-long option, instruction is in the fundamentals of engine operation and construction; engine testing and diagnosis; and engine disassembly, inspection, cleaning, reconditioning, reassembly and check-out.

In another option, 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 option, brakes, front suspensions, steering, alignment, transmissions and drive train mechanisms are emphasized.

The program is housed in four working labs specifically designed for automotive front-end alignment, wheel balance, brake service, transmissions service, electrical, tune-up and engine overhaul. The well-equipped labs will introduce the student to modern ignition scopes, alternator-starter testers, transmission and engine dynamometers, wheel balancers, brake lathes, vacuum pumps, distributor testers, compression testers, micrometer calipers, welding equipment, timing lights, pullers and many other types of equipment currently in use in the industry.

The three-trimester program totals 1,350 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 skills mastered in the program. Special recognition is given to those students completing the entire program.

Automotive Mechanics students must pay a $75 equipment fee prior to entering the first trimester and $45 before each additional trimester, totaling $165.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory diseases and allergies to automotive fuels and solvents.
3. Must be able 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/~~Elective~~ Courses | 5 |
| *Option II* | |
| Automotive Electrical and Tune-Up Lab | 20 |
| Automotive Electrical and Tune-Up Theory | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Option III* | |
| Brakes, Front-End Alignment and Drive Trains Lab | 20 |
| Brakes, Front-End Alignment and Drive Trains Theory | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Supporting Courses* | |
| Basic Automotive Math I | 3* |
| Precision Measurement | 2* |
| Basic Tool Application | 3 |
| Automotive Emission Control Systems I | 2 |
| Automotive Air-Conditioning I | 3 |
| Automotive Diagnostic Procedures | 2 |

~~Electives~~ Alternative Supporting Courses

| | |
|---|---|
| Industrial Safety | 3 |
| ~~Job Relations~~ | 2 |
| ~~Electr~~ical and Vacuum Systems | 5 |
| ~~Carb~~uretion | 5 |
| ~~Autom~~otive Emission Control II | 3 |
| ~~Autom~~otive Air-Conditioning II | 2 |
| Math II | 3 |

*Recommended for beginning Automotive Mechanics students.

## COURSE DESCRIPTIONS

**Automotive Engines and Engine Systems Lab/Theory**
(*Prerequisite: Specific Entrance Requirements or Satisfactory Completion of Previous Option*) Instruction in shop safety, basic tools and equipment, engine systems operation and maintenance; engine operation and construction; engine testing and diagnosis; and engine disassembly, inspection, cleaning, reconditioning, reassembly and check-out is offered. Reading and interpreting technical data, proper shop procedures and job operations are also included.

**Automotive Electrical and Tune-Up Lab/Theory**
(*Prerequisite: Specific Entrance Requirements or Satisfactory Completion of Previous Option*) Instruction covers basic electricity; schematics; batteries; cranking motors; and charging, ignition, fuel and emission control systems. Auto air-conditioning is studied as a separate unit of instruction.

**Brakes, Front-End Alignment and Drive Trains Lab/Theory**
(*Prerequisite: Specific Entrance Requirements or Satisfactory Completion of Previous Option*) Brakes, front suspensions, steering, alignment, transmissions, drive train mechanisms, troubleshooting techniques, technical research and power flow circuits are included.

**Basic Automotive Math I (3 Hours/Week)**
This trade-related course reviews basic mathematics, English and metric measurement systems, basic geometric construction and calculations, machinists' scales, basic right-angle measurements and calculations, and the various thread systems used in the industry.

**Precision Measurement (2 Hours/Week)**
Precision measuring tools used in the automotive industry will be emphasized. Practical training applications caliper, depth micrometer, telescoping gauges and dial indicators will be the main part of the course.

**Basic Tool Application (3 Hours/Week)**
Shop safety, basic benchwork, hand tools, machine construction, and basic operations on the drill press and pedestal grinder are taught in this combination theory-demonstration and training.

**Automotive Emission Constrol Systems I (2 Hours/Week)**
This theory-demonstration offers instruction in the effects of autmotive emission on the atmosphere. Emphasis is placed on the various types of emission systems and equipment used on the modern automobile.

**Automotive Air-Conditioning I (3 Hours/Week)**
This industrially based theory-demonstration and training course offers the advanced automotive mechanics student an understanding of the safety, diagnosis, repair and service of the current models of automotive air-conditioning.

**Automotive Diagnostic Procedures (2 Hours/Week)**
To emphasize the latest methods and techniques of diagnosis used in the highly technical automotive service industry, this advanced troubleshooting course provides practical on-the-job procedures in the use of test equipment. Future professional mechanics will also be introduced to the national mechanics certification programs.

**Industrial Safety (3 Hours/Week)**
This course will include training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification will be issued upon successful completion. Occupational safety will be stressed.

**Job Relations (2 Hours/Week)**
A course to aid students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**Electrical and Vacuum Systems (5 Hours/Week)**
This course is designed for those individuals who are interested in becoming specialists. Emphasis will be based on the use of schematic diagrams for both wiring and vacuum in relationship to lights, instrument panels, heating and other electrical accessories.

**Carburetion (5 Hours/Week)**
This combination theory-laboratory class will cover late model carburetors with emphasis placed on carburetor operation and circuitry, fuel system and carburetion troubleshooting. Proper service procedures will be stressed, and overhaul procedures and techniques will also be covered.

**Automotive Emission Control II (3 Hours/Week)**
(*Prerequisite: Automotive Emission Control I or equivalent*) This combination theory-laboratory class is structured to give the student a background in diagnosis, maintenance and service of all components of the control system. Emphasis will be placed on diagrams as they apply to emission controls.

**Automotive Air-Conditioning II (2 Hours/Week)**
(*Prerequisite: Automotive Air-Conditioning I or equivalent*) This combination theory-laboratory class will cover operation, maintenance and service of mode doors, control switches, climatic controls and the use of specialized equipment.

**Math II (3 Hours/Week)**
(*Prerequisite: Basic Automotive Math I or equivalent*) This course will include geometric construction, geometric solutions, volume, capacity and simple formula

# Baking

2 Trimesters

This specialty in the food service field will prepare persons for jobs as bakers in restaurants, bake shops, bakeries and institutional kitchens, such as schools or hospitals. Persons entering this field should be early-risers since most commercial baking begins early in the morning.

The program is housed in a lab, specifically designed for baking, which contains ovens, display cases, commercial mixers, doughnut machines, dough dividers, refrigerated display cases, proofing cabinets, dough sheeters and many other equipment items used in the baking industry.

The 30-week program is 750 hours long and students may leave the program upon completion of a training objective and receive a rating sheet detailing the skills mastered in the program.

Baking students are required to pay an equipment fee of $45 to cover the cost of special baking utensils. Students must provide their own uniforms.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
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 enrolling 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.

## BAKING PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Baking Lab I | 20 |
| Baking Theory and Merchandising I | 5 |
| *Trimester II* | |
| Baking Lab II | 20 |
| Baking Theory and Merchandising II | 5 |
| *Electives* | |
| Industrial Safety | 3 |
| Job Relations | 2 |
| Salesmanship | 0 |
| Advanced Cake Decorating | 3 |
| Cashiering | 2 |
| Basic Accounting Principles | 5 |

## COURSE DESCRIPTIONS

**Baking Lab/Theory and Merchandising I**

Students are introduced to the fundamentals of production, processing and mixing of various ingredients used in bread and rolls, sweet yeast dough products and specialties, biscuits and muffins, doughnuts and crullers, pies and pastries, cakes and cake specialties, and cookies. Also included are care and use of equipment, bakery sanitation, proper storage of ingredients, experiments with baking formulas, chemical leavening agents, and baking ingredients and their properties.

Basic storeroom procedures, record keeping and product merchandising are included in the merchandising portion of the class.

**Baking Lab/Theory and Merchandising II**

(*Prerequisite: Baking Lab/Theory and Merchandising I*) This course continues the principles of Baking I with emphasis on baking chemistry and advanced procedures in production of products. More study of international pastries and desserts is provided with management principles incorporated at the supervisory level. Responsibilities of merchandising are delegated with actual shop procedures followed.

**Industrial Safety**

This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations**

This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**Salesmanship (5 Hours/Week)**

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

**Advanced Cake Decorating (3 Hours/Week)**

Instruction is provided in fundamental to advanced decorating techniques, including icings, equipment and colors, paper cone and pressure control methods, cake borders, flowers, figure piping, tube writing and lettering, "gum paste," sugar molding and special occasion cakes.

