

Salt Lake Community College

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General Catalogs and Class Schedules

Student Experience

1970

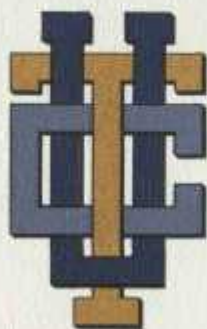
General College Catalog 1969-1970

Utah Technical College at Salt Lake

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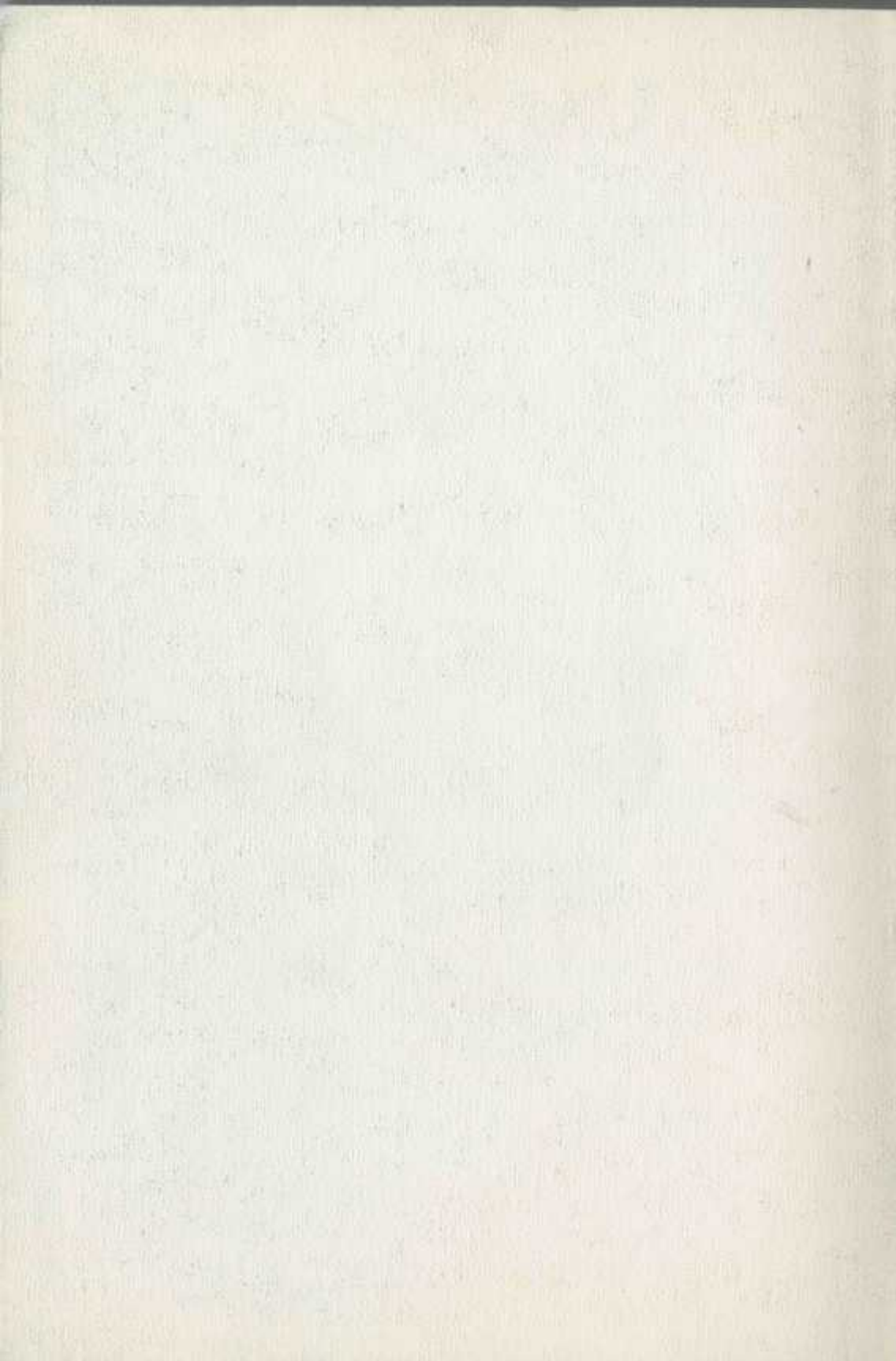
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**1969-70
GENERAL
CATALOG**

**UTAH
TECHNICAL
COLLEGE
at salt lake**





**UTAH TECHNICAL COLLEGE
AT SALT LAKE**

GENERAL CATALOG

1969-1970



A state supported trade and technical college operated under the direction of the Utah State Board for Vocational Education and the Utah State Board of Higher Education. The college is a candidate for accreditation by The Northwest Association of Secondary and Higher Schools



MAIN CAMPUS: 4600 South Redwood Road (Phone 299-3411)
84107

DOWNTOWN CAMPUS: 431 South Sixth East (Phone 328-8521)
84102

Salt Lake City, Utah

SALT LAKE COMMUNITY COLLEGE

COLLEGE CALENDAR

1969-70

Summer Quarter

May 22-29	Registration
June 2	Instruction Begins
June 13	Last Day for Class Changes
July 4	Independence Day Holiday
July 24	Pioneer Day Holiday
August 15	Summer Quarter Ends — Summer Graduation

Fall Quarter

September 22-26	Registration
September 26	New Student Orientation
September 29	Instruction Begins
October 10	Last Day for Class Changes
October 17 through 20	Harvest Holiday
November 27 through 30	Thanksgiving Holiday
December 15 and 16	Examination Period
December 16	Fall Quarter Ends
December 17 through Jan. 4	Christmas Holidays

Winter Quarter

December 15-17, 29-30	Registration
January 5	Instruction Begins
January 16	Last Day for Class Changes
March 17 and 18	Examination Period
March 18	Winter Quarter Ends

Spring Quarter

March 16-19	Registration
March 23	Instruction Begins
April 3	Last Day for Class Changes
May 29	Memorial Day Holiday
June 3 and 4	Examination Period
June 4	Spring Quarter Ends — Graduation

Summer Quarter

June 10-12	Registration
June 15	Instruction Begins
June 26	Last Day for Class Changes
July 3	Independence Day Holiday
July 24	Pioneer Day Holiday
August 27 and 28	Examination Period
August 28	Summer Quarter Ends — Summer Graduation

Health Occupations, Barbering and Cosmetology programs do not follow the above Calendar. Please check with the Dean of Students Office or Department.

Health Occupations Calendar 1969-70

(Please check with the Department for other dates.)

August 28, 1969	Registration: LPN Class #41, Nurse Aide, and Operating Room Technician.
September 2	Instruction Begins
September 11	Graduation: LPN Class #39
November 13	Registration: Hospital Ward Clerk
November 14	Instruction Begins
March 11, 1970	Registration: LPN Class #42 and Nurse Aide
March 12	Instruction Begins
March 20	Graduation: LPN Class #40
August 28	Graduation: LPN Class #41

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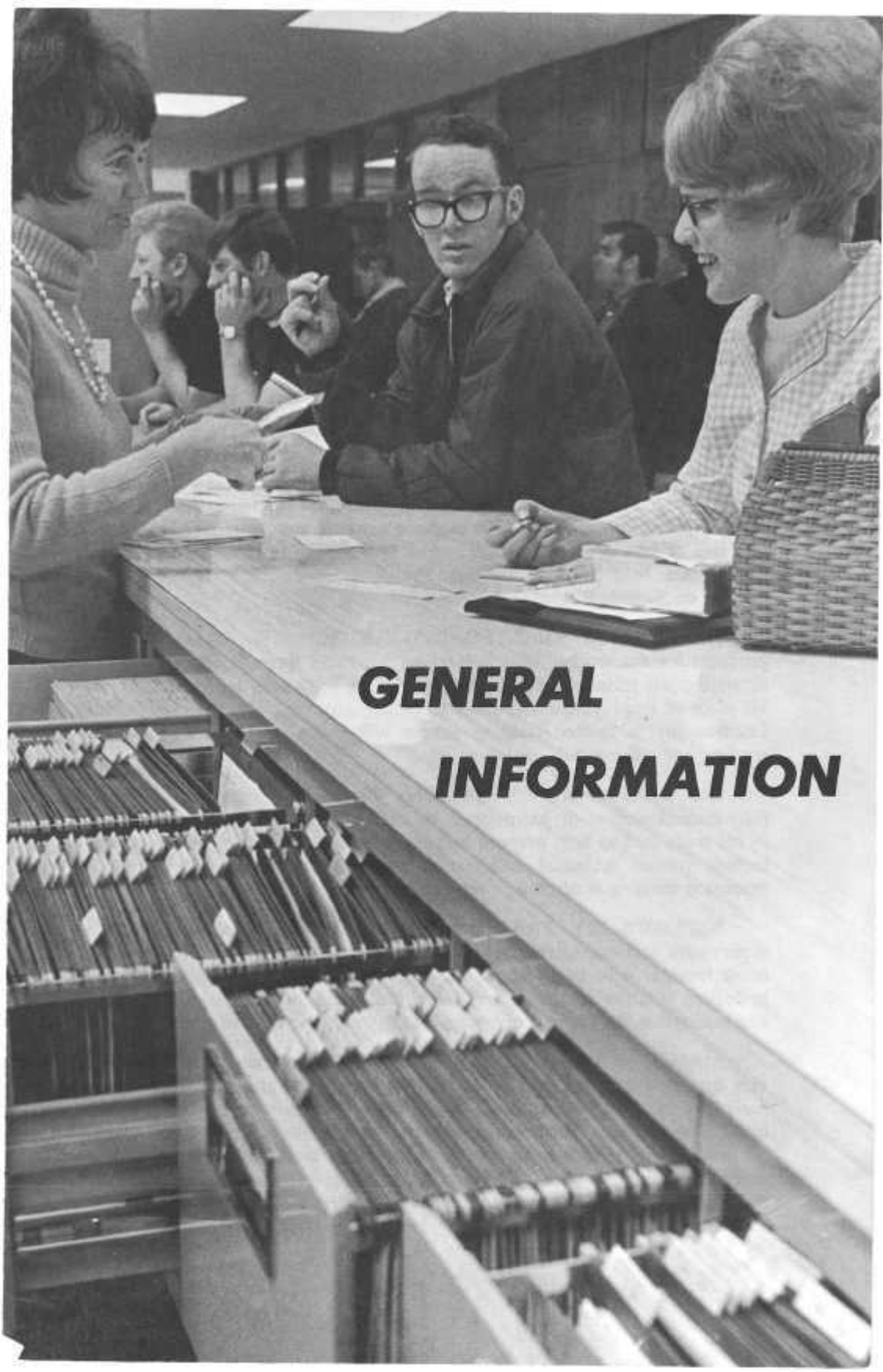
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**GENERAL
INFORMATION**

AREAS OF INSTRUCTION

The objective of Utah Technical College is to train persons to qualify for new or advanced opportunities in industry. These major types of programs provide training designed to meet the needs of particular groups of individuals.

DAY SCHOOL OCCUPATIONAL PREPARATORY: Full-time programs designed to train students to enter an occupation are conducted at least 30 hours each week. The student is required to attend theory and related instruction classes for a portion of the day. The remainder of the school day is spent in the shop or laboratory in developing necessary skills.

PART-TIME DAY CLASSES: Designed for the student who is interested in receiving training in a single subject. For example, the typing program provides training in that subject alone.