**Cashiering (2 Hours/Week)**

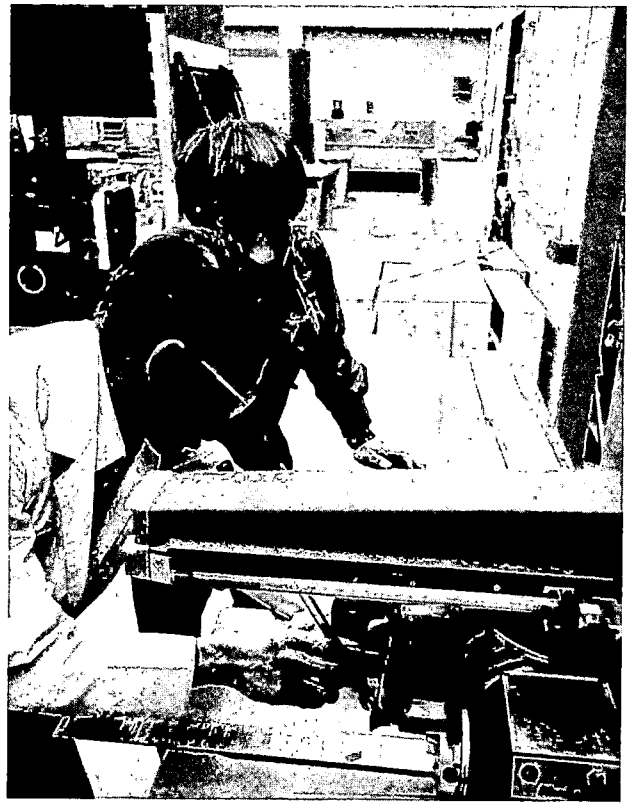
The student learns how to use cash registers, including the ability to solve procedural problems that occur at a register and checkout station.

**Basic Accounting Principles (5 Hours/Week)**

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

**Principles of Supervision (2 Hours/Week)**

An introductory course to help the student understand the basic operational functions of the supervisor as related to planning, organizing, staffing, directing and



# Carpentry

**2 Trimesters**

The Carpentry Program provides students with practical and realistic job entry-level skills for the construction industry.

During the first trimester, the fundamentals of residential framing and tools of the trade are taught. In the second trimester, emphasis is placed on interior finish, finish carpentry, basic construction and installation of cabinets, millwork and estimating.

The Carpentry Program is housed in a lab specifically designed for carpentry as well as an outside livework area. The well-equipped lab includes drill presses, band saws, doweling machine, table saws, surfacer and many other types of equipment used in industry.

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

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the skills mastered in the program.

Carpentry students must pay a $75 equipment fee before entering the first trimester and an additional $45 before the second trimester, totaling $120, and must provide their own car-

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic wood or wood product allergies.
3. Must be able to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

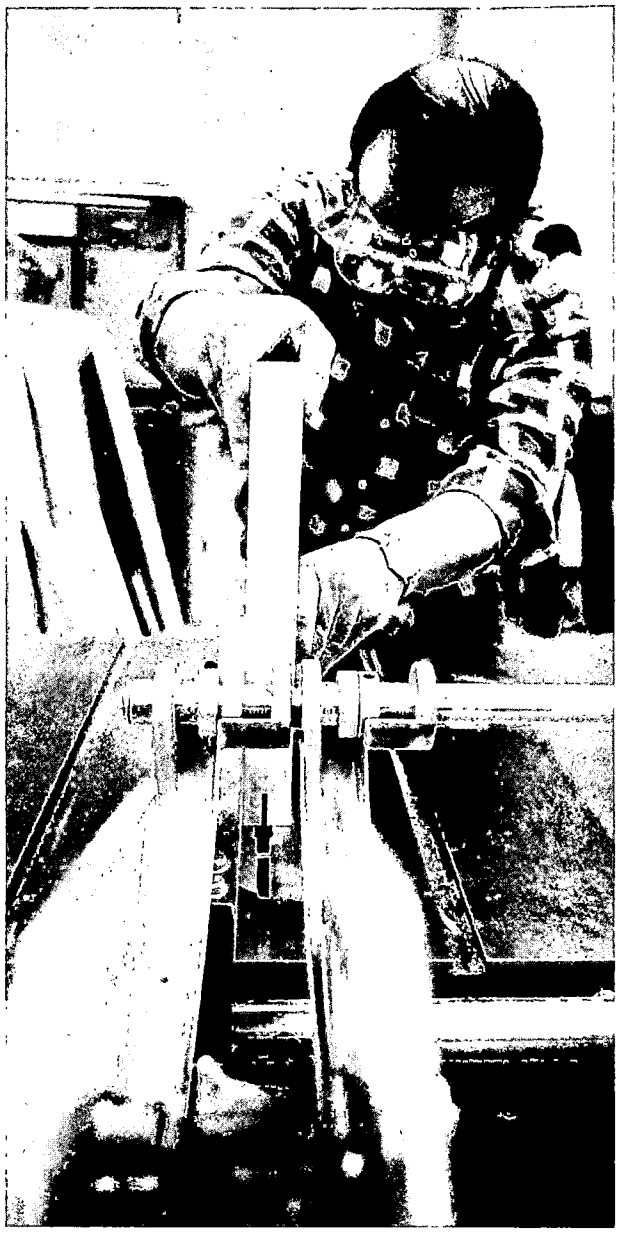
## CARPENTRY PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Carpentry Lab I | 15 |
| Carpentry Theory I | 5 |
| Supporting/~~Elective~~ Courses | 10 |
| *Trimester II* | |
| Carpentry Lab II | 15 |
| Carpentry Theory II | 5 |
| Supporting/~~Elective~~ Courses | 10 |
| *Supporting Courses* | |
| Carpentry Math I | 5* |
| Carpentry Math II | 5 |
| Blueprint Reading I | 5* |
| Blueprint Reading II | 5 |
| ~~Electives~~ Alternative Supporting Courses | |
| Industrial Safety | 3 |
| ~~Job Relations~~ | 2 |
| Construction Estimating | 3 |
| ~~Basic Structural Methods~~ | 3 |
| ~~Concrete Technology~~ | 2 |
| Oxyacetylene Welding | 5 |
| Math III | 3 |

## 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.

**Carpentry Lab and Theory II**
(*Prerequisite: Carpentry Lab and Theory I or equivalent*) Materials covered in this course are a continuation of Trimester I lab/theory, with emphasis on finish carpentry, basic construction and installation of cabinets and millwork.



**Carpentry 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.

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

**Blueprint Reading I**
This course offers basic instruction in sketching, reading working drawings, blueprints and specifications for residential and light commercial work.

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

**Industrial Safety (3 Hours/Week)**
This course will include training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification will be issued upon successful completion. Occupational safety will be stressed.

**Job Relations (2 Hours/Week)**
A course to aid students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations will be related to employment today.

**Construction Estimating (3 Hours/Week)**
Construction Estimating is intended for those students in the building trades who are interested in being able to estimate the amount of material, time and equipment required to complete a construction project.

**Basic Structural Methods (3 Hours/Week)**
This course covers the basics of statics and strength of materials with emphasis on fundamental terms, forces, moments, noncurrent-coplaner forces (trusses), static and kinetic friction, simple stresses, properties of materials, beams, shear forces and bending moments, beam design and columns.
Practical applications of the above design criteria are stressed as referenced to the uniform building code applications and interpretations and to prevention of structural failures in the building process.

**Concrete Technology (2 Hours/Week)**
Concrete Technology introduces the students to the history, development and present use of concrete in the construction industry. The chemistry of cements will be covered in depth, types of aggregates used in concrete, design and control of concrete, control of concrete mixes, precast concrete and various forming systems will also be covered.

**Oxyacetylene Welding (5 Hours/Week)**
This laboratory practice class includes safety practices, general tools and equipment, sources of heat, operational procedures, metals and their properties, and application of oxyacetylene welding.

**Math III (3 Hours/Week)**
(*Prerequisite: Carpentry Math II or equivalent*) This course includes basic algebraic manipulation of signed numbers, order of operation, inverse operation, linear equations, straight-line graphs, monomials, polynomials, factoring, algebraic fractions, fractional equations, ex-

# Culinary Arts

**2 Trimesters**

The Culinary Arts Program emphasizes nutritional food preparation leading to entry into one of the fastest growing industries 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 program is housed in two working labs specifically designed for Culinary Arts, with three adjacent supporting facilities for conducting restaurant-like transactions. The well-equipped labs introduce the student to fryolators, grills, broilers, ovens, steam cookers and many other equipment items used in the local restaurant industry.

The eight-month 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 skills mastered in the program. Special recognition is given to those students completing all of the courses in the program.

The Culinary Arts students pay a $75 equipment fee before entering the first trimester and an additional $45 before the second trimester, totaling $120.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
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 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

## CULINARY ARTS PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Sauté Cook Lab I | 20 |
| Sauté Cook Theory I | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Trimester II* | |
| Dinner Cook Lab II | 20 |
| Dinner Cook Theory II | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Supporting Courses* | |
| Food Service Math | 3* |
| Food and Nutrition | 2* |
| Cashiering | 2 |
| Stewardship | 3 |
| ~~*Electives*~~ *Alternative Supporting Courses* | |
| Industrial Safety | 3 |
| ~~Job~~ Relations | 2 |
| ~~Basic Accounting~~ Principles | 5 |
| ~~Food Garnishment~~ | 3 |
| ~~Principles of~~ Supervision | 2 |

## COURSE DESCRIPTIONS

**Sauté Cook Lab I**
This laboratory class teaches the different methods of preparing meats, vegetables, soups, sauces and thickening agents, sandwiches and salads, breakfast food and basic baking. 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 I**
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.

**Dinner Cook Lab II**
(*Prerequisites: Sauté Cook Lab and Theory I or equivalent*) This laboratory class gives instruction in cooking methods and techniques, herbs and spices, cutting meats, salads and salad dressings, baking, following instructions in recipes, calculation of cost and pantry work.

**Dinner Cook Theory II**
(*Prerequisites: Sauté Cook Lab and Theory I or equivalent*) Instruction supports the work accomplished in the dinner cook lab. Emphasis is 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 Service Math (3 Hours/Week)**
Basic arithmetic is studied in this course. Industrial applications are thoroughly covered and applied to the Culinary Arts major.

**Food and Nutrition (2 Hours/Week)**
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.

**Cashiering (2 Hours/Week)**
In this class, students learn to use cash registers, including the ability to solve procedural problems that occur at a register and checkout station.

**Stewardship (3 Hours/Week)**
Instruction is provided regarding the identification, solution and prevention of problems in areas ranging from purchasing to sanitation. Topics to be covered will include receiving and storage, menus, frozen foods, kitchen layout, controls and employee training. Emphasis will also be placed on salesmanship, basic bookkeeping, storeroom procedures, back-of-the-house activities, requisitions and dealing with the public.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**Basic Accounting Principles (5 Hours/Week)**
Instruction is provided in accounting fundamentals, including the accounting cycle, accounting statements and the principles of journalizing and posting.

**Food Garnishment (3 Hours/Week)**
This course covers fundamental decorating techniques, icing the cake, decorative icings, ornamenting tubes and their use, pressure control exercises and color techniques. An introduction to hors d'oeuvres, sandwiches, salads and desserts for parties is included.

**Principles of Supervision (2 Hours/Week)**
This introductory course helps students understand the basic operational functions of the supervisor as related to planning, organizing, staffing, directing and controlling in the business world.

# Diesel Mechanics

**5 Trimesters**

This program, the only state-approved diesel mechanics training course in New Mexico, provides students with the technical knowledge and skills needed for entry and satisfactory performance in the diesel industry.

Job projections for the future, both statewide and nationally, show that a great number of new mechanics in this field will be needed in the next ten years.

Students learn basic engine block assembly design, component parts disassembly, inspection and reassembly, diesel engine accessories, diagnosis and troubleshooting in the first trimester. Second trimester instruction covers engine overhaul, troubleshooting and failure analysis, major causes of engine operational or performance failure and reclaiming engine performance procedures.

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

In the fifth trimester, emphasis is on various fuel injection system, injectors, governors and analysis procedures.

The program is held in five working labs specifically designed for diesel fuel injection, diesel engine principles and accessories, diesel engine overhaul, diesel transmissions and diesel electrical and hydraulic systems. The well-equipped labs introduce the student to modern fuel injection calibration stands, engine dynamometers, transmission testing equipment, starter tester, alternator/generator tester, Caterpillar engines, Cummins engines, Detroit engines, manual and automatic transmissions, and many other factory and dealership training units.

The 20-month program totals 2,250 hours of instruction, of which 1,275 hours are laboratory work and 975 hours are supporting courses.

A student may leave the program upon completion of a training objective and receive a rating sheet detailing the skills mastered in the program.

Diesel Mechanics students must pay a $75 equipment fee before entering the first trimester and $45 before each additional trimester, totaling $255, and must provide their own industrial ~~safety~~ glasses or goggles.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory diseases and allergies to diesel fuels and solvents.
3. Must be able 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 |
| Supporting/~~Elective~~ Courses | 10 |

*Trimester II*

| | |
|---|---|
| Diesel Engine Overhaul Lab | 20 |
| Diesel Engine Overhaul Theory | 5 |
| Supporting/~~Elective~~ Courses | 5 |

*Trimester III*

| | |
|---|---|
| Diesel Transmission, Final Drives, Clutches and Brakes Lab | 20 |
| Diesel Transmission, Final Drives, Clutches and Brakes Theory | 5 |
| Supporting/~~Elective~~ Courses | 5 |

*Trimester IV*

| | |
|---|---|
| Diesel Electrical and Hydraulics Systems Lab | 15 |
| Diesel Electrical and Hydraulics Systems Theory | 5 |
| Supporting/~~Elective~~ Courses | 10 |

*Trimester V*

| | |
|---|---|
| Diesel Fuel Injection Lab | 15 |
| Diesel Fuel Injection Theory | 5 |
| Supporting/~~Elective~~ Courses | 10 |

*Supporting Courses*

| | |
|---|---|
| Basic Blueprint Reading | 3* |
| Diesel Math I | 5* |
| Diesel Math II | 5 |
| Precision Measurement | 2* |
| Applied Physics | 5 |
| Basic Tool Application | 5 |
| Oxyacetylene Welding | 5 |
| Air-Conditioning and Transport Refrigeration | 5 |

*~~Electives~~*

| | |
|---|---|
| Industrial Safety | 3 |
| ~~Job~~ Relations | 2 |
| ~~Fun~~damentals of Electricity | 3 |
| ~~Tech~~nical Report Writing | 3 |
| ~~Strength~~ of Materials | 5 |
| Parts Procedures | 2 |
| Math III | 3 |

*Recommended for beginning Diesel Mechanics stu-

## 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.

**Diesel Engine Overhaul Lab/Theory**
(*Prerequisites: Trimester I Lab and Theory or equivalent*) This combined laboratory and theory course teaches 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.

**Diesel Transmissions, Final Drives, Clutches and Brakes Lab/Theory**
(*Prerequisites: Trimester II Lab and Theory or equivalent*) A laboratory practice class designed to give instruction in service, repair and troubleshooting of transmissions, torque convertors, final drives, crawler tractor undercarriages, clutches and brakes. Hydraulic principles and service specifications are thoroughly covered. Dealer pre-delivery 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 with regard to the preventive maintenance program are covered.

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

**Diesel Fuel Injection Lab/Theory**
(*Prerequisites: Trimester IV Lab and Theory or equivalent*) This combined theory and practice class provides instruction in fuel system design, theory, construction, operating principles and servicing procedures; distributor-type and multi-plunger fuel systems; injectors and governors; and troubleshooting and analysis sequence procedures.

**Basic Blueprint Reading (3 Hours/Week)**
Basic instruction in reading and interpreting drawings is offered in this course. Emphasis is on terminology, details, abbreviations and symbols, schematics and

**Diesel Math I (5 Hours/Week)**
This course, correlated with Diesel Engine Principles and Accessories Lab and Theory, reviews basic arithmetic operations including formulas, graphs, meters and fluid calculations.

**Diesel Math II (5 Hours/Week)**
(*Prerequisite: Diesel Math I or equivalent*) Instruction is provided in the use of rules and formulas, ratio and proportion, volume, pulley speeds, velocity or surface speed, application of algebraic calculations, geometric figures and right angle functions, and physics principles as associated with engine operation and engine life expectancy.

**Precision Measurement (2 Hours/Week)**
Precision measuring tools used in the industry will be emphasized. Practical training applications on the English and metric micrometer caliper, vernier caliper, depth micrometer, telescoping gauges and dial indicators will be the main part of the course.

**Applied Physics (5 Hours/Week)**
(*Prerequisite: Math II or equivalent*) A course in basic physics which will include physical measurement, equations and problem solving as related to forces, vectors, work and energy, simple machines and motion, forces, matter, fluids, temperature and heat, thermal expansion, gas laws and electricity.

**Basic Tool Application (5 Hours/Week)**
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 shifts, drilling and reaming holes in diesel engine blocks, transmission final drive housings and ancillary accessories are thoroughly covered.

**Oxyacetylene Welding (5 Hours/Week)**
This laboratory practice class includes 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.

**Air-Conditioning and Transport Refrigeration (5 Hours/Week)**
This industrially based theory-demonstration and training course offers students an understanding of the safety, diagnosis, repair and service of current models of diesel air-conditioning. In addition, this course will cover the refrigeration cycle of transport units with emphasis on the electrical systems of the diesel powered units.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**Fundamentals of Electricity (3 Hours/Week)**
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 electri-

**Technical Report Writing (3 Hours/Week)**
Students will develop reports on conditions of existing equipment. Reports of recommendation and rejection for purchase of materials and equipment and accompanying letters, purchase orders, work orders, and billings will be emphasized. Written reports as they relate to blueprints, sketches and schematics will also be covered.

**Strength of Material (5 Hours/Week)**
(*Prerequisite: Math II or equivalent*) This course covers the mathematics of stresses, forces and movements as related to structural members. The course also includes the basic concepts for further study in the design and analysis of machines and structures.

**Parts Procedures (2 Hours/Week)**
This course will provide the student with training in the use of manuals, number identification, components, and accessories, model and year applications.

**Math III (3 Hours/Week)**
(*Prerequisite: Math II or equivalent*) This course covers basic algebraic manipulation including signed numbers, order of operation, inverse operation, linear equations, straight-line graphs, monomials, polynomials, factoring, algebraic fractions, fractional equations, exponents and quadratic equations.

# Electrical Trades

## 2 Trimesters

This program provides students with entry-level skills for employment in the construction industry and related electrical trades as an electrician trainee.

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

Electrical Trades is housed in a working lab, specifically designed for residential electrical work, which includes clamp-on volt-ohm-amp meters, rotary hammers, hydraulic knock-out punches, Simpson voms, Amprobe voms, power-actuated fastening tools, door openers, single phase motor controls, conduit benders and other equipment used in the industry.

The eight-month 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 skills mastered in the program.