EXTENDED DAY: Part-time training programs designed to teach the skills and technical knowledge needed to obtain employment in a skilled occupation or to teach new skills to those workers now employed, but who face loss of jobs in the future because of automation or technical progress. Classes are held Monday through Friday evenings. Some classes also operate on Saturday.

APPRENTICE RELATED INSTRUCTION: A related training program for the worker who is learning his trade through apprenticeship or on-the-job training. The apprentice learns to master manual skills at his place of employment and gains technical information in the classroom. Occasionally, a related training course will include shop work. These courses are offered only in the evening.

OCCUPATIONAL EXTENSION: Programs designed to aid the fully-trained worker or journeyman to keep abreast of new developments in his trade and to help prepare him for job advancement. The programs include related technical information and shop practice. Occupational extension training is offered in the evening.

SUPERVISORY TRAINING: Special courses to assist foremen, supervisors and executives and those preparing for such positions to become familiar with new techniques, developments and improved methods in dealing with the complex problems of business and industrial supervision and management. These programs are offered only in the evening.

MANPOWER TRAINING PROGRAM: A federal program to provide qualified persons with new skills and job retraining. Workers who have lost their jobs because of automation, unemployed youths aged 16 to 22, farm workers with less than \$1,200 annual family income, and some part-time workers who cannot obtain full-time jobs without retraining are accepted in this program. These special training programs, authorized by the Clark-Holland Bill in Congress, provide free tuition, cash allowances for heads of families who have held jobs for at least three years and for

youths 19 to 22, even without previous employment. Some persons may qualify for living and travel expenses. Applicants should contact their local State Employment Security office for information.

VOCATIONAL IMPROVEMENT PROGRAM: (VIP) A federal training project administered by the Community Action Program. The major objective of this program is teaching adult basic education in reading, writing, arithmetic and social development, and introduction to various vocational programs.

The Federal portion of the cost is paid through Title II of the Economic Opportunity Act of 1964. Only applicants residing in Salt Lake and Davis Counties may apply and contact should be made through their local State Employment Security Office.

PRE-TECHNICAL PROGRAMS: These courses in mathematics, physics and reading are designed to upgrade students desiring to enter technical programs who lack the necessary entry skills. Students must register for the classes, but the credit does not count toward graduation.

REMEDIAL PROGRAMS: These courses are designed for students who are enrolled in regular programs, but who are having difficulty in mathematical or reading skills. The classes are generally taught in the late afternoon or evening. Entry into these classes is based on the recommendation of the regular instructors or counselors. These are non-credit classes and no registration fees are charged.

Advisory Committees

ADVISORY COMMITTEES, composed of leaders in industry and business, regularly review each course. This insures that courses offer up-to-date technological information and training that supplies all the needs and skills for the various trades and technical programs.

JOINT APPRENTICESHIP COMMITTEES, composed of representatives from both labor and management, meet regularly with college officials to evaluate and review training programs offered to trade apprentices, to keep them abreast of modern developments and techniques.

Veterans

Utah Technical College at Salt Lake is approved by the Veterans Administration to train veterans.

Veterans or surviving children of veterans entitled to training benefits may contact the Veterans Administration Regional Office, 125 South State Street, Salt Lake City, for further information.

Referral Agencies

Students referred by the State Department of Vocational Rehabilitation, County Departments of Public Welfare or other agencies must present written authorization and a completed Agency Reference Form. Books, tools, equipment and training materials supplied by the College Store do not become the property of these students until training is satisfactorily completed. Students withdrawing before completion must return these items to the appropriate agency. Transfers in training programs must be approved by the student's agency counselor.

University of Utah

A cooperative program is being planned with the University of Utah in which students attending either of the schools may register in the other school for part of their training. Students may take part of their courses at the University, and part of their courses at the Technical College. Details on this program are available at the Dean of Students office at Utah Technical College and at the Division of Continuing Education at the University of Utah.

Institute of Religion

An L.D.S. Institute of Religion has been established adjacent to the College Campus. A maximum of six quarter credit hours of non-denominational Institute credit may be applied toward the Associate in Applied Science Degree. This credit must be approved by the students Department Head.

Admission Procedure

Enrollment in occupational preparatory classes is open to applicants 16 years of age or older, except for barbering students, who must be 17, and practical nursing students, who must be between the ages of 17 and 55.

All applicants for enrollment in these classes should:

1. Complete the Application for Admission form, which can be obtained at the school or mailed to the applicant on request.

2. (a) Provide the school with a transcript of high school and post-high school credits from the school previously attended;

or

- (b) Take the series of aptitude tests. Tests are offered the first Thursday evening and the following morning of each month.

Applicants are notified of their acceptance by the school.

Persons of high school age must receive permission to attend Utah Technical College from their local district Board of Education office. High school counselors are provided information to answer inquiries about registration procedures.

Applicants are required to complete additional forms and pay the tuition and fees before they are admitted.

Referral agencies must submit written authorization covering tuition, fees and required books, tools and supplies before applicants planning to attend under agency sponsorship can be admitted. The school cannot hold a place in a class for such students until after registration is completed.

Readmissions

Former students returning to the college after official withdrawal must clear with the registration office before reporting to class.

College Hours

DAY SCHOOL classes operate between 7 a.m. and 7 p.m., five days per week. Hours of instruction are shown on the course outlines.

EXTENDED DAY classes are held weekdays from 6 p.m. to 10 p.m. except for the barbering class, which is held from 4 p.m. to 10 p.m. Monday through Thursday, and Saturday from 8:30 a.m. to 5 p.m.

EVENING SCHOOL classes operate from 7 p.m. to 10 p.m. and Saturday from 8 a.m. to 4 p.m.

Scholarships

A liberal number of tuition scholarships are available to prospective students. The award of scholarships is based on outstanding scholarship, extraordinary talents, leadership abilities, and need.

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SUGAR HOUSE ROTARY CLUB.

TOOELE COUNTY UNITED ACTION ORGANIZATION.

UTAH AUTO DEALERS ASSOCIATION.

UTAH BUILDING CONSTRUCTION CONGRESS.

UTAH STATE BOARD FOR VOCATIONAL EDUCATION TUI-
TION GRANTS.

Tuition and Fees

DAY SCHOOL — CREDIT CLASSES AND PRE-TECHNICAL PROGRAMS

Tuition and Fees:

One Credit Hour	\$26.00	Nine Credit Hours	\$ 70.00
Two Credit Hours	32.00	Ten Credit Hours	75.00
Three Credit Hours	38.00	Eleven Credit Hours	80.00
Four Credit Hours	44.00	Twelve Credit Hours	85.00
Five Credit Hours	50.00	Thirteen Credit Hours	90.00
Six Credit Hours	55.00	Fourteen Credit Hours	95.00
Seven Credit Hours	60.00	Fifteen Credit Hours	100.00
Eight Credit Hours	65.00		

Regular approved programs above 15 hours — no extra charge

Nonresidents — \$200.00 in addition to above

Late Fee: \$5.00

Bad Check Charge: \$5.00

Refunds: Only tuition refundable. Refund for tuition of 15 hours and below, pro-rated — 75% first week, 50% second week, no refund after class has commenced two weeks. No additional refund beyond 15 hours.

Resident Full Time Total \$100.00 per quarter

Nonresident Full Time Total \$300.00 per quarter

EVENING SCHOOL — NON CREDIT CLASSES

Middle Management Administration Training Course \$25.00 per course
Supervisory, Management and Technical Courses 15.00 per course
Apprentice Related Training (7 hours per week) 23.00 per quarter
Occupational Extension Courses

6 hours per week	21.00 per quarter
4 to 5 hours per week	18.00 per quarter
2 to 3 hours per week	15.00 per quarter

(Min. Fee)

Welding 10, 11, 12 and 13	28.50 per quarter
Plumbing 50 and 51	30.50 per quarter
Welding 14	36.00 per quarter
Color Camera — PRT 21	31.00 per quarter
Men's Hair Styling — BR 90	31.00 per quarter

A non-refundable \$5.00 fee is charged for testing and/or admission. However, this fee is applicable toward registration and will be deducted from total charges at the time of registration. It is necessary for students to present the \$5.00 receipt at the time of taking the test or submitting the application of enrollment. In order to receive the reduction when registering, the receipt must be surrendered.

Special Fees and Exceptions

HIGH SCHOOL STUDENTS: Students whose tuition is paid by a sponsoring school district are required to pay \$16 per quarter for student fees. These fees are not refundable.

NON-RESIDENT FEES: Residence in Utah merely for the purpose of attending Utah Technical College does not entitle the student to resident classification. Requirements for resident classification include residence within the State of Utah for at least one year immediately preceding registration with the intention to maintain permanent residence within the state.

SCHOLARSHIP FEES: Students attending on a tuition-paid scholarship are required to pay \$16 per quarter for student fees. These fees are not refundable.

LATE REGISTRATION FEE: Students who do not make fee payments by the due dates will be charged a late registration fee of \$5. Anyone whose check is dishonored by a bank will be charged the late fee plus \$5 for handling.

Books — Tools — Supplies

Cost of books, tools and supplies varies according to the class. Fluctuation in costs of these items may necessitate increases in price without notice. Students must acquire the books, tools and supplies that are required for the classes in which they are enrolled. The lists are available in the registration office.

Graduation

To be eligible for graduation from Utah Technical College, a student must qualify for one of the following certificates:

CERTIFICATE OF GRADUATION: This certificate is awarded after satisfactory completion of a minimum of 48 quarter credit hours in a prescribed course of study. The chosen course of study includes the required general education, theory and laboratory classes. Students transferring from other post high school institutions must have their credits evaluated during the first quarter of study at Utah Technical College. At least one half of the credits required for graduation must be taken in residence at Utah Technical College.

ASSOCIATE IN APPLIED SCIENCE DEGREE: This degree is awarded to those students who have satisfactorily completed a minimum of 96 quarter credit hours in a prescribed course of study. This includes a minimum of 24 quarter credit hours in general education-type classes. These general education classes are designed to enhance the vocational and technical classes offered at the college and are not designed specifically for transfer to other institutions to be used toward a baccalaureate degree.

Students transferring from other post high school institutions must have their credits evaluated during the first quarter of study at Utah Technical College. At least one half of the credits required for graduation must be taken in residence at Utah Technical College.

CERTIFICATE OF COMPLETION: This certificate is awarded to those students who satisfactorily complete requirements for programs of less than 48 quarter credit hours in length.

Attendance

Attendance regulations have been adopted to help students form good work habits and attitudes that will be beneficial in future employment. One day of absence will be charged for each three times a student is tardy. Four days' absence per quarter will result in termination, unless acceptable written justification is received promptly.

Program Changes

Class changes, additions and withdrawals, are permitted during the first two weeks of the quarter. A student desiring to change his class schedule will obtain a Class Card Request from the Registrar's Office. The Class Card Request is then taken to the student's vocational instructor who must sign the request. No change will be honored by the Registrar without this signature. The Class Card Request, which is dated in the Registrar's Office upon issue, must be returned to the Registrar's Office within 48 hours. Changes not returned within the 48 hour period will become invalid. Upon receipt of the request the Registrar will issue a class card to the instructor(s) involved in the change. Withdrawals during the first two weeks will be shown on the official student transcript as a "W".

A \$1.00 fee will be charged for processing all changes.

Students who merely stop attending a class and do not follow the official procedure will be given the grade of "F" at the end of the quarter.

Program changes after the deadline for adding or dropping classes will be honored only in extreme circumstances. Such changes must have the written approval of the instructor, the appropriate department head and the Registrar. Withdrawals will be shown on the official transcript of the student as a "WP" or a "WF."