Electrical Trades students must pay a $75 equipment fee before entering the first trimester and an additional $45 before the second tri-

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be able to lift materials and equipment weighing up to 50 pounds.
3. Must have an interview with the program coordinator and admissions counselor.
4. Must have normal color vision.

## ELECTRICAL TRADES PROGRAM

*Trimester I* — *Hours/Week*

Electrical Trades Lab I ..... 15
Electrical Trades Theory I ..... 5
Supporting/~~Elective~~ Courses ..... 10

*Trimester II*

Electrical Trades Lab II ..... 15
Electrical Trades Theory II ..... 5
Supporting/~~Elective~~ Courses ..... 10

*Supporting Courses*

Electrical Math I ..... 5*
Blueprint Reading I ..... 5*
Electrical Math II ..... 5
Blueprint Reading II ..... 5

~~*Electives*~~ Alternative Supporting Courses

Industrial Safety ..... 3
~~Job Rel~~lations ..... 2
Construction Estimating ..... 3
~~Instru~~mentation ..... 3
~~Control~~ Circuitry ..... 3

*Recommended for beginning Electrical Trades students.

## 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 Trades Lab and Theory II**
(*Prerequisites: Trimester I Lab and Theory or equivalent*) 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 are included.

**Electrical Math I**
Covered are 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, blueprints and specifications for

**Electrical Math II**
(*Prerequisite: Math I or equivalent*) 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 wiring and wire sizing, calculating service entrances and estimating materials for the electrical trades is provided.

**Blueprint Reading II**
(*Prerequisite: Blueprint Reading I or equivalent*) 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.

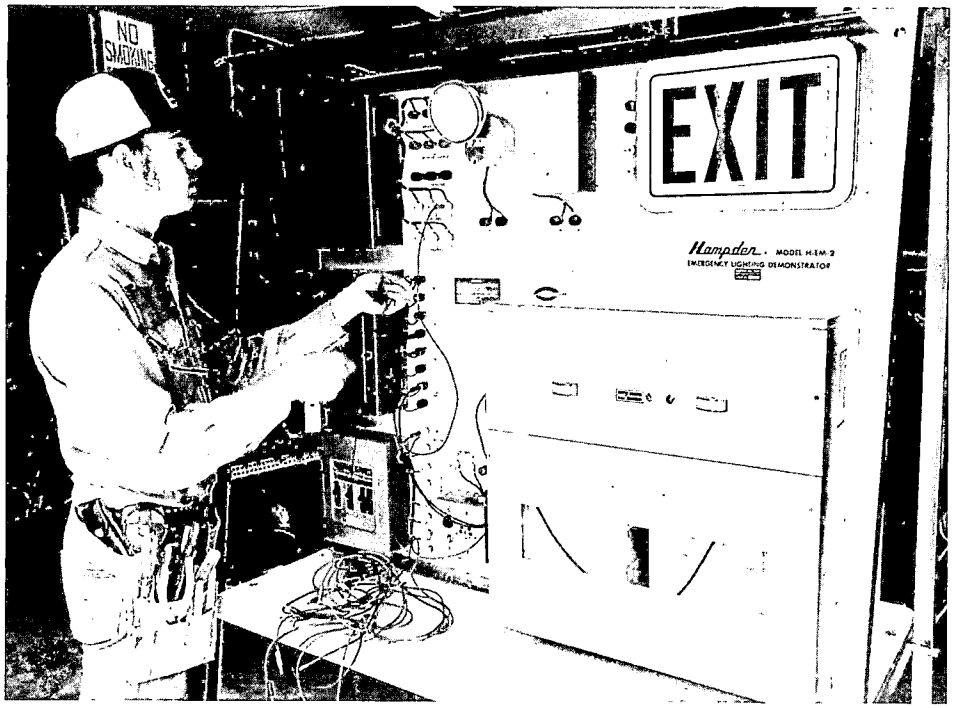
**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**Construction Estimating (3 Hours/Week)**
This course is intended for those students in the building trades who are interested in estimating the amount of material, time and equipment required to complete a construction project.

**Instrumentation (3 Hours/Week)**
This course offers instruction on instruments encountered in the trade by presenting electrical concepts of power applications, wiring, magnetic circuits, generator and motor problems.

**Control Circuitry I (3 Hours/Week)**
This course is designed to reinforce the background knowledge required in 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.




# Industrial Electricity

**2 Trimesters**

The Industrial Electricity program is designed to provide the student with entry level skills for employment in maintenance or industrial electrician specialties.

The program is housed in a well-equipped lab which includes industrial motor control systems, electric heat panels, emergency lighting panels, fire alarm panels, low-voltage lighting control panels, burglar alarm circuits, a trouble-shooting trainer and many other types of equipment used in the industry.

The eight-month program consists of 900 hours of instruction, of which 300 hours are laboratory experiences 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 skills mastered in the program. Special recognition is given to those students completing all of the courses in the program.

Industrial Electricity students must pay $75 equipment fee prior to entering the first trimester and an additional $45 before entering the second trimester, totaling $120, and must provide their own shop clothing and industrial safety glasses or goggles.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics test.
2. Must be able to lift materials and equipment weighing up to 50 pounds.
3. Must have an interview with the program coordinator

## INDUSTRIAL ELECTRICITY PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Industrial Electricity Lab I | 10 |
| Industrial Electricity Theory I | 5 |
| Industrial Code Requirements | 5 |
| Supporting/~~Elective~~ Courses | 10 |

| *Trimester II* | |
|---|---|
| Industrial Electricity Lab II | 10 |
| Industrial Electricity Theory II | 5 |
| Industrial Control Systems | 10 |
| Supporting/~~Elective~~ Courses | 5 |

*Supporting Courses*

| | |
|---|---|
| Industrial Electricity Bluepring Reading | 5* |
| Basic Physics and Mechanisms | 5* |
| Industrial Electricity Math and Instrumentation | 5 |

~~*Electives*~~ alternative Supporting Courses

| | |
|---|---|
| Industrial Safety | 3 |
| ~~Job Relations~~ | 2 |
| Construction Estimating | 3 |
| Math II | 3 |

*Recommended for beginning Industrial Electricity students.

## COURSE DESCRIPTIONS

**Industrial Electricity Lab and Theory I**

The course includes principles of direct and alternating current, A.C. and D.C. generators and motors, small motor analysis and troubleshooting, electromagnetic and static controls, magnetic and static electric motor con-

**Industrial Code Requirements**
Instruction supports the work accomplished in the Industrial Electricity lab through a study of the commercial and industrial sections of the electrical code.

**Industrial Electricity Lab and Theory II**
(*Prerequisites: Industrial Electricity Lab and Theory I or equivalent*) Instructional materials covered in this course are similar to those covered in Industrial Electricity Lab I but in more depth. Major emphasis is placed on industrial control systems, automated motor controls, motor control equipment maintenance, motor acceleration and deceleration, motor speed controls, static control devices, transformer connections and operations, industrial distribution systems and low voltage circuits.

**Industrial Control Systems**
(*Prerequisite: Industrial Code Math and Instrumentation and Blueprint Reading or equivalent*) This course provides experience in the analysis, development and servicing of automatic control devices, starters, acceleration and braking, speed control devices, multi-station systems, and industrial heating and signalling devices.

**Industrial Electricity Blueprint Reading**
This course provides instruction in unit substratum and high voltage metering equipment; feeder duct and distribution transformers; panelboards and sub-feeders; lighting circuits and systems; motors and controllers; precipitron units, synchronous condensers, three-phase trolley ducts, signal systems, ventilating and air-conditioning, telephone raceways and alternate methods of feeder layout.

**Basic Physics and Mechanisms**
(*Prerequisite: Industrial Electricity Math and Instrumentation*) Basic principles of mechanics, sound, light, utilization of basic gears, linkages and conversion mechanisms moves are covered. Emphasis is placed on modern industrial concepts and trends.

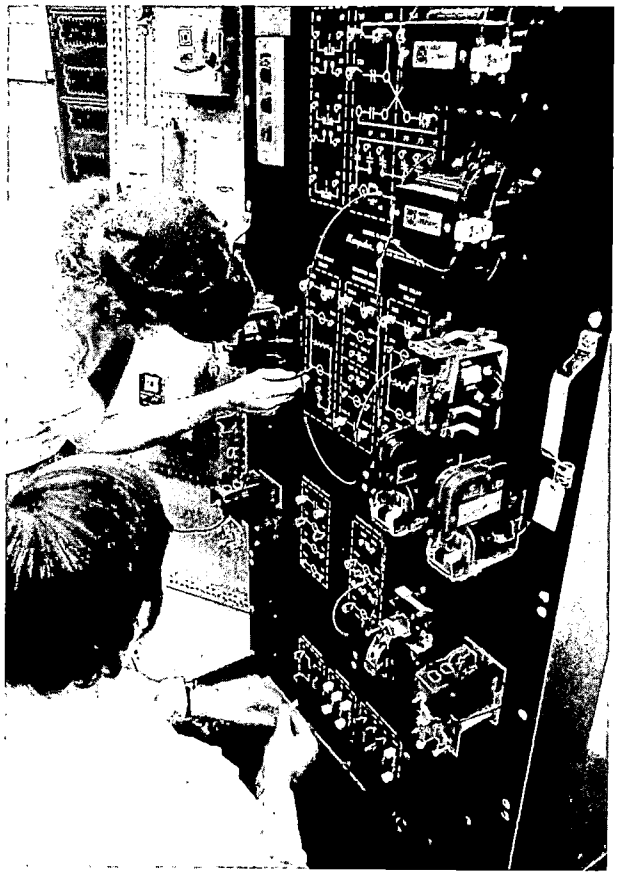
**Industrial Electricity Math and Instrumentation**
This course covers the mathematics and instruments encountered in the trade. Beginning and advanced algebra, trigonometric functions, power applications, wiring, magnetic circuits, generator and motor problems, and special applications on transformers are included.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**Construction Estimating (2 Hours/Week)**
This course is intended for those students in the building trades who are interested in estimating the amount of material, time and equipment required to complete a construction project.

**Math II (3 Hours/Week)**
(*Prerequisite: Math I or equivalent*) This course includes geometric construction and solutions, volume, capacity and simple formula manipulation.



# Machine Trades

3 Trimesters

The Machine Trades Program qualifies students for entry into the machine trades field as machine tool operators.

Students learn the fundamental operations of all machines, and it is possible to specialize in drilling machine set-up and operations in the first trimester. 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.

Machine Trades classes meet in a well-equipped lab where students are introduced to micrometer calipers, height transfer micrometers, surface plates, taper micrometers, gauge blocks, plug gauges, snap gauges, drill presses, band saws, engine lathes, milling machines, tool and cutter grinders, universal cylindrical grinders, numerical controlled equipment and many other types of equipment used throughout the metal working industry.

The year-long program offers up to 1,350 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 skills mastered in the program. Special recognition is 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 an $85 equipment fee before entering the first trimester and $45 before each additional trimester, totaling $175, and must provide their own industrial safety glasses or goggles.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory diseases and allergies to oils, solvents and cutting fluids.
3. Must be able to stand on concrete floors for eight to ten hours per day.
4. Must have depth perception correctable in both eyes.
5. Must be able to lift materials and equipment weighing up to 50 pounds.
6. Must have an interview with program coordinator and

## MACHINE TRADES PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Machine Trades Lab I | 15 |
| Machine Trades Theory I | 5 |
| Supporting/~~Elective~~ Courses | 10 |
| *Trimester II* | |
| Machine Trades Lab II | 15 |
| Machine Trades Theory II | 5 |
| Supporting/~~Elective~~ Courses | 10 |
| *Trimester III* | |
| Machine Trades Lab III | 15 |
| Machine Trades Theory III | 5 |
| Supporting/~~Elective~~ Courses | 10 |
| *Supporting Courses* | |
| Machine Trades Math I | 5* |
| Blueprint Reading I | 5* |
| Machine Trades Math II | 5 |
| Blueprint Reading II | 5 |
| Machine Trades Math III | 5 |
| Blueprint Reading III | 5 |

~~*Electives*~~ Alternative Supporting Courses

| | |
|---|---|
| Industrial Safety | 3 |
| ~~Job Relations~~ | 2 |
| True Position Dimensioning and Quality Control | 3 |
| ~~Tooling~~ Applications | 2 |
| Numerical Control Programming Applications | 3 |
| ~~Production~~ Planning | 2 |
| ~~Basic Metal~~lurgy | 2 |
| ~~Technical~~ Report Writing | 3 |

*Recommended for beginning Machine Trades students.

## 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 Lab II**

(*Prerequisite: Machine Trades Lab and Theory I or equivalent*) Materials covered in this class 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 is placed on the engine lathe, operations of taper turning, threading, introduction to four-jaw chuck work and basic introduction to tracer lathes; basic milling machine operations; surface grinding; tool and cutter grinding; introduction to cylindrical grinding; and manual numerically controlled (N/C) operation. Metric dimensioned drawings and utilization of true position dimensioning will

**Machine Trades Theory II**
(*Prerequisites: Machine Trades Theory I or equivalent*) 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 Lab III**
(*Prerequisites: Machine Trades Lab and Theory II or equivalent*) Materials covered in this course are similar to those covered in Machine Trades Lab I and II but in more depth. Major emphasis is on milling machine operations of hole production, indexing and rotary table work with N/C setup and basic tape operations. 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.

**Machine Trades Theory III**
(*Prerequisites: Machine Trades Theory II or equivalent*) 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 I**
Feeds and speeds, percentages, surface and direct measurements, threads and tapers as applied to the machine trades field are included.

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

**Blueprint Reading II**
(*Blueprint Reading I or equivalent*) This course teaches students to interpret complete shop drawings, including size definition, true positioning symbols and coding practices as applied to the machine trades field.

**Machine Trades Math III**
(*Prerequisite: Machine Trades Math II or equivalent*) 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 Machinery Handbook.

**Blueprint Reading III**
(*Prerequisite: Blueprint Reading II or equivalent*) This is an advanced course in blueprint reading in which the student reads complex detail section and assembly drawings as related to the machine trades.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**True Position Dimensioning and Quality Control (3 Hours/Week)**
This course offers instruction in the interpretation and application of the true position dimensioning system based on federal specifications. It also deals with the maintenance of high quality production inspection in the machine trades field. Subjects covered include comparative, gauge and optical measurement as they relate to the inspection of parts machined to true position dimensions.

**Tooling Applications (2 Hours/Week)**
This course covers care and application of tooling with emphasis on applications to commonly machined materials with high speed steels, carbides, coated carbides and oxides.

**Numerical Control Programming Applications (3 Hours/Week)**
(*Prerequisites: Machine Trades Math I and Blueprint Reading I or equivalent*) The history of N/C, the TAB sequential, fixed block and work address formats, as well as the programming and tape preparation necessary for numerical control machining, are included in this course.

**Production Planning (2 Hours/Week)**
(*Prerequisites: Machine Trades Lab and Theory II*) This course covers material allocation, method planning, job routing, time and cost estimating, and production planning terminology.

**Basic Metallurgy (2 Hours/Week)**
Instruction is offered in methods and processes; structure and properties of metal; temperature changes in metal machining; and effects of alloying elements, weights and conversion factors.

**Technical Report Writing (3 Hours/Week)**
Students develop reports on conditions of existing equipment; recommendation or rejection for purchase of materials and equipment; and accompanying letters, purchase orders, work orders and billings. Written reports as they relate to blueprints, sketches and schematics will

# Masonry

2 Trimesters

The Masonry Trades Program teaches the skills and practices needed to enter the masonry construction field. In the first trimester, students learn the fundamentals of masonry and masonry machines. During the second trimester, advanced masonry skills, such as chimneys, fireplaces, arches, floors and estimating are emphasized.

The indoor lab includes power finishers, mortar mixers, concrete mixers, floats, tampers and other types of equipment used in the industry.

The eight-month program consists of 900 hours of instruction, of which 600 hours are laboratory experiences 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 skills mastered in the program. Special recognition is given to those students completing all of the courses in the program.

Masonry Trades students must pay an equipment fee of $75 before entering the first trimester and $45 before entering the second trimester, totaling $120.

## ENTRANCE REQUIREMENTS

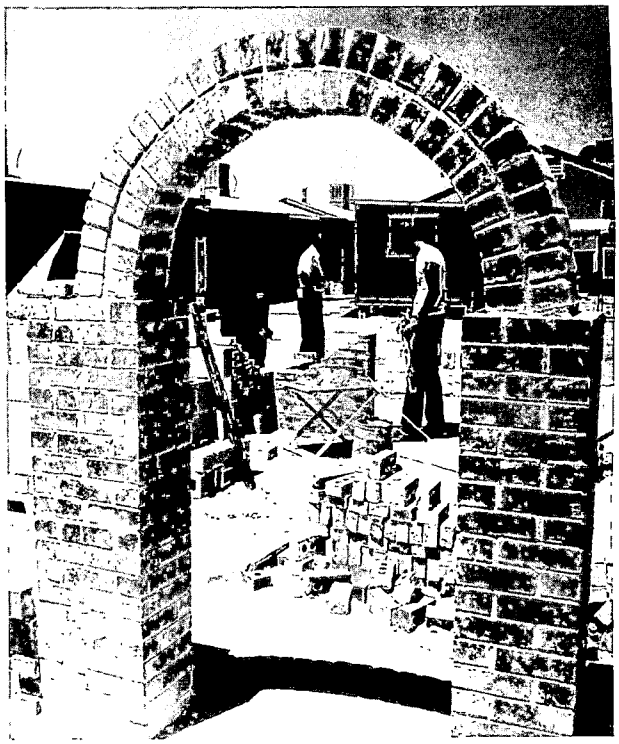
1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic lime or cement product allergies.
3. Must be able to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

## MASONRY TRADES PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Masonry Lab I | 20 |
| Masonry Theory I | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Trimester II* | |
| Masonry Lab II | 20 |
| Masonry Theory II | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Supporting Courses* | |
| Masonry Math I | 5* |
| Blueprint Reading I | 5 |

~~*Electives*~~ Alternative Supporting Courses

| | |
|---|---|
| Industrial Safety | 3 |
| ~~Job~~ Relations | 2 |
| Construction Estimating | 3 |
| Concrete Technology | 2 |
| Math II | 3 |
| Blueprint Reading II | 5 |



## COURSE DESCRIPTIONS

**Masonry 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.

**Masonry Lab and Theory II**
(*Prerequisite: Masonry Lab and Theory I or equivalent*) This course includes 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.