Withdrawal from the College

If it becomes necessary that a student completely withdraws from the college, he is required to make an appointment with his vocational instructor for an exit interview. The student will then follow the withdrawal procedure outlined under Program Changes above.

Grades and Reports

Report cards are distributed to occupational preparatory students at the end of each quarter. Evaluation of performance and performance characteristics are graded as follows:

A = 4.0 — Superior Grade	I — Incomplete
B = 3.0 — Above Average Grade	P — Passing
C = 2.0 — Average Grade	W — Withdrawn
D = 1.0 — Lowest Passing Grade	WP — Withdrawn Passing
F = 0.0 — Failing Grade	WF — Withdrawn Failing

Counseling Service

The College can help students most when they are engaged in an occupational program that is in harmony with natural ability and which will offer favorable opportunities for success. Counseling service is provided to assist persons in selecting suitable occupational courses and in solving personal problems that may have a bearing on school work. The counseling service administers aptitude tests to prospective students, and also offers interest and personality testing to assist students. All students are invited to avail themselves of this service at any time throughout their training.

Placement

The Director of Placement assists students in locating part-time jobs while they are attending college. He also aids graduates who are seeking employment opportunities. The college maintains friendly and cooperative relations with labor, management and the employment offices in this area. In cooperation with these agencies, the school gives its graduates all possible assistance in securing jobs.

Part-time Employment

A cosmopolitan city the size of Salt Lake offers a large variety of part-time employment. However, employment must not interfere in any way with school hours and school work.

Student Appearance

Following is a statement of position on the matter of student appearance which has been reviewed and approved by student body officers, faculty officers, and administration.

Many agencies and organizations, both inside and outside the school, are interested in the matter of student dress and appearance. Future employers, speaking through advisory committees, have made their position

clear. The Utah State Employment Service is concerned with the appearance of clients for whom they seek employment. The student body in general is concerned with dress and grooming and the effect that it has on the public image of their school. In brief, all agencies agree that part of preparation for employment is to recognize and respect standards accepted in the industry.

All students are urged to recognize the requirement for neatness and maintain standards of dress, grooming, and hygiene acceptable to any employer and suitable to meet the public as an employer's representative. Dress should be stylish but never extreme. In the shop or laboratory, dress should conform with industry standards for safety and appearance.

The school recognizes the right of individuals to select their own fashion; however, the entire purpose of training is defeated when students do not recognize and accept the relationship between employability and appearance. Accordingly, long flowing hair, decorative beads, and similar adornments are considered inappropriate on men. Neatness and cleanliness are essential to both sexes. Filthiness and sloppiness are intolerable and offensive to others working in proximity to the offender.

Standard of dress for the classroom and school activities should be consistent at all times with good taste. Standards for the shop or laboratory will conform to industry's practices. Following is a list of uniforms adopted by the respective departments in 1961. Other departments may adopt similar uniform requirements.

- Auto Mechanics — white coveralls
- Auto Body & Painting — gray pants and shirts
- Diesel Mechanics — blue and white striped twill coveralls
- Electricity — blue shirts
- Machine Shop — blue aprons
- Welding — brown aprons with leg ties
- Carpentry — white overalls

Social Standards

A student attending Utah Technical College at Salt Lake is expected to maintain a high standard of moral conduct and to uphold the laws of the College, the State and the Federal governments. He enters college through choice; he is not required to attend by law. Forfeiture of the privilege to attend may result from unsatisfactory conduct. Attempts have been made to keep rules and regulations at a minimum. Students are expected to demonstrate maturity in their judgments and assume responsibility for their actions.

The College does not permit alcoholic beverages, either on the campus or at college-sponsored functions off the campus. Additionally, the College does not permit the illegal use or possession of drugs by its students, whether on or off campus. Violators are subject to disciplinary action.

Student Projects

All work projects must be approved by the instructor before they are started. It is expected that projects undertaken by the student will be related to the course of instruction and practical from the standpoint of training needs.

Students are not permitted to remove completed projects from the school until all financial obligations to the school have been paid.

Housing

It is recommended that students moving to Salt Lake City to attend school make advance arrangements for housing.

The school will do all possible to assist in locating housing, but cannot assume responsibility for securing such facilities.

Instructional Media Center

The Instructional Media Center is open to students and faculty members from 7 a.m. to 8:30 p.m. during Fall, Winter and Spring Quarters. Books in the library are principally technical volumes related to the areas of instruction offered. Trade manuals, periodicals and reference materials are available. Other facilities are in the audio-visual aids section, which provides classes and individuals with film, film strips, recording devices and other materials. A color film on the program and mission of the College, entitled "Future in Your Hands," is available without charge on a loan basis to schools and groups interested in learning more about the school.

College Store

The College Store carries all required books, tools and supplies as well as other sundry items. School sweat shirts, jackets, rings, tie tacks and mugs are also provided for sale to the students and faculty throughout the day and evening.



Cafeterias

The school's cafeterias provide limited snack bar service throughout the day and evening. Full cafeteria service is provided during the breakfast and lunch hours. Eating areas and facilities are provided for those who do not wish to purchase lunches in the cafeteria. Vending machines located throughout the campus dispense beverages, fresh fruits, pastries, candy and ice cream.

Student Government

A democratic school government operates under an established constitution and by-laws through elected officers and Student Council. Student activities include dances, assemblies, sports events, outings and safety programs throughout the year. Several student clubs are in operation on the campus.

Yearbook

A student editor is appointed to prepare a yearbook for and about the studentbody. Anyone interested in assisting with copy writing, photography and art work should contact the faculty advisor.

Student Newspaper

A newspaper is published periodically by the studentbody, and is printed by the school Printing class. The editorial staff is selected from the studentbody, and any interested person may apply for a post on the newspaper staff.

Awards

Students who have made significant contributions to activities and those who have distinguished themselves scholastically receive recognition for their achievements at an awards assembly.

Alumni Association

An active Alumni Association is organized for former students of Utah Technical College. Annual Alumni Day activities and a Fellowship Dinner are held on or near February 22.

A newsletter is sent to alumni shortly before the Fellowship Dinner.

Sports

The college fosters a variety of intramural sports including basketball, volleyball, badminton, horseshoes and ping pong. Several bowling teams are sponsored by the studentbody. An all-star basketball team represents the college in the Salt Lake Industrial League.



Parking Rules and Regulations

Parking is permitted only in areas designated and marked for parking and in accordance with all signs posted in the designated area. Parking areas are reserved for staff members. Students are not permitted to park in reserved areas. Staff and student vehicles must display the proper decal. The maximum speed limit on the College campus is 20 miles per hour. However, no person shall operate a motor vehicle on the campus at a speed greater than is reasonable and prudent under the conditions, having regard for the actual and potential hazards then existing. Parking violations will result in citations and fines. Students who do not clear parking tickets will not be permitted to register for succeeding quarters and will not be eligible to receive a certificate.

Smoking

For reasons of safety and to comply with state law, smoking is prohibited in shops and classrooms of the school. Smoking areas are designated and containers are provided to help keep the campus clean.

Visitors

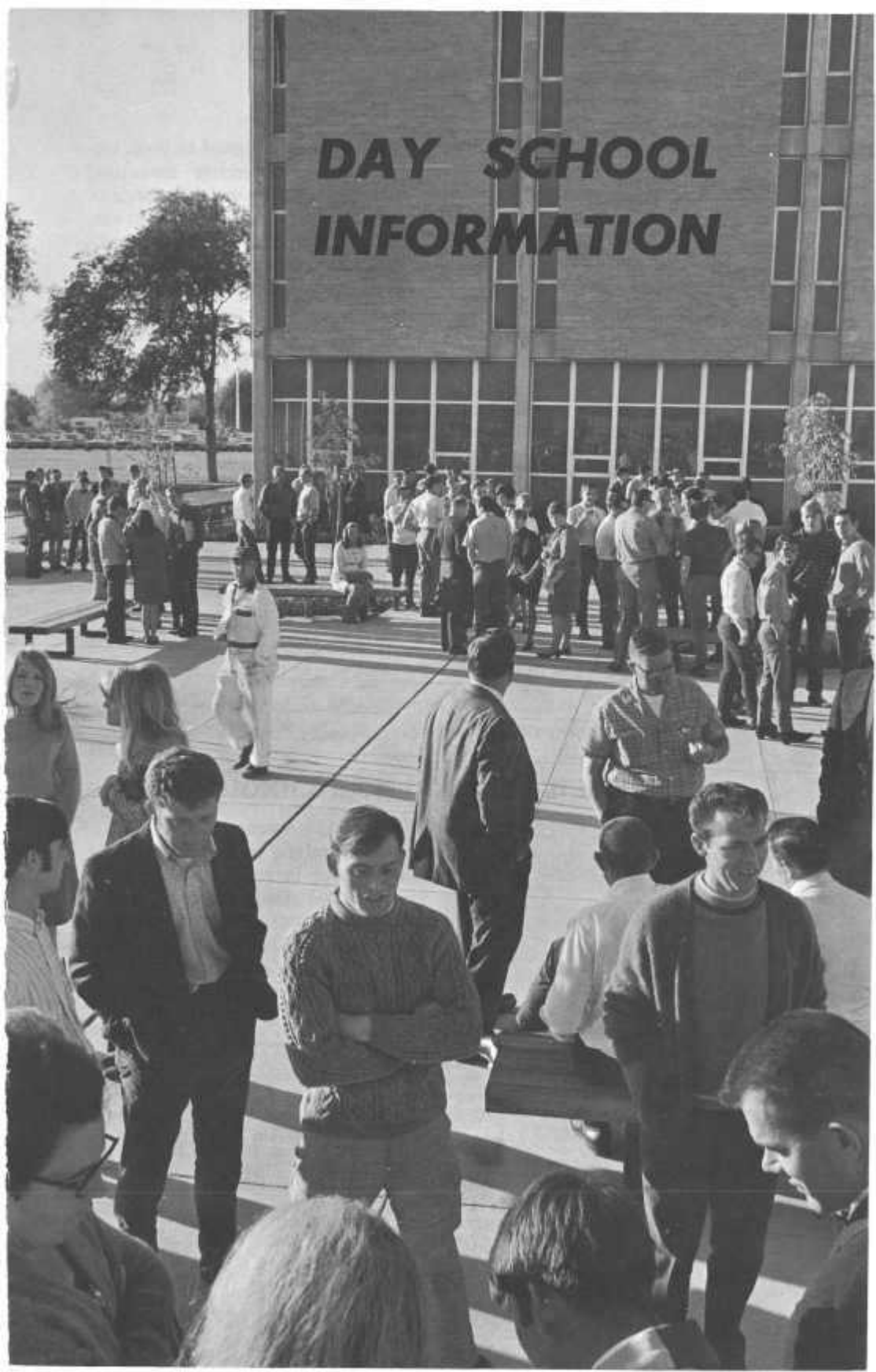
The College is open to visitors who wish to see the trade and technical training that is offered. All visitors are requested to apply at the information desk in the main building for a pass and a guide before visiting departments.

Tours may be arranged for small groups by advance request to the Librarian. Evening tours may be conducted in special circumstances.

Records

Permanent records of students' attendance and achievement are maintained in the school office. Transcripts will be furnished on request with 24 hours notice. Each transcript will cost the applicant \$1.00.

DAY SCHOOL INFORMATION



ACCOUNTING



This course is designed to train students to use objective measuring methods in the financial dealings of business. Includes instruction in use, analysis, interpretation, and projection of accounting data. Accountants must develop practical methods of measuring and reporting changes accurately with acceptable terminology and procedures.