**Masonry Math I**
This course covers basic arithmetic including whole numbers, common fractions, decimal fractions, surface and direct measurement, percent, powers and roots, and angular and area measurement as applied to masonry.

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

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross Certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits, and employee and customer relations are discussed.

**Construction Estimating (3 Hours/Week)**
This course is for those students in the building trades who are interested in estimating the material, time and equipment required to complete a construction project.

**Concrete Technology (2 Hours/Week)**
Concrete Technology introduces the students to the history, development and present use of concrete in the construction industry. The chemistry of cements is covered in depth. Types of aggregates used in concrete, design and control of concrete, control of concrete mixes, precast concrete and various forming systems are covered.

**Math II (3 Hours/Week)**
(*Prerequisite: Masonry Math I or equivalent*) This course includes geometric construction and solutions, volume, capacity and simple formula manipulation.

**Blueprint Reading II (5 Hours/Week)**
(*Prerequisite: Blueprint Reading I or equivalent*) This course includes a study of development and variations in design, construction practices and materials, specifications, masonry materials and effects of material variations on blueprint reading.

# Parts Specialist

2 Trimesters

The Parts Specialist Program Prepares students for entry-level employment in the four phases of parts sales: shipping and receiving, stocking, inventory control and counter sales. Also included are some secondary areas such as outside parts sales, inventory supervision, inventory purchasing and control, management of satellite store parts sales and office manager.

In the first trimester, students are given instruction and practical experience in catalog use, parts sales organization, shipping and receiving, stocking procedure, inventory control and counter sales.

In the second trimester, actual work experience will be emphasized in major parts supply areas of auto collision, automotive and diesel mechanics.

The eight-month 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 skills mastered in the program. Special recognition is 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 second trimester, students receiving Veterans Administration or other support agency benefits will receive only partial benefits.

The Parts Specialist lab is set up like a live store and makes parts distribution for student use in related mechanical programs. The lab includes catalogs, microfiche, calculators, cash registers, redifold machines and many other types of equipment used in the industry.

Parts Specialist students must pay an equipment fee of $45 before entering the first tri-

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory diseases and allergies to automotive fuels and solvents.
3. Must be able to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.
5. Must have correctable vision in both eyes.
6. Must be able to stand on concrete floors for a prolonged period of time.

## PARTS SPECIALIST PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Parts Specialist Lab I | 20 |
| Parts Specialist Theory I | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Trimester II* | |
| Parts Specialist Lab II | 20 |
| Parts Specialist Theory II | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Supporting Courses* | |
| Parts Sales Math | 3* |
| Office Procedures for Parts Sales | 2* |
| Basic Tool Applications | 3 |
| Precision Measurements | 2 |
| ~~*Electives*~~ alternative Supporting Courses | |
| Industrial Safety | 3 |
| ~~Job Relations~~ | 2 |
| Basic Accounting Principles | 5 |
| Principles of Data Processing | 5 |
| ~~Introduction~~ to Minicomputers and Microprocessors | 5 |

## COURSE DESCRIPTIONS

**Parts Specialist Lab and Theory I**
This combined theory and laboratory practice class provides instruction in automotive collision, automotive and diesel parts nomenclature, parts sales, shipping and receiving procedures, inventory control, counter sales and safety.

**Parts Specialist Lab and Theory II**
(*Prerequisite: Parts Specialist Lab and Theory I or equivalent*) Materials covered in this course are a continuation of Trimester I Lab/Theory with emphasis on actual working business problems. Employer-employee rules and guidelines, counter sales problems, dealership catalogs, and dealership operation and parts house operation will be included.

**Parts Sales Math**
Basic arithmetic; percentages; ratio and proportion; sales ticket, work order, special order and estimate parts writing; and metric systems and volumes are covered.

**Office Procedures for Parts Sales**
This course includes the use of office machines, telephone sales techniques, business terminology, office procedures, business organizations, finance, keeping records and operations, distribution of goods, invoice and billing procedures, and customer and personal relations as they relate to the parts sales industry.

**Basic Tool Applications (3 Hours/Week)**
Shop safety, basic benchwork, hand tools, machine construction, basic operations on the drill press, pedestal grinder, and brake lathe operations are taught in this combination theory, demonstration and training course.

**Precision Measurement (2 Hours/Week)**
Precision measuring tools used in the industry will be emphasized. Practical training applications on the English and metric micrometer caliper, vernier caliper, depth micrometer, telescoping gauges and dial indicators will be the main part of the course.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation for which Red Cross certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibility, payroll and benefits, and employee and customer relations are discussed.

**Basic Accounting Principles (5 Hours/Week)**
Instruction is provided in accounting fundamentals. Included are the accounting statements and the principles of journalizing and posting.

**Principles of Data Processing (5 Hours/Week)**
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.

**Introduction to Minicomputers and Microprocessors (5 Hours/Week)**
This course covers the architecture, functions and programming of microprocessors and mini-computers.

# Plumbing

2 Trimesters

The Plumbing Program provides the technical knowledge and occupational skills necessary to enter the plumbing industry.

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

The program is housed in a lab specifically designed for plumbing work. It includes pipe threading machines, soldering machines, propane torches, power sewer cleaners, welding machines and many other types of equipment used in industry. Students also work on plumbing projects in an outdoor construction area.

The eight-month 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 skills mastered in the program.

Plumbing students must pay a $75 equipment fee before entering the first trimester and an additional $45 before entering the second trimester, totaling $120.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory disease and allergies to plumbing fluxes, oils, glues and plastic compounds.
3. Must be able to lift materials and equipment weighing up to 50 pounds.
4. Must have an interview with the program coordinator and admissions counselor.

## PLUMBING PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Plumbing Lab I | 15 |
| Plumbing Theory I | 5 |
| Supporting/~~Elective~~ Courses | 10 |

| *Trimester II* | |
|---|---|
| Plumbing Lab II | 15 |
| Plumbing Theory II | 5 |
| Supporting/~~Elective~~ Courses | 10 |

| *Supporting Courses* | |
|---|---|
| Plumbing Math I | 5* |
| Blueprint Reading I | 5* |
| Blueprint Reading II | 5 |
| ~~Control Circuitry~~ Solar Appl. | 5 |
| ~~*Electives*~~ Alternative Supporting Courses | |
| Industrial Safety | 3 |
| ~~Job~~ Relations | 2 |
| Construction Estimating | 3 |
| ~~Solar~~ Applications | 5 |
| Oxyacetylene Welding | 5 |
| Math II | 3 |

*Recommended for beginning Plumbing students.

## 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.

**Plumbing Lab/Theory II**

(*Prerequisites: Trimester I Lab and Theory or equivalent*) Emphasized in this course are 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.

**Plumbing 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

**Blueprint Reading I**
This course offers basic instruction in sketching, reading working drawings, blueprints, and specifications for residential and light commercial work.

**Blueprint Reading II**
(*Prerequisite: Blueprint Reading I or equivalent*) 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.

**Control Circuitry**
This course reinforces 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.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia Systems and cardiopulmonary resuscitation, for which Red Cross Certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits and employee and customer relations are discussed.

**Construction Estimating (3 Hours/Week)**
This course is for those students in the building trades who are interested in estimating the amount of material, time and equipment required to complete a construction project.

**Solar Applications (5 Hours/Week)**
This course offers instruction and application in heat collectors, types of storage and use with conventional heating systems.

**Oxyacetylene Welding (5 Hours/Week)**
This laboratory practice class includes safety practices, general tools and equipment, sources of heat, operational procedures, metals and their properties, and applications of oxyacetylene welding.

**Math II (3 Hours/Week)**
(*Prerequisite: Plumbing Math I or equivalent*) This course includes geometric construction and solutions, volume, capacity and simple formula manipulation.

# Sheet Metal

**2 Trimesters**

The Sheet Metal Program equips students 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 learn 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 program meets in a lab specifically designed for sheet metal fabrication where students are introduced to slip rolls, the rotex punch, brakes, lockformers and many other types of equipment used in the industry.

The eight-month 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 skills mastered in the program. Special recognition is given to those students completing all of the courses in the program.

Sheet Metal students must pay an equipment fee of $75 before entering the first trimester and an additional $45 before entering the second tri-

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory diseases and allergies to sheet metal fluxes and metals.
3. Must be able 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 | 20 |
| Sheet Metal Theory I | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Trimester II* | |
| Sheet Metal Lab II | 20 |
| Sheet Metal Theory II | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Supporting Courses* | |
| Sheet Metal Math I | 5* |
| Blueprint Reading I | 5 |

~~Electives~~ alternative Supporting Courses

| | |
|---|---|
| Industrial Safety | 3 |
| ~~Job Relations~~ | 2 |
| Oxyacetylene Welding | 5 |
| Construction Estimating | 3 |
| Systems Design | 5 |
| Math II | 3 |
| Blueprint Reading II | 2 |

## 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.

**Sheet Metal Lab/Theory II**
(*Prerequisite: Sheet Metal Lab and Theory I or equivlent*) This course provides advanced training and emphasizes sheet metal machines and accessories, radial line and transition pattern development.

**Sheet Metal Math I**
Covered are basic arithmetic including whole numbers, common fractions, decimal fractions, surface and direct measurement, percent, powers and roots, and angular and area measurement as applied to the sheet metal trade.

**Blueprint Reading I**
Basic instruction in working drawings and blueprints is offered in this course. Elevations and floor plans; symbols and notations; scaling and dimensioning practices; structural information; detail drawings; plot plans; and specifications for sheet metal products are emphasized.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibilities, payroll and benefits and employee and customer relations are discussed.

**Oxyacetylene Welding (5 Hours/Week)**
This laboratory practice class includes safety practices, general tools and equipment, sources of heat, operational procedures, metals and their properties, and applications of oxyacetylene welding.

**Construction Estimating (3 Hours/Week)**
This course is for those students in the building trades who are interested in estimating the amount of material, time and equipment required to complete a construction project.

**Systems Design (5 Hours/Week)**
Included are the study of the design, layout and application of air distribution duct systems for air-conditioning. Instructional emphasis is on basic principles of physics, psychrometric theory related to human comfort, the principles of fluid flow and the thermodynamics of the refrigeration cycle.

**Math II (3 Hours/Week)**
(*Prerequisite: Math I or equivalent*) This course includes geometric construction and solutions, volume, capacity and simple formula manipulation.

**Blueprint Reading II (2 Hours/Week)**
(*Prerequisite: Blueprint Reading I or equivalent*) This course provides 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 coor-

# Small Engine Mechanics

**2 Trimesters**

The Small Engine Mechanics Program provides job entry technical knowledge and skills through an instructional program based on the rapidly expanding small engine repair field.

In the first trimester, students learn 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.

The Small Engine Mechanics lab introduces students to chain saws, 2- and 4-cycle mower engines, multiple cylinder air-cooled engines, outboard motors, valve grinding machines, hones, test instruments and many other types of equipment used in industry.

The eight-month 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 skills mastered in the program. Special recognition is given to those students completing the entire program.

Small Engine Mechanics students must pay an equipment fee of $75 before entering the first trimester and an additional $45 before entering

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be free of chronic respiratory diseases and allergies to fuels and solvents.
3. Must be able 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 |
| Supporting/~~Elective~~ Courses | 5 |
| *Trimester II* | |
| Small Engine Mechanics Lab II | 20 |
| Small Engine Mechanics Theory II | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Supporting Courses* | |
| Small Engine Mechanics Math I | 3* |
| Precision Measurements | 2* |
| Electrical Accessories | 5 |
| ~~*Electives*~~ *alternative Supporting Courses* | |
| Industrial Safety | 3 |
| Job Relations | 2 |
| Diesel Support Engines | 5 |
| Oxyacetylene Welding | 5 |
| Math II | 3 |

## 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 to ignition and starter systems, fuel systems and tune-up techniques; and proper use of manufacturer's specifications, manuals, catalogs and price lists. The course also teaches the student to interpret small engine blueprints and schematics.

**Small Engine Mechanics Lab and Theory II**
(*Prerequisites: Small Engine Mechanics Lab and Theory I or equivalent*) 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 to various small engine recreational vehicles are provided. The course also includes instruction in repair orders, invoices, warranty descriptions and customer relations.

**Small Engine Mechanics Math I**
This trade related course reviews basic mathematics, English and metric measurement systems, basic calculations, machinist's scales and the various thread systems used in the industry.

**Precision Measurements**
Precision measuring tools used in the industry are emphasized. Practical training applications on the English and metric micrometer caliper, vernier caliper, depth micrometer, telescoping gauges and dial indicators are the main part of this course.

**Electrical Accessories**
(*Prerequisite: Small Engine Mechanics Math I or equivalent*) This course includes instruction in charging systems, ignition systems, safety inter-lock systems, generators, alternators, and electronic system troubleshooting techniques. Emphasis is on schematic reading and understanding.

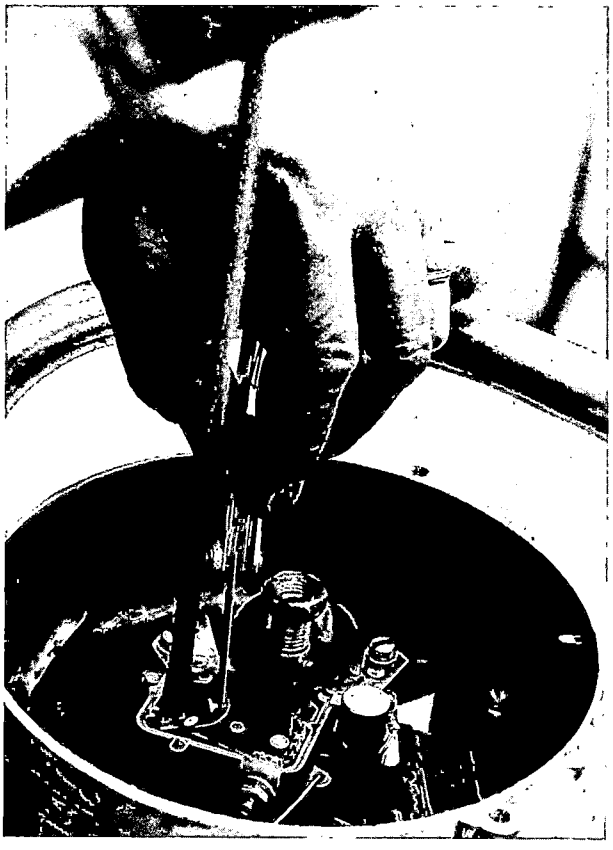
**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross certification is issued upon successful completion. Occupational safety is stressed.

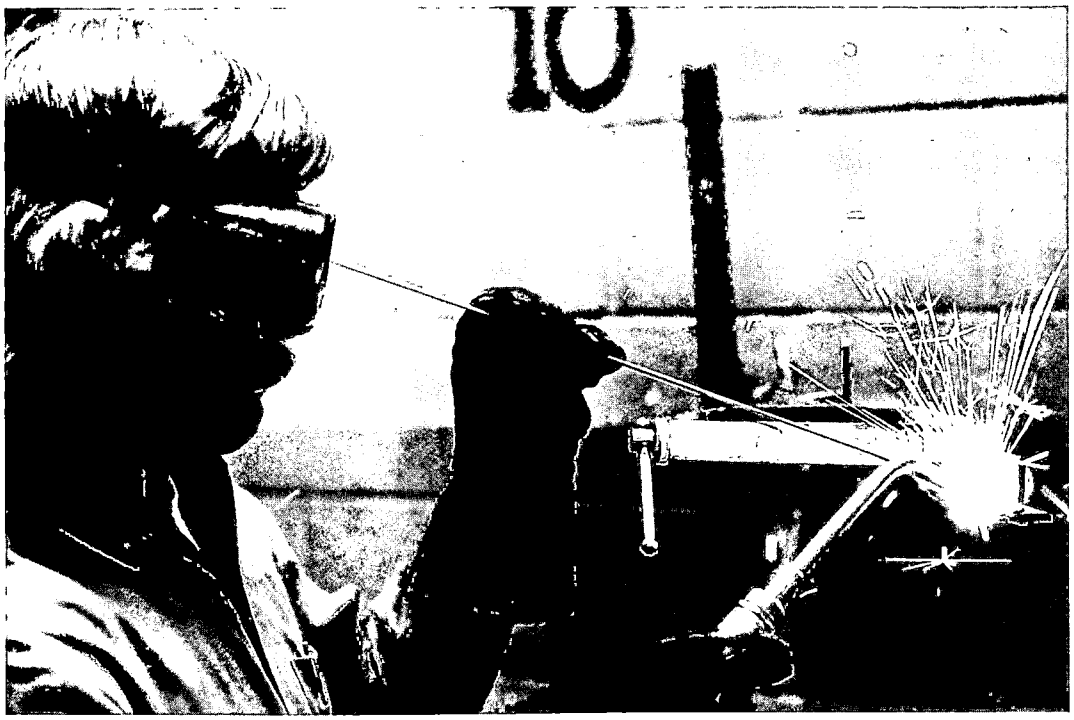
**Job Relations (2 Hours/Week)**
A course to aid students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resumé, letter of application, interviews, job responsibility, payroll and benefits, and employee and customer relations are discussed.

**Diesel Support Engines (5 Hours/Week)**
(*Prerequisite: Small Engine Mechanics Lab and Theory I or equivalent*) This course offers an introduction to the air-cooled diesel engine with emphasis on the construction modifications and the fuel delivery system.

**Oxyacetylene Welding (5 Hours/Week)**
This laboratory practice class includes safety practices, general tools and equipment, sources of heat, operational procedures, metals and their properties, and applications of oxyacetylene welding.

**Math II (5 Hours/Week)**
(*Prerequisite: Small Engine Mechanics Math I or equivalent*) This course includes geometric construction, geometric solutions, volume, capacity and simple for-





# Welding

**3 Trimesters**

The Welding Program qualifies students for entry-level employment in the metals processing industry.

During the first trimester, students study and practice acetylene 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 welding qualifications, pipe welding and materials testing. Specific welding certification is the goal of each trimester.

Welding is housed in two working labs specifically designed for welding which introduce students to rectifier machines, resistance machines, induction power supplies, power shears, semi-automatic cutting, semi-automatic pipe beveler, radiograph, hardness testers, dye penetrant and tensile testing.

The three-trimester program totals 1,350 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 skills mastered in the program.