First Quarter	Hrs./wk.
	Lec. Lab. Cr.
BUS 131 (Office Machines)	5 3
BUS 160 (Begin Account Pt I) 5	5
BUS 170 (Accounting Lab)	5 2
MTH 130 (Math-Business) 3 2 3	
COM 134 (Communication) 5	5

	13 12 18

Second Quarter	Hrs./wk.
	Lec. Lab. Cr.
BUS 132 (Office Machines)	5 3
BUS 161 (Begin Account Pt II) 5	5
BUS 171 (Accounting Lab)	5 2
MTH 138 (Advanced Bus. Mth) 3 2 3	
COM 135 (Bus. Report Writing) 3	3
COM 140 (Effective Reading) 2	2

	13 12 18

Third Quarter	Hrs./wk.
	Lec. Lab. Cr.
BUS 151 (Business Law) 3	3
BUS 162 (Begin Account Pt III) 5	5
DP 100 (Basic Com. Concep.) 5 5 7	
BUS 172 (Accounting Lab.)	5 2

	13 10 17

Approximate cost of books, tools and supplies = \$85.00

ARCHITECTURAL DRAFTING TECHNOLOGY



Students are instructed in the architectural drafting field with emphasis on practice in an atmosphere of a professional drafting room. Architectural projects are carried through from preliminary sketches to completed working drawings. Leads to Associate in Applied Science Degree.

FIRST YEAR

First Quarter	Hrs./wk.
	Lec. Lab. Cr.
ADT 100 (Arch. Orient) 5	1
ADT 110 (Arch. Dr. I)	15 5
ADT 111 (Mat. & Methods I) 3 2 3	
MTH 120 (Applied Math) 5	5
COM 120 (Communications) 5	5

	18 17 19

Second Quarter	Hrs./wk.
	Lec. Lab. Cr.
ADT 120 (Arch. Dr. II)	15 5
ADT 121 (Mat. & Methods II) 3 2 3	
PHY 120 (Gen. Physics I) 3 2 4	
MTH 121 (Applied Math) 5	5

	11 19 17

	Hrs./wk.		
Third Quarter	Lec.	Lab.	Cr.
ADT 130 (Arch. Dr. III)	....	15	5
ADT 131 (Str. of Mat.)	5	....	5
PHY 121 (Gen. Physics 2)	3	2	4
PSY 120 (Ind. Psy.)	5	....	5
	<u>13</u>	<u>17</u>	<u>19</u>

SECOND YEAR

Fourth Quarter	Hrs./wk.			Fifth Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.		Lec.	Lab.	Cr.
ADT 210 (Arch. Det.)	....	15	5	ADT 220 (Arch. Wkg. Dr.)	....	15	5
ADT 212 (Str. Wd. & Steel)	5	....	5	ADT 223 (Str.-Concrete)	5	....	5
ADT 202 (Mech. Equip.)	2	3	3	PS 110 (Pol. Science)	5	....	5
ADT 213 (Specifications)	2	2	3	ADT 224 (Codes & Zoning)	3	2	4
ADT 214 (Pro. Practice)	1	....	1				
	<u>10</u>	<u>20</u>	<u>17</u>		<u>13</u>	<u>17</u>	<u>19</u>

Sixth Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
ADT 230 (Adv. Arch. W. Dr.)	....	15	5
ADT 231 (Constr. Layout)	3	2	4
ADT 232 (Estimating)	2	3	3
ADT 233 (Str. Dr.)	2	3	3
	<u>7</u>	<u>23</u>	<u>15</u>

Approximate cost of books, tools and supplies = \$185.00

AUTO PAINTING



Auto Painting is designed to emphasize techniques and processes of automobile painting and refinishing. Includes preparation, application, and mixing and matching of colors. It is recommended that students return for a second year in Auto Body Repair.

First Quarter	Hrs./wk.			Second Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.		Lec.	Lab.	Cr.
ABP 110 (Auto Paint. Lab.)	....	20	7	ABP 120 (Color Applic. Lab.)	....	20	7
ABP 111 (Auto Painting)	5	....	5	ABP 121 (Color Application)	5	....	5
MTH 110 (Gen. Tr. Math.)	5	....	5	COM 110 (Communications)	3	....	3
				CIV 115 (Voc. Civics)	2	....	2
	<u>10</u>	<u>20</u>	<u>17</u>		<u>10</u>	<u>20</u>	<u>17</u>

Third Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
ABP 130 (Color Match. Lab.)	....	25	9
ABP 131 (Color Matching)	5	....	5
	<u>5</u>	<u>25</u>	<u>14</u>

Approximate cost of books, tools and supplies = \$70.00

AUTO BODY REPAIR



Familiarization with problems encountered in analyzing and repairing collision damage on automobiles. Experience is gained by working on a variety of damaged cars, including complete reconstruction of total wrecks. It is recommended that students return for a second year in Auto Painting.

First Quarter	Hrs./wk. Lec. Lab. Cr.	Second Quarter	Hrs./wk. Lec. Lab. Cr.
AB 110 (Auto Body Rep.)	.... 20 7	AB 120 (Auto Body Recons.)	.... 20 7
AB 111 (Metal & Proc.)	5 5	AB 121 (Stress Analysis)	5 5
MTH 110 (Gen. Tr. Math.)	5 5	COM 110 (Communications)	3 3
	-----	CIV 115 (Voc. Civics)	2 2
	10 20 17		-----
			10 20 17

Third Quarter	Hrs./wk. Lec. Lab. Cr.
AB 130 (Adv. Auto Body Recons.)	20 7
AB 131 (Estimating)	3 3
AB 132 (Alignment)	2 2
PHY 110 (Applied Physics)	2 3 4

	7 23 16

Approximate cost of books, tools and supplies = \$115.00

AUTO BODY REPAIR AND PAINTING (Extended Day)

This course is a combination Auto Body Repair and Auto Painting evening program. Normally, the Auto Body Repair is offered on Monday

and Tuesday and Auto Painting on Wednesday and Thursday. It is recommended that four nights be scheduled.

First Quarter	Hrs./wk. Lec. Lab. Cr.	Second Quarter	Hrs./wk. Lec. Lab. Cr.
AB 114 (Auto Body Repair A)	.... 6 2	AB 124 (Auto Body Repair B)	.... 6 2
AB 115 (Metal & Process A)	2 2	AB 125 (Metal & Process B)	2 2
ABP 114 (Auto Paint Lab A)	.... 6 2	ABP 124 (Auto Paint Lab B)	.... 6 2
ABP 115 (Auto Painting A)	2 2	ABP 125 (Auto Painting B)	2 2
	-----		-----
	4 12 8		4 12 8

Third Quarter	Hrs./wk. Lec. Lab. Cr.
AB 134 (Auto Body Recons. A)	.... 6 2
AB 135 (Stress Analysis A)	2 2
ABP 134 (Color Applic Lab A)	.... 6 2
ABP 135 (Color Application A)	2 2

	4 12 8

Fourth Quarter			Fifth Quarter		
	Hrs./wk.			Hrs./wk.	
	Lec.	Lab. Cr.		Lec.	Lab. Cr.
AB 144 (Auto Bdy Reconst. B)	6	2	AB 154 (Ad. Auto Bdy Rec A)	6	2
AB 145 (Stress Analysis B)	2	2	AB 155 (Estimating A)	2	2
ABP 144 (Color Applic Lab B)	6	2	ABP 154 (Color Match Lab A)	6	2
ABP 145 (Color Application B) 2	2	2	ABP 155 (Color Matching A) 2	2	2
	<hr/>	<hr/>		<hr/>	<hr/>
	4	12 8		4	12 8

Sixth Quarter		
	Hrs./wk.	
	Lec.	Lab. Cr.
AB 164 (Ad Auto Bdy Rec B)	6	2
AB 165 (Estimating B)	2	2
ABP 164 (Color Match Lab B)	6	2
ABP 165 (Color Matching B) 2	2	2
	<hr/>	<hr/>
	4	12 8

AUTO MECHANICS



Emphasis on basic principles of maintenance and repair of passenger cars and light trucks. Experience is gained by working on actual vehicle components. Opportunity for specialization is provided during last quarter. Leads to Associate in Applied Science Degree.

FIRST YEAR

First Quarter		
	Hrs./wk.	
	Lec.	Lab. Cr.
AM 110 (Auto Chassis Repair)	20	7
AM 111 (Auto Chassis)	5	5
WLD 105 (Welding)	2	4 3
	<hr/>	<hr/>
	7	24 15

Second Quarter		
	Hrs./wk.	
	Lec.	Lab. Cr.
AM 120 (Fuel & Elec. Sys. Ser.)	15	5
AM 121 (Fuel & Elec. System) 5	5	5
ELT 105 (Auto Electricity)	5	5
PSY 120 (Ind. Psy.)	5	5
	<hr/>	<hr/>
	15	15 20

Third Quarter		
	Hrs./wk.	
	Lec.	Lab. Cr.
AM 130 (Auto Eng. Lab.)	20	7
AM 131 (Auto Engines)	5	5
MTH 110 (Gen. Tr. Math.)	5	5
	<hr/>	<hr/>
	10	20 17

SECOND YEAR

Fourth Quarter		
	Hrs./wk.	
	Lec.	Lab. Cr.
AM 210 (Elec. Comp. Lab.)	20	7
AM 211 (Electrical Comp.)	5	5
PHY 110 (App. Physics)	3	2 4
	<hr/>	<hr/>
	8	22 16

Fifth Quarter		
	Hrs./wk.	
	Lec.	Lab. Cr.
AM 220 (Drive Mech. Lab.)	20	7
AM 221 (Drive Mech.)	5	5
COM 120 (Communications)	5	5
	<hr/>	<hr/>
	10	20 17

Sixth Quarter		
	Hrs./wk.	
	Lec.	Lab. Cr.
AM 230 (Diag. & Applic. Lab.)	20	7
AM 231 (Diag. & Applic.)	5	5
PS 110 (Pol. Science)	5	5
	<hr/>	<hr/>
	10	20 17

Approximate cost of books, tools and supplies = \$240.00

BARBERING



Students are instructed in the Barbering field with emphasis on a work-like atmosphere in the school's modern 12-chair Barber Shop. The course prepares the student to take the State Licensing Examination which requires 1250 hours of instruction. Students may start training at any time during the regular school year. The examination for Barber Apprentices in the State of Utah is given during the months of April, August and December.

First Quarter	Hrs./wk. Lec. Lab. Cr.	Second Quarter	Hrs./wk. Lec. Lab. Cr.
BR 110 (Barbering Lab.)	.... 35 12	BR 120 (Barbering Lab.)	.... 35 12
BR 111 (Barbering Theory)	5 5	BR 121 (Barbering Theory)	5 5
	<hr/> 5 35 17		<hr/> 5 35 17
Third Quarter	Hrs./wk. Lec. Lab. Cr.		
BR 130 (Barbering Lab.)	.... 35 12		
BR 131 (Barbering Theory)	5 5		
	<hr/> 5 35 17		

Approximate cost of books, tools and supplies = \$110.00

BARBERING (Extended Day)

Students may start training at any time during the regular school year. There are no classes conducted dur-

ing Summer Quarter in the Evening Program.

First Quarter	Hrs./wk. Lec. Lab. Cr.	Third Quarter	Hrs./wk. Lec. Lab. Cr.
BR 112 (Barbering Lab.)	.... 28 9	BR 132 (Barbering Lab.)	.... 28 9
BR 113 (Barbering Theory)	4 4	BR 133 (Barbering Theory)	4 4
	<hr/> 4 28 13		<hr/> 4 28 13
Second Quarter	Hrs./wk. Lec. Lab. Cr.	Fourth Quarter	Hrs./wk. Lec. Lab. Cr.
BR 122 (Barbering Lab.)	.... 28 9	BR 142 (Barbering Lab.)	.... 28 9
BR 123 (Barbering Theory)	4 4	BR 143 (Barbering Theory)	4 4
	<hr/> 4 28 13		<hr/> 4 28 13

BUILDING CONSTRUCTION



This course in Building Construction provides the student with a knowledge of building structures, materials, systems and procedures related to the field. Emphasis is placed on practical construction projects. Completion of the course provides the student with many and varied employment opportunities. Leads to Associate in Applied Science Degree.

FIRST YEAR

	Hrs./wk.	Lec.	Lab.	Cr.
First Quarter				
BC 110 (Cabinet Constr.)	....	20	7	
BC 111 (Tools of Constr.)	5	....	5	
MTH 110 (Gen. Tr. Math.)	5	....	5	
	—	—	—	—
	10	20	17	
Second Quarter				
BC 120 (Mat. of Constr.)	....	20	7	
BC 121 (Mat. of Constr.)	5	....	5	
MTH 111 (Gen. Tr. Math.)	5	....	5	
	—	—	—	—
	10	20	17	
Third Quarter				
BC 130 (Constr. Layout)	....	15	5	
BC 131 (Constr. Layout)	5	....	5	
COM 120 (Communications)	5	....	5	
BPR 103 (Blueprint Reading)	2	3	3	
	—	—	—	—
	12	18	18	

SECOND YEAR

	Hrs./wk.	Lec.	Lab.	Cr.
Fourth Quarter				
BC 210 (House Constr.)	....	15	5	
BC 211 (House Constr.)	5	....	5	
WLD 105 (Welding)	2	4	3	
PS 110 (Pol. Science)	5	....	5	
	—	—	—	—
	12	19	18	
Fifth Quarter				
BC 220 (App. Int. Trim)	....	15	5	
BC 221 (Interior Trim)	5	....	5	
BPR 104 (Blueprint Reading)	2	3	3	
PSY 120 (Ind. Psy.)	5	....	5	
	—	—	—	—
	12	18	18	
Sixth Quarter				
BC 230 (App. Bldg. Tech.)	....	20	7	
BC 231 (Tech. Bldg. Constr.)	5	....	5	
PHY 110 (Physics)	5	....	5	
	—	—	—	—
	10	20	17	

Approximate cost of books, tools and supplies = \$200.00



BUSINESS MANAGEMENT

This course is designed to train students to use objective measuring methods in the financial dealings and management of business. It includes instruction in use, analysis, interpretation, and projection of data, both

financial and otherwise. Emphasis will be placed on measuring and reporting financial changes accurately for efficient and profitable operations. It leads to an Associate in Applied Science Degree.

FIRST YEAR

	Hrs./wk.		
	Lec.	Lab.	Cr.
First Quarter			
BUS 131 (Office Machines)	5	3	
BUS 160 (Begin Account. Pt. I)	5	5	
BUS 170 (Accounting Lab)	5	2	
MTH 130 (Math Business)	3	2	3
COM 134 (Communication)	5	5	
	13	12	18

Second Quarter			
BUS 132 (Office Machines)	5	3	
BUS 161 (Begin Acct. Part II)	5	5	
BUS 171 (Accounting Lab.)	5	2	
MTH 138 (Adv. Bus. Mth.)	3	2	3
COM 135 (Bus. Report Writ.)	3	3	
COM 140 (Effective Reading)	2	2	
	13	12	18

Third Quarter			
BUS 151 (Business Law)	3	3	
BUS 162 (Begin. Acct.)	5	5	
BUS 172 (Accounting Lab.)	5	2	
DP 100 (Basic Com. Concep.)	5	5	7
	13	10	17

SECOND YEAR

	Hrs./wk.		
	Lec.	Lab.	Cr.
Fourth Quarter			
BUS 125 (Personal Finance)	2	3	3
BUS 250 (Intermediate Acct.)	5	5	
BUS 260 (Inter. Acct. Lab.)	5	2	
BUS 270 (Fed. Inc. Tax Acct.)	2	3	3
PS-110 (Pol. Sc. or Econ. 100)	5	5	
	14	11	18

Fifth Quarter			
BUS 213 (Marketing)	2	3	3
BUS 251 (Inter. Accounting)	5	5	
BUS 261 (Accounting Lab.)	5	2	
BUS 262 (Cost Accounting)	5	5	
PSY 120 (Industrial Psy.)	5	5	
	17	8	20

Sixth Quarter			
BUS 210 (Investments)	2	3	3
BUS 252 (Int. Accounting)	5	5	
BUS 253 (Accounting Lab.)	5	2	
BUS 214 (Bus. Org. & Mngt.)	5	5	
DP 291 (Comp. Mgmt. Sc.)	2	3	3
	14	11	18

Approximate cost of books, tools and supplies = \$185.00



COMMERCIAL ART



This program provides instruction in creating finished layouts, designs and compositions. The students are prepared through a thorough study of art fundamentals, both commercial and academic, for an interesting and remunerative career.

FIRST YEAR

First Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
CA 114 (Lettering I)	2	8	4
CA 115 (Drawing I)	1	4	2
CA 116 (Princ. & Ele. of Art)	2	3	3
CA 117 (Media & Tech. I)	2	3	3
COM 110 (Communications)	3	....	3
CIV 115 (Vocational Civics)	2	....	2
	<u>12</u>	<u>18</u>	<u>17</u>
Second Quarter	Hrs./wk.		
CA 125 (Lettering II)	1	4	2
CA 126 (Anatomy)	2	3	3
CA 127 (Color)	2	3	3
CA 123 (Perspective)	1	4	2
CA 128 (Media & Tech. II)	2	3	3
MTH 110 (General Tr. Math.)	5	....	5
	<u>13</u>	<u>17</u>	<u>18</u>
Third Quarter	Hrs./wk.		
CA 135 (Typography I)	2	3	3
CA 136 (Figure Drawing)	1	4	2
CA 137 (Design I)	2	3	3
CA 138 (Layout I)	1	4	2
CA 139 (Drawing II)	1	4	2
MTH 111 (General Tr. Math.)	5	....	5
	<u>12</u>	<u>18</u>	<u>17</u>

SECOND YEAR

Fourth Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
CA 215 (Art. Prep. I)	2	3	3
CA 216 (Illus.)	2	3	3
CA 217 (Cartooning)	2	3	3
CA 218 (Photo Retouch)	2	3	3
CA 219 (Layout II)	1	4	2
PSY 120 (Ind. Psychology)	5	....	5
	<u>14</u>	<u>16</u>	<u>19</u>
Fifth Quarter	Hrs./wk.		
CA 220 (Art Prep. II)	2	3	3
CA 225 (Design II)	1	4	2
CA 226 (Elective Art)	4	6	6
CA 227 (Typography II)	1	4	2
PRT 105 (Printing)	5	....	5
	<u>13</u>	<u>17</u>	<u>18</u>
Sixth Quarter	Hrs./wk.		
CA 235 (Promotional Design)	2	3	3
CA 236 (Occupational Orient.)	2	3	3
CA 237 (Portfolio)	2	3	3
CA 238 (Studio Prod.)	2	8	4
DDT 205 (Tech. Illus.)	2	3	3
	<u>10</u>	<u>20</u>	<u>16</u>

Approximate cost of books, tools and supplies = \$250.00

COSMETOLOGY

Instruction and practice in all phases of Cosmetology using the revolutionary Pivot-Point System. Prepares students to take State Licensing Examinations which require a minimum of 1500 hours of instruction. An additional 500 hours of instruction is available to qualify candidates for a Cosmetology License that includes haircutting.

A separate licensing program is offered in Manicuring and requires 500 hours of instruction.



	Hrs./wk.			Hrs./wk.		
	Loc.	Lab.	Cr.	Loc.	Lab.	Cr.
First Quarter						
COS 110 (Cosmet. Lab.)	....	35	12	COS 130 (Cosmet. Lab.)	....	35 12
COS 111 (Cosmet. Theory)	5	....	5	COS 131 (Cosmet. Theory)	5	.... 5
			5 35 17			5 35 17
Second Quarter						
COS 120 (Cosmet. Lab.)	....	35	12	COS 140 (Cosmet. Lab.)	....	35 12
COS 121 (Cosmet. Theory)	5	....	5	COS 141 (Cosmet. Theory)	5	.... 5
			5 35 17			5 35 17

Approximate cost of books, tools and supplies = \$100.00

DATA PROCESSING TECHNOLOGY



A two year program leading to an Associate in Applied Science Degree. Sufficient skills are acquired the first year to qualify as a Junior Programmer. At the completion of the second year the student is competent to program in major languages such as COBOL, Fortran, or Assembly. Skills will also be developed in analyzing and designing systems for business and industrial programming.

FIRST YEAR

	Hrs./wk.		
	Loc.	Lab.	Cr.
First Quarter			
DP 100 (Basic Com. Concepts)	5	5	7
BUS 160 (Begin. Acct. Part I)	5	....	5
MTH 130 (Math-Business)	3	2	3
COM 134 (Communications)	5	....	5
			18 7 20

	Hrs./wk.		
	Loc.	Lab.	Cr.
Second Quarter			
DP 110 (Basic Com. Program.)	5	10	7
BUS 161 (Begin. Acct. Part II)	5	....	5
MTH 131 (Math-Algebra I)	3	2	3
COM 135 (Report Writing)	3	....	3
COM 140 (Effective Reading)	2	....	2
			18 12 20

	Hrs./wk.		
	Loc.	Lab.	Cr.
Third Quarter			
DP 120 (Basic Cobol Prog.)	5	10	7
BUS 162 (Begin. Acct. Part III)	5	....	5
MTH 132 (Math-Algebra II)	3	2	3
PS 110 (Political Science)	5	....	5
or Econ 100			
			18 12 20

SECOND YEAR *Programmer*

	Hrs./wk.		
	Loc.	Lab.	Cr.
Fourth Quarter			
DP 210 (Basic Fortran Prog.)	5	5	7
BUS 262 (Cost Accounting)	5	....	5
MTH 133 (Math-Adv. Alg.)	3	2	3
DP 220 (Applied Cobol)	3	7	5
			13 14 20

	Hrs./wk.		
	Loc.	Lab.	Cr.
Fifth Quarter			
DP 230 (Applied Com. Prog.)	5	5	7
DP 270 (Basic Bus. Statistics)	5	....	5
DP 280 (Business Sys. Design)	5	5	7
			15 10 19

	Hrs./wk.		
	Loc.	Lab.	Cr.
Sixth Quarter			
DP 290 (Adv. Prog. Tech.)	5	5	7
DP 295 (Ind. Case Studies)	3	7	5
PSY 120 (Psychology)	5	....	5
DP 299 (CDP Review)	1	....	1
			14 12 18

SECOND YEAR *Programmer Analyst*

Fourth Quarter	Hrs./wk. Lec. Lab. Cr.	Fifth Quarter	Hrs./wk. Lec. Lab. Cr.
DP 210 (Basic Fortran Prog.)	5 5 7	MTH 134 (Math-Trigonometry)	3 2 3
BUS 262 (Cost Accounting)	5 5	DP 280 (Bus. Sys. Design)	5 5 7
MTH 133 (Math-Adv. Algebra)	3 2 3	BUS 270 (Basic Bus. Statistics)	5 5
DP 220 (Applied Cobol)	3 7 5	DP 240 (Applied Com. Prog.)	3 7 5
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Sixth Quarter	Hrs./wk. Lec. Lab. Cr.
MTH 135 (Math-Anal. Geom.)	3 2 3
DP 285 (Applied Sys. Design)	3 7 5
DP 295 (Ind. Case Studies)	3 7 5
PSY 120 (Psychology)	5 5
DP 299 (CDP Review)	1 1
	<hr style="width: 100%; border: 0.5px solid black;"/> 15 16 19

Approximate cost of books, tools and supplies = \$240.00

Students completing the first year only may be awarded a certificate of graduation in Computer Operation.

DATA PROCESSING TECHNOLOGY (Extended Day)

The majority of the above listed classes are taught also in the Extended Day program. Please check class schedule to determine when specific classes are being offered.

DRAFTING AND DESIGN TECHNOLOGY



This course stresses the fundamentals of precision drawing with tools, and basic design. Completion of this course enables the student to work with and assist engineers by performing many important tasks and responsibilities necessary to convert rough sketches to working drawings. Leads to Associate in Applied Science Degree.

FIRST YEAR

First Quarter	Hrs./wk. Lec. Lab. Cr.	Second Quarter	Hrs./wk. Lec. Lab. Cr.
DDT 110 (Draft. Fund.)	... 15 5	DDT 122 (Descriptive Geo.)	5 15 10
DDT 111 (Plane Des. Geo.)	3 2 3	PHY 120 (Gen. Physics 1)	3 2 4
MTH 120 (Mathematics 1)	5 5	MTH 121 (Mathematics)	5 5
COM 120 (Communications)	5 5		
	<hr style="width: 100%; border: 0.5px solid black;"/> 13 17 18		<hr style="width: 100%; border: 0.5px solid black;"/> 13 17 19

Third Quarter		Hrs./wk.
	Lec. Lab. Cr.	
DDT 132 (Eng. Drawing)	5 15 10	
PHY 121 (Gen. Physics 2)	3 2 4	
BUS 128 (Office Machines)	— 5 2	
	<hr/>	<hr/>
	8 22 16	

SECOND YEAR

Fourth Quarter		Hrs./wk.	Fifth Quarter		Hrs./wk.
	Lec. Lab. Cr.			Lec. Lab. Cr.	
DDT 212 (Mec. & Str. of Mat.)	5 15 5		DDT 221 (Mach. Tool Dr.)	— 15 5	
DDT 213 (Topographic Dr.)	— 15 5		DDT 222 (Mach. Design)	5 — 5	
PSY 120 (Ind. Psy)	5 — 5		DDT 232 (Pipeline Dr.)	2 3 3	
MS 122 (Machine Shop)	3 2 3		COM 130 (Tech. Writing)	5 — 5	
	<hr/>	<hr/>		<hr/>	<hr/>
	13 17 18			12 18 18	

Sixth Quarter		Hrs./wk.
	Lec. Lab. Cr.	
DDT 230 (Elec. & Elec. Dr.)	5 15 10	
DDT 234 (Manuf. Processes)	2 3 3	
PS 110 (Pol. Science)	5 — 5	
	<hr/>	<hr/>
	12 18 18	

Approximate cost of books, tools and supplies = \$170.00
Students completing the first year only may be awarded a certificate of graduation in Drafting.

DRAFTING AND DESIGN (Extended Day)

FIRST YEAR

First Quarter	Hrs./wk.
	Lec. Lab. Cr.
DDT 115 (Mech. Draft. 1)	4 12 8

Second Quarter	Hrs./wk.
	Lec. Lab. Cr.
DDT 125 (Mech. Draft. 2)	2 10 5
MTH 122 (Mathematics 1)	4 0 4
	<hr/>
	6 10 9

Third Quarter	Hrs./wk.
	Lec. Lab. Cr.
DDT 135 (Mech. Draft. 3)	2 10 5
MTH 123 (Mathematics 2)	4 0 4
	<hr/>
	6 10 9

SECOND YEAR

Fourth Quarter	Hrs./wk.
	Lec. Lab. Cr.
DDT 215 (Mech. Draft. 4)	2 10 5
DDT 216 (Mec. & Str. of Mat.)	4 0 4
	<hr/>
	6 10 9

Fifth Quarter	Hrs./wk.
	Lec. Lab. Cr.
DDT 225 (Mach. Tool Draft.)	2 6 3
DDT 226 (Mach. Design)	4 0 4
MS 227 (Machine Shop)	4 0 3
	<hr/>
	10 6 10

Sixth Quarter	Hrs./wk.
	Lec. Lab. Cr.
DDT 236 (Pipe Draft.)	1 4 3
DDT 237 (Str. Draft.)	1 4 3
DDT 238 (Elec. Mech. Draft.)	1 5 3
	<hr/>
	3 13 9

ELECTRICITY



Students receive a broad foundation in the principles encountered in the electrical industry and a working knowledge and ability with the tools of the trade. Emphasis is placed on basic principles, house wiring, industrial circuitry, and the use of instruments.

First Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
ELC 110 (Elec. Wiring)	....	15	5
ELC 111 (Basic Elec.)	5	....	5
ELC 102 (Elec. Code)	2	3	3
MTH 115 (Elec. Math.)	5	....	5
	<hr/>	<hr/>	<hr/>
	12	18	18

Second Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
ELC 120 (Elec. Motors)	....	15	5
ELC 121 (Elec. Devices)	5	....	5
MTH 116 (Elec. Math.)	5	....	5
PHY 125 (App. Physics)	2	3	4
	<hr/>	<hr/>	<hr/>
	12	18	19

Third Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
ELC 130 (Ind. Cont.)	....	15	5
ELC 131 (Instrumentation)	5	....	5
ELC 150 (Adv. Motor Cont.)	2	3	3
COM 110 (Communications)	3	....	3
CIV 115 (Voc. Civics)	2	....	2
	<hr/>	<hr/>	<hr/>
	12	18	18

Approximate cost of books, tools and supplies = \$165.00

ELECTRONIC TECHNOLOGY



Instruction in basic electron theory, component parts, and electronics communications. Students will receive the necessary support material, such as: English, Math, Physics, and Drafting, etc., to prepare them for jobs in the leading industries in the nation. This course of study leads to an Associate in Applied Science Degree. Following one year of basic work, four standard sequences may be selected: Television and Microwave, Electro-Mechanical, Instrumentation and Medical Electronics, or TV Microwave, Computer Sequence. Other sequences may be approved by the department.

Minimum requirements for entrance into the program: Tenth grade reading level, and one year successful high school algebra. For students not meeting these requirements, a pre-technical course will be offered.

FIRST YEAR

First Quarter	Hrs./wk. Lec. Lab. Cr.	Second Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 110 (DC-AC App.)	... 10 3	ELT 120 (App. Amp. Div.)	... 10 3
ELT 111 (DC-AC Cir. Fund)	7 3 8	ELT 121 (Solid St. Fund.)	5 3 6
MTH 151 (Algebra)	3 2 3	MTH 152 (Int. Algebra)	3 2 3
PHY 151 (Mechanics)	3 ... 3	PHY 152 (Heat, Light, Snd.)	3 2 3
	— — —	ELT 108 (Elt. Drafting)	2 3 3
	13 15 17		— — —
			13 20 18

Third Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 130 (App. Com. Dev.)	... 10 3
ELT 131 (Elt. Com. Dev.)	5 3 6
MTH 153 (Adv. Alg.)	3 2 3
PHY 153 (Mod. Phy.)	3 ... 3
COM 120 (Communications)	5 ... 5
	— — —
	16 15 20

SECOND YEAR

Television and Microwave

Fourth Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 210 (Integ-System)	... 10 3
ELT 211 (Adv. Comm. & TV)	5 3 6
MTH 154 (Diff. Calc.)	3 ... 3
PHY 154 (Mechanics)	3 2 3
PSY 120 (Ind. Psy.)	5 ... 5
	— — —
	16 15 20

Fifth Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 260 (Color Lab)	... 10 3
ELT 261 (Color TV)	5 3 6
MTH 155 (Int. Calc.)	3 2 3
PHY 155 (Ele. & Mag.)	3 ... 3
PS 110 (Pol. Science)	5 ... 5
	— — —
	16 15 20

Sixth Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 220 (Mic. Wav. Equip.)	... 10 3
ELT 221 (Micro. Sys. Anal.)	5 ... 5
PHY 156 (Optics)	3 2 3
COM 130 (Tech. Writing)	5 ... 5
	— — —
	13 12 16

Electro Mechanical

Fourth Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 230 (Dig. Anal. Conc.)	... 10 3
ELT 231 (Comp. Tech.)	5 ... 5
MTH 156 (Boolean Alg.)	3 2 3
PHY 154 (Mechanics)	3 2 3
PSY 120 (Ind. Psy.)	5 ... 5
	— — —
	16 14 19

Fifth Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 270 (Electro Mec. Lab)	... 10 3
ELT 271 (Mechanisms)	5 3 6
MTH 154 (Diff. Calc.)	3 ... 3
PHY 155 (Ele. & Mag.)	3 ... 3
PS 110 (Pol. Science)	5 ... 5
	— — —
	16 13 20

Sixth Quarter	Hrs./wk. Lec. Lab. Cr.
ELT 280 (Electro Mech. Lab)	... 10 3
ELT 281 (Electro Mech.)	5 3 6
MTH 155 (Int. Calc.)	3 2 3
PHY 156 (Optics)	3 2 3
COM130 (Tech. Writing)	5 ... 5
	— — —
	16 17 20

Instrumentation and Medical Electronics TV, Microwave, Computer

Fourth Quarter			Fourth Quarter		
	Hrs./wk.			Hrs./wk.	
	Lec.	Lab. Cr.		Lec.	Lab. Cr.
ELT 230 (Dig. Anal. Cone)	....	10 3	ELT 210 (Int. Syst.)	....	10 3
ELT 231 (Comp. Tech.)	5	.... 5	ELT 211 (Adv. Comm & TV)	5	3 6
MTH 156 (Boolean Alg.)	3	2 3	MTH 154 (Diff. Calc.)	3	.... 3
PHY 154 (Mechanics)	3	2 3	PHY 154 (Mechanics)	3	2 3
PSY 120 (Ind. Psy.)	5	.... 5	PSY 120 (Ind. Psy.)	5	.... 5
	16	14 19		16	15 20
Fifth Quarter			Fifth Quarter		
ELT 240 (Med. Lab.)	....	10 3	ELT 220 (Mic. Wave. Equip)	....	10 3
ELT 241 (Med. Elect.)	5	3 6	ELT 221 (Mic. Sys. Anal.)	5	.... 5
MTH 154 (Diff. Calc.)	3	.... 3	MTH 155 (Int. Calc.)	3	2 3
PHY 155 (Ele. & Mag.)	3	.... 3	PHY 155 (Ele. & Mag.)	3	.... 3
PS 110 (Pol. Science)	5	.... 5	PS 110 (Pol. Science)	5	.... 5
	16	13 20		16	12 19
Sixth Quarter			Sixth Quarter		
ELT 250 (Standards Lab)	....	10 3	ELT 230 (Dig. Anal. Cone)	....	10 3
ELT 251 (Instruments)	5	3 6	ELT 231 (Comp. Tech.)	5	.... 5
MTH 155 (Int. Calc.)	3	2 3	MTH 156 (Boolean Alg.)	3	2 3
PHY 156 (Optics)	3	2 3	PHY 156 (Optics)	3	2 3
COM 130 (Tech. Writing)	5	.... 5	COM 130 (Tech Writing)	5	.... 5
	16	17 20		16	14 19

Approximate cost of books, tools and supplies = \$300.00
Students completing the first year only may be awarded a certificate of graduation in Electronic Fundamentals.

ELECTRONIC TECHNOLOGY (Extended Day)

The above listed classes are also taught in the Extended Day Program. Please check class schedule to determine when specific classes are being offered.

EXECUTIVE SECRETARY



A course designed to prepare executive secretaries for positions in business, industry, and the professions. Admission is selective and programs are individually designed. Emphasis is placed on human relations and personality development, administrative ability, and superior skills and knowledge.

First Quarter			Second Quarter		
	Hrs./wk.			Hrs./wk.	
	Lec.	Lab. Cr.		Lec.	Lab. Cr.
BUS 201 (Advanced Type)	....	5 2	BUS 202 (Exec. Typing)	....	3 1
BUS 245 (Dictation)	3	2 3	BUS 255 (Exec. Dictation)	3	2 3
BUS 246 (Transcription)	....	5 2	BUS 256 (Transcription)	....	2 1
BUS 220 (Sec. Procedures)	3	2 3	BUS 153 (Bus. of Beauty)	2	.... 2
BUS 230 (Exec. Acctg. Prac.)	....	3 1	COM 135 (Bus. Report Writ.)	3	.... 3
BUS 152 (Business of Beauty)	2	.... 2	COM 140 (Effective Reading)	2	.... 2
COM 134 (Bus. English)	5	.... 5	BUS 221 (Sec. Procedures)	5	8 8
	13	17 18	Selected from: Medical, Legal, Science-Engineering		
				15	15 20

	Hrs./wk.		
	Lec.	Lab.	Cr.
Third Quarter			
BUS 203 (Exec. Typing)	....	2	1
BUS 265 (Exec. Dictation)	3	2	3
BUS 266 (Transcription)	....	3	1
BUS 154 (Business of Beauty)	2	....	2
MTH 130 (Math-Business)	3	2	3
BUS 222 (Sec. Procedures)	5	8	8
Continuation of BUS 221	5	8	8
	13	17	18

Approximate cost of books, tools and supplies = \$180.00

FIRE SCIENCE

In cooperation with local fire departments, Utah Technical College offers an Associate in Applied Science Degree to those students who have satisfactorily completed a minimum of 96 quarter credit hours in the prescribed course of study.

Two classes each fall, winter and spring quarters will be taught on Mondays and Tuesdays or Wednesdays and Thursdays. (The same subject material is taught on two consecutive nights to allow for shift schedules.)

	Hrs./wk.				Hrs./wk.		
	Lec.	Lab.	Cr.		Lec.	Lab.	Cr.
First Quarter				Second Quarter			
FS 103 (Fire Ft. Tac. & St. I)	3	FS 104 (Fire Ft. Tac. & St. II)	....	....	3
PSY 120 (Indus. Psychology)	3	COM 110 (Communications)	....	....	3
Third Quarter				Hrs./wk.			
				Lec.	Lab.	Cr.	
FS 115 (Arson Investigation)	3				
MTH 117 (Basic Algebra)	3				

GENERAL OFFICE CLERK AND CLERK TYPIST PROGRAM

Students are thoroughly instructed in the use of the typewriter and other office machines; and receive training in business communications, business mathematics, and other re-

lated subjects. After completion, students will have clerical ability which will enable them to secure employment in business or industry.

	Hrs./wk.				Hrs./wk.		
	Lec.	Lab.	Cr.		Lec.	Lab.	Cr.
First Quarter				Second Quarter			
BUS 101 (Typewriting I)	....	10	3	BUS 102 (Typewriting II)	....	10	3
BUS 120 (Sec. Training)	3	....	2	BUS 132 (Office Machines II)	....	5	3
BUS 131 (Office Machines I)	....	5	3	BUS 153 (Bus. of Beauty)	2	....	2
BUS 135 (Cler. Rec. Keeping)	5	....	5	MTH 130 (Math-Business)	3	2	3
BUS 152 (Bus. of Beauty)	2	....	2	COM 135 (Bus. Report Writ.)	3	....	3
COM 134 (Bus. English)	5	....	5	COM 140 (Effective Reading)	2	....	2
	15	15	20		10	17	16

Highway Equipment

Fourth Quarter	Hrs./wk. Lec. Lab. Cr.	Fifth Quarter	Lec. Lab. Cr. Hrs./wk.
HDM 200 (H.E. Engines)	.... 20 7	HDM 220 (H.E. Dr. Sys. Lab.)	.... 20 7
HDM 201 (H.E. Equip.)	5 5	HDM 221 (H.E. Dr. Sys.)	5 5
WLD 105 (Welding)	2 3 3	PSY 120 (Ind. Psy.)	5 5
	<hr/> 7 23 15		<hr/> 10 20 17

Sixth Quarter	Hrs./wk. Lec. Lab. Cr.
HDM 230 (H.E. Sp. Sys. Lab.)	.... 20 7
HDM 231 (H.E. Sup. Sys.)	5 5
COM 120 (Communications)	5 5
	<hr/> 10 20 17

Approximate cost of books, tools and supplies = \$340.00



HOSPITAL WARD CLERK



This program is planned to develop the knowledge, skills, and attitudes needed to function as a clerical assistant to nurses on the patient unit in the hospital. Emphasis is placed on supervised application of classroom acquired knowledge to the laboratory setting plus observation experience in a patient-care clinical facility.

First Quarter	Hrs./wk. Lec. Lab. Cr.
HWC 115 (Nurs. Cler. Asst.)	14 14
HWC 116 (Nurs. Cl. As. Lab.)	.... 16 5
	<hr/> 14 16 19

Approximate cost of books, tools and supplies = \$10.00

This course is offered once a year. See Health Occupations calendar.

MACHINE SHOP



Emphasis in the Machine Shop program is placed on operation of machine tools, accuracy of measurements, quality of finish and performance speed. Experience is gained through work on actual projects and problems.

First Quarter				Second Quarter			
	Hrs./wk.	Lec.	Lab. Cr.		Hrs./wk.	Lec.	Lab. Cr.
MS 110 (M.S. Practice)	.... 15	5		MS 120 (M.S. Practice)	.... 15	5	
MS 111 (Basic Mach. Op.)	5	5		MS 121 (Machine Op.)	5	5	
MTH 105 (M.S. Math.)	5	5		MTH 106 (M.S. Math.)	5	5	
BPR 100 (Blueprint Rdg.)	2 3 3			BPR 101 (M.S. BPR)	2 3 3		
	<hr/>				<hr/>		
	12	18	18		12	18	18

Third Quarter				Hrs./wk.			
	Lec.	Lab.	Cr.		Lec.	Lab.	Cr.
MS 130 (Adv. Mach. Pr.)	....	15	5				
MS 131 (Adv. Mach. Op.)	5	5					
COM 110 (Communications)	3	3					
CIV 115 (Voc. Civics)	2	2					
PHY 125 (App. Physics)	2 3 4						
	<hr/>				<hr/>		
	12	18	19				

MARKETING



Marketing prepares students for careers in retailing, wholesaling and service businesses. The program combines classroom study of the principles of modern merchandising with supervised occupational training in selected business in the Salt Lake area.

First Quarter				Second Quarter			
	Hrs./wk.	Lec.	Lab. Cr.		Hrs./wk.	Lec.	Lab. Cr.
MKT 101 (Princ. of Mkt.)	5	5		MKT 110 (Market. Managmt.)	5	5	
MKT 105 (Princ. of Retailing)	4 1 4			MKT 120 (Salesmanship)	5	5	
MTH 125 (Business Math)	5	5		BUS 160 (Accounting)	5 5 7		
MKT 115 (Coop Training)*	.... 15	3		MKT 125 (Coop Training)*	.... 15	3	
	<hr/>				<hr/>		
	14	16	17		15	20	20

Third Quarter				Hrs./wk.			
	Lec.	Lab.	Cr.		Lec.	Lab.	Cr.
MKT 130 (Advertising)	5	5					
MKT 151 (Small Bus. Mgt.)	5	5					
BUS 151 (Bus. Law)	3	3					
COM 110 (Communications)	3	3					
MKT 135 (Coop Training)*	.... 15	3					
	<hr/>				<hr/>		
	16	15	19				

* Optional—not required for graduation

Approximate cost of books, tools and supplies = \$50.00

NURSE AIDE



This program is designed to develop the knowledge, skills, and attitudes needed to function as a nurse aide. Emphasis is placed on supervised application of classroom-acquired knowledge. Observation of patient care in a clinical facility is provided.

First Quarter

NA 116 (Nurs. Fund. Lab.)
NA 117 (Nurs. Fund.)

Hrs./wk.
Lec. Lab. Cr.

... 24 8
11 ... 11

11 24 19

Approximate cost of books, tools and supplies = \$50.00

This course is offered twice a year. See Health Occupations calendar.

OPERATING ROOM TECHNICIAN

This evening program is designed to prepare qualified men and women to handle sterile instruments and sup-

plies while assisting the surgeon during surgery in the hospital operating room.

First Quarter

ORT 110 (O.R. Scrub Nurs L) ... 6 2
ORT 111 (O.R. Scrub Nurse) 6 ... 6

Hrs./wk.
Lec. Lab. Cr.

... 6 2
6 ... 6

6 6 8

Second Quarter

ORT 120 (O.R. Scrub Nurs L) ... 9 3

Hrs./wk.
Lec. Lab. Cr.

... 9 3

... 9 3

Approximate cost of books, tools and supplies = \$10.00

This evening course is offered once a year. For date of starting refer to Health Occupations calendar.

ORNAMENTAL HORTICULTURE — NURSERYMAN

Ornamental horticulture is that area of horticulture concerned with decorating and beautifying of objects with plants. Horticulture has en-

joyed accelerated development in recent years. There is demand and career opportunity for personnel trained in this field.

First Quarter

OH 110 (Soil Science I) 4 3 5
OH 111 (Applied Botany) 4 3 5
OH 112 (Power Equip.) 1 6 3
MTH 110 (Gen. Tr. Math.) 5 ... 5

Hrs./wk.
Lec. Lab. Cr.

4 3 5
4 3 5
1 6 3
5 ... 5

14 12 18

Second Quarter

OH 120 (Soil Science II) 4 3 5
OH 121 (Landscaping) ... 3 5
OH 122 (Irrigation) 4 3 5
COM 110 (Communications) 3 ... 3

Hrs./wk.
Lec. Lab. Cr.

4 3 5
... 3 5
4 3 5
3 ... 3

15 9 18

Third Quarter	Hrs./wk.		
	Lec.	Lab.	Cr.
OH 131 (Plant Ident. & Mnt.)	3	15	8
OH 132 (Pest & Dis. Control)	4	3	5
PSY 120 (Industrial Psy.)	5	—	5
	<hr/>	<hr/>	<hr/>
	12	18	18

PRACTICAL NURSING



This program is designed to develop the knowledge, skills, and attitudes needed to function as a Licensed Practical Nurse. Emphasis is placed on supervised application of knowledge acquired in the classroom and laboratory to the actual clinical setting in a hospital.

First Unit	Hrs./wk.		
	Lec.	Lab.	Cr.
LPN 110 (Basic Nurs Fund L)	—	3	1
LPN 111 (Nursing Fund.)	5	—	5
LPN 113 (Orient. to Nurs.)	1	—	1
LPN 115 (Anat. & Physiol.)	4	—	4
LPN 116 (Pharm. Prac. Nurs.)	4	—	4
LPN 117 (Nutrition)	2	—	2
LPN 119 (Microbiology)	1	—	1
	<hr/>	<hr/>	<hr/>
	17	3	18

Second Unit	Hrs./wk.		
	Lec.	Lab.	Cr.
LPN 120 (Adv. Nurs. Fund. L)	—	12	4
LPN 127 (Int. to Med-Sur. N.)	6	—	5
LPN 128 (Med-Sur. Nurs. L)	—	12	4
LPN 129 (Med-Sur. Nursing)	6	—	5
	<hr/>	<hr/>	<hr/>
	12	24	18

Third Unit	Hrs./wk.		
	Lec.	Lab.	Cr.
LPN 130 (Med-Sur. Nurs. L.)	—	12	4
LPN 131 (Med-Sur. Nurs.)	6	—	5
LPN 132 (Med-Sur. Nurs. L.)	—	12	4
LPN 133 (Med-Surg. Nurs.)	6	—	5
	<hr/>	<hr/>	<hr/>
	12	24	18

Fourth Unit	Hrs./wk.		
	Lec.	Lab.	Cr.
LPN 142 (Pediatric Nurs. L.)	—	12	4
LPN 143 (Pediatric Nurs.)	6	—	5
LPN 146 (Ob. Nurs. Lab.)	—	12	4
LPN 147 (Obstet. Nurs.)	6	—	5
	<hr/>	<hr/>	<hr/>
	12	24	18

Fifth Unit	Hrs./wk.		
	Lec.	Lab.	Cr.
LPN 152 (Psych. Nurs. Lab.)	—	12	4
LPN 153 (Psychiatric Nurs.)	6	—	5
	<hr/>	<hr/>	<hr/>
	6	12	9

Approximate cost of books, tools and supplies = \$200.00

PRE-TECHNICAL

A non-credit program for students lacking necessary entry skills in mathematics, physics, reading, study skills and English. It is designed to upgrade the skills of students desiring entry into trade-technical programs.

The program has three levels; A, B, and C. Students placed in level A by

counseling and testing will progress to level C before entering a trade-technical program. Other students may enter levels B or C depending upon achievement level. Students may advance at their own rate and may enter a trade-technical program when attaining entry level requirements for that program.

Level A	Hrs./wk. Lec. Lab. Cr.
MTH 10 (Mathematics)	10 — — —
COM 15 (Basic English)	5 — — —
COM 10 (Reading)	5 — — —
	— — —
	20 — — —

Level B	Hrs./wk. Lec. Lab. Cr.
MTH 11 (Mathematics)	10 — — —
COM 16 (Basic English)	5 — — —
COM 11 (Reading)	5 — — —
	— — —
	20 — — —

Level C	Hrs./wk. Lec. Lab. Cr.
PHY 10 (Science)	5 — — —
STS 10 (Study Skills)	2 — — —
MTH 12 (Mathematics)	8 — — —
COM 17 (Basic English)	5 — — —
	— — —
	20 — — —

Approximate cost of books and supplies = \$45.00

PRINTING



This Printing program is designed to prepare the student to enter the field of offset printing, camera, letterpress printing, composition and bindery work. Emphasis is placed on a printing shop atmosphere with projects similar to those found in the trade.

First Quarter	Hrs./wk. Lec. Lab. Cr.
PRT 110 (Copy Prep.)	— — 5 2
PRT 114 (Cam. Platemaking)	— — 5 2
PRT 115 (Printing Theory)	5 — 5
PRT 118 (Presswork)	— 10 3
COM 120 (Communications)	5 — 5
	— — —
	10 20 17

Third Quarter	Hrs./wk. Lec. Lab. Cr.
PRT 130 (Copy Prep.)	— — 5 2
PRT 134 (Cam. Platemaking)	— — 5 2
PRT 135 (Printing Theory)	5 — 5
PRT 138 (Presswork)	— 10 3
CA 105 (Commercial Art)	2 3 3
	— — —
	7 23 15

Second Quarter	Hrs./wk. Lec. Lab. Cr.
PRT 120 (Copy Prep.)	— — 5 2
PRT 124 (Cam. Platemaking)	— — 5 2
PRT 125 (Printing Theory)	5 — 5
PRT 128 (Presswork)	— 10 3
MTH 110 (Gen. Tr. Math.)	5 — 5
	— — —
	10 20 17

Fourth Quarter	Hrs./wk. Lec. Lab. Cr.
PRT 210 (Copy Prep.)	— — 5 2
PRT 214 (Cam. Platemaking)	— — 5 2
PRT 215 (Printing Theory)	5 — 5
PRT 216 (Print. Mangmt.)	5 — 5
PRT 218 (Presswork)	— 10 3
	— — —
	10 20 17

Approximate cost of books, tools and supplies = \$100.00

REFRIGERATION AND AIR CONDITIONING



Students receive extensive training in the areas of operation, maintenance installation and design of Refrigeration and Air Conditioning Systems. This will enable those graduates to enter installation and service areas.

First Quarter	Hrs./wk.	Lec.	Lab.	Cr.
REF 110 (Basic Refrig. Sys.)	....	15	5	5
REF 111 (Fund. of Refrig.)	5	....	5	5
MTH 115 (Elec. Math)	5	....	5	5
ELC 104 (AC-DC Fund.)	5	....	5	5
	<hr/>	<hr/>	<hr/>	<hr/>
	15	15	20	

Second Quarter	Hrs./wk.	Lec.	Lab.	Cr.
REF 120 (Refrig. Systems)	....	15	5	5
REF 121 (Applied Ref. Dom.)	5	....	5	5
MTH 116 (Elec. Math)	5	....	5	5
ELC 105 (AC-DC Circuits)	5	....	5	5
	<hr/>	<hr/>	<hr/>	<hr/>
	15	15	20	

Third Quarter	Hrs./wk.	Lec.	Lab.	Cr.
REF 130 (Service Commerc.)	....	15	5	5
REF 131 (Auto-Controls)	5	....	5	5
BPR 105 (Piping Practice)	5	....	5	5
BUS 135 (Clerical Rec. Keep.)	5	....	5	5
	<hr/>	<hr/>	<hr/>	<hr/>
	15	15	20	

Approximate cost of books, tools and supplies = \$200.00

STENO I PROGRAM

First Quarter	Hrs./wk.	Lec.	Lab.	Cr.
BUS 101 (Typewriting)	....	10	3	
BUS 105 (Shorthand I)	5	....	5	
BUS 120 (Sec. Training)	3	....	2	
BUS 131 (Office Machines)	....	5	3	
BUS 152 (Bus. of Beauty)	2	....	2	
COM 134 (Bus. English)	5	....	5	
	<hr/>	<hr/>	<hr/>	<hr/>
	15	15	20	

Second Quarter	Hrs./wk.	Lec.	Lab.	Cr.
BUS 102 (Typewriting)	....	10	3	
BUS 106 (Shorthand)	5	....	5	
BUS 107 (Transcription)	....	5	2	
MTH 130 (Math-Business)	3	2	3	
BUS 153 (Bus. of Beauty)	2	....	2	
COM 135 (Bus. Report Writ.)	3	....	3	
	<hr/>	<hr/>	<hr/>	<hr/>
	13	17	18	

Third Quarter	Hrs./wk.	Lec.	Lab.	Cr.
BUS 103 (Typewriting)	....	10	3	
BUS 108 (Shorthand)	5	....	5	
BUS 109 (Transcription)	....	5	2	
BUS 155 (Filing)	2	3	3	
BUS 151 (Business Law)	3	....	3	
BUS 154 (Bus. of Beauty)	2	....	2	
	<hr/>	<hr/>	<hr/>	<hr/>
	12	18	18	

Approximate cost of books, tools and supplies = \$120.00

STENO II PROGRAM

First Quarter	Hrs./wk.	Lec.	Lab.	Cr.
BUS 102 (Typewriting)	....	10	3	
BUS 110 (Shorthand)	5	....	5	
BUS 120 (Sec. Training)	3	....	2	
BUS 131 (Office Machines)	....	5	3	
BUS 152 (Business of Beauty)	2	....	2	
COM 134 (Business English)	5	....	5	
	<hr/>	<hr/>	<hr/>	<hr/>
	15	15	20	

Second Quarter	Hrs./wk.	Lec.	Lab.	Cr.
BUS 103 (Typewriting)	....	10	3	
BUS 111 (Shorthand)	5	....	5	
BUS 112 (Transcription)	....	5	2	
BUS 153 (Business of Beauty)	2	....	2	
MTH 130 (Math-Business)	3	2	3	
COM 135 (Report Writing)	3	....	3	
	<hr/>	<hr/>	<hr/>	<hr/>
	13	17	18	

Third Quarter	Hrs./wk.	Lec.	Lab.	Cr.
BUS 104 (Typewriting)	....	10	3	
BUS 113 (Shorthand)	5	....	5	
BUS 114 (Transcription)	....	5	2	
BUS 151 (Business Law)	3	....	3	
BUS 154 (Business of Beauty)	2	....	2	
BUS 155 (Filing)	2	3	3	
	<hr/>	<hr/>	<hr/>	<hr/>
	12	18	18	

WELDING



Emphasis in the Welding program is placed on processes used in welding of ferrous and non-ferrous metals. Instruction is given in metallurgy, testing of welds, safety in welding and blueprint reading. Graduates of the 18-month course are familiar with all well-known welding processes. Leads to Associate in Applied Science Degree.

FIRST YEAR

	Hrs./wk.	Lec.	Lab.	Cr.
First Quarter				
WLD 110 (Weld. Pr., Arc and Acetylene)	15	5		
WLD 111 (Fund. of Weld.)	5	5		
MTH 110 (Gen. Tr. Math.)	5	5		
BPR 100 (Basic BPR)	2	3	3	
	12	18	18	

Second Quarter				
WLD 120 (Weld. Pr., Arc and Acetylene)	15	5		
WLD 121 (Fund. of Weld.)	5	5		
MTH 111 (Gen. Tr. Math.)	5	5		
BPR 102 (Weld. BPR)	2	3	3	
	12	18	18	

Third Quarter				
WLD 130 (Weld. Pr., Arc and Acetylene)	20	7		
WLD 131 (Fund. of Weld.)	5	5		
COM 120 (Communications)	5	5		
	10	20	17	

SECOND YEAR

	Hrs./wk.	Lec.	Lab.	Cr.
Fourth Quarter				
WLD 210 (Adv. Weld. Pr.)	15	5		
WLD 211 (Pipe Weld. and Testing)	10	8		
PS 110 (Pol. Science)	5	5		
	15	15	18	

Fifth Quarter				
WLD 220 (Adv. Weld. Pr.)	15	5		
WLD 221 (Spec. Welds)	10	8		
PSY 120 (Ind. Psy.)	5	5		
	15	15	18	

Sixth Quarter				
WLD 230 (Adv. Weld. Pr.)	15	5		
WLD 231 (Metal Fab.)	10	8		
PHY 110 (App. Physics)	3	2	4	
	13	17	17	

Approximate cost of books, tools and supplies = \$110.00
Students completing the first year only may be awarded a certificate of graduation in Welding.

***EVENING
SCHOOL
INFORMATION***



EVENING SCHOOL

Four types of classes are offered during evening hours—extended day, apprentice related training, occupational extension, and supervisory training. Extended Day courses are listed under the Day School section of this college catalog. Apprentice related training is classwork that augments the apprentice's on-the-job training. Evening occupational extension courses offer additional training to employed persons. Courses in supervisory and technical training assist foremen, supervisors and managers in understanding and developing improved management methods.

Minimum