All laboratory courses require operator qualification examinations, and supporting courses require examinations in each area supporting laboratory work.

Welding Trades students must pay an equipment fee of $75 before entering the first trimester and an additional $45 before entering the second trimester, totaling $120.

## ENTRANCE REQUIREMENTS

1. Must make an acceptable score on a mathematics and reading test.
2. Must be able to lift materials and equipment weighing up to 50 pounds.
3. Must be free of chronic respiratory diseases.
4. Must have an interview with the program coordinator and admissions counselor.

## WELDING PROGRAM

| *Trimester I* | *Hours/Week* |
|---|---|
| Welding Lab I | 15 |
| Welding Metallurgy I | 5 |
| Supporting/~~Elective~~ Courses | 10 |
| *Trimester II* | |
| Welding Lab II | 15 |
| Welding Metallurgy II | 5 |
| Supporting/~~Elective~~ Courses | 10 |
| *Trimester III* | |
| Welding Lab III | 20 |
| Welding Metallurgy III | 5 |
| Supporting/~~Elective~~ Courses | 5 |
| *Supporting Courses* | |
| Welding Math I | 5* |
| Blueprint Reading I | 5* |
| Welding Math II | 5 |
| Blueprint Reading II | 5 |
| Inspection and Quality Control | 5 |
| ~~*Electives*~~ Alternative Supporting Courses | |
| Industrial Safety | 3 |
| ~~Job~~ Relations | 2 |
| ~~Pipe~~ Welding | 5 |
| ~~Strength~~ of Welding Materials | 3 |
| Destructive and Non-Destructive Testing | 4 |
| ~~Cost~~ Analysis | 3 |
| ~~Fundamentals~~ of Electricity | 3 |

*Recommended for beginning Welding students.

## COURSE DESCRIPTIONS

**Welding Lab I**
This laboratory practice class teaches welding safety, general tools and equipment, common gases and their properties, welding materials, welding joints, oxy-acetylene 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; and slags and gases for shielding.

**Welding Lab II**
(*Prerequisites: Welding I Lab and Welding Metallurgy I or equivalent*) 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: Welding Metallurgy I or equivalent*) Instruction is offered in filler metal for joining iron and steel, shrinkage and distortion in weldments, preheating and postheating, difficulties and defects in welds, welding carbon steel, welding alloy steels, welding tests, conversion factors and symbols, weights and properties.

**Welding Lab III**
(*Prerequisite: Welding II Lab and Welding Metallurgy II or equivalent*) Emphasis is on working speed and proficiency in the welding lab through continued practice, shop fabrication and selected field work assignments. Instruction is also offered in basic pipe welding and layout, materials testing and industrial safety.

**Welding Metallurgy III**
(*Prerequisite: Welding Metallurgy II or equivalent*) This course focuses on the use of technical reports and preparation of welding schedules. Emphasis is placed on reactive and refractory metals and the weld processes selected for them.

**Welding Math I**
This course covers basic arithmetic. Surface and direct measurements, graphs and charts and payroll calculations are studied.

**Blueprint Reading I**
Basic drawing interpretation, welding symbols, terminology, and detailed fittings as applied to the welding area are covered in this course.

**Welding Math II**
(*Prerequisite: Welding Math I or equivalent*) The use of rules, formulas, ratio, proportion, volume and right angle calculations as applied to the welding industry make up the course content.

**Blueprint Reading II**
(*Prerequisite: Blueprint Reading I or equivalent*) This combination theory and laboratory course allows students to develop specifications for various types of pipe and fabrication welding, materials estimating, pipe layout and development, pipe and structural print reading, performance of pipe certification tests for the basic intersections, transferring of measurements from working drawings and blueprints, design considerations, layout and welding as related to welding fabrication.

**Inspection and Quality Control**
(*Prerequisite: Welding Metallurgy II or equivalent*) Instruction is offered on the specifics of welding inspection. Sample forms and reports are written and quality control procedures are covered.

**Industrial Safety (3 Hours/Week)**
This course includes training in the Red Cross Multimedia System and cardiopulmonary resuscitation, for which Red Cross certification is issued upon successful completion. Occupational safety is stressed.

**Job Relations (2 Hours/Week)**
This course aids students in locating, securing and keeping a job. Sources of employment, proper completion of applications, the resume, letter of application, interviews, job responsibility, payroll and benefits, and employee and customer relations are discussed.

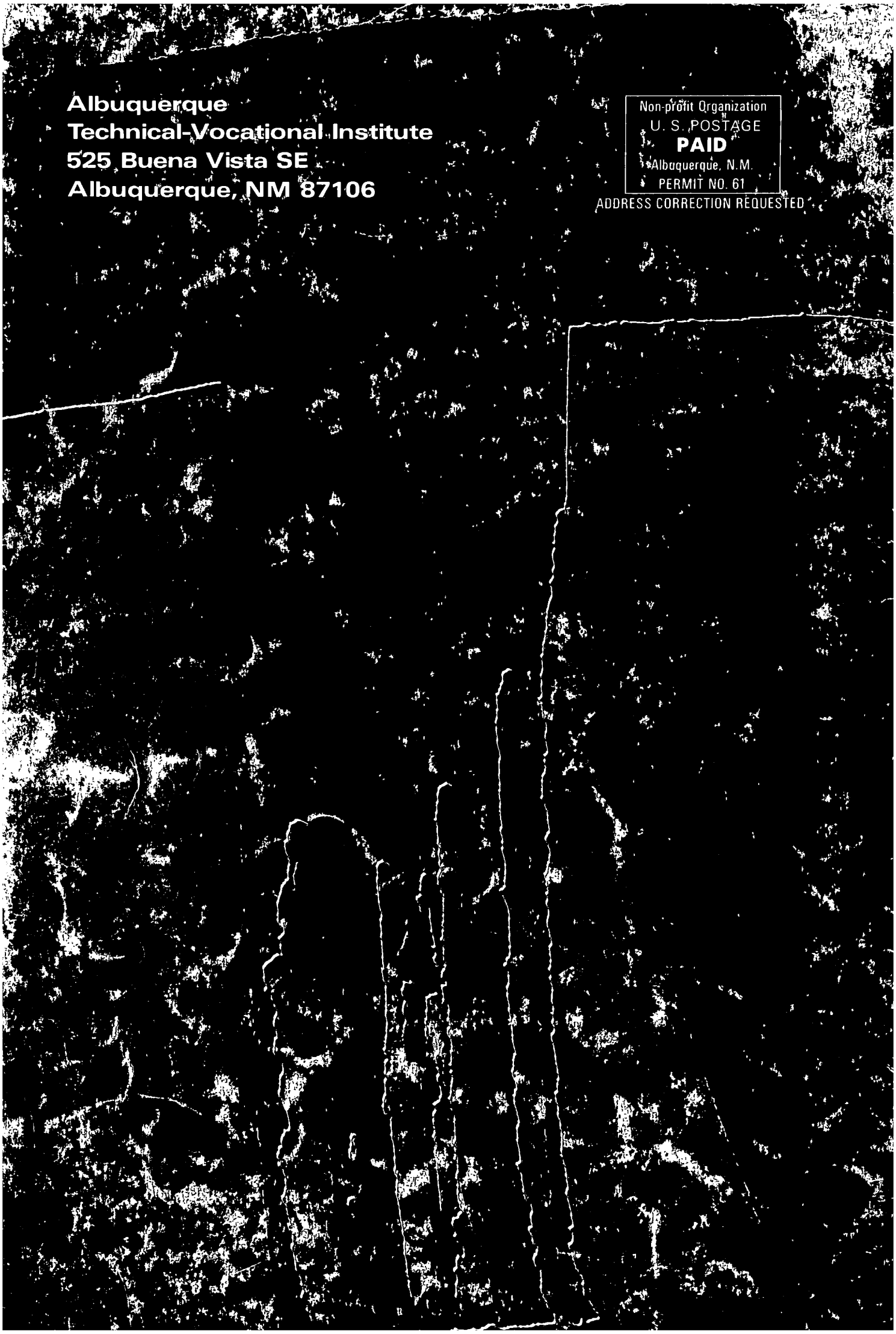
**Pipe Welding (5 Hours/Week)**
(*Prerequisite: Blueprint Reading II or equivalent*) This laboratory class provides additional time for welding and testing pipe intersections constructed in Blueprint Reading II. Pipe qualification tests are also given and certified as students progress.

**Strength of Materials (3 Hours/Week)**
(*Prerequisite: Successful completion of Welding Metallurgy II and Welding Math II*) This course covers the mathematics of stresses, forces, and movements as related to structural members. The course also includes the basic concepts for further study in the design and analysis of structures, with emphasis on stress factors relating to residual and stress raisers.

**Destructive and Nondestructive Testing (4 Hours/Week)**
(*Prerequisite: Welding Metallurgy II or equivalent*) This laboratory course emphasizes work in the areas of specimen preparation, reporting and evaluating various types of weld qualifications.

**Cost Analysis (3 Hours/Week)**
This course allows business-minded students to estimate various welding jobs. Accuracy and complete cost estimating are stressed.

**Fundamentals of Electricity (3 Hours/Week)**
This practical course provides instruction in the basic principles of electricity; terminology; electrical components and symbols; schematic reading; conductors, insulators and 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.



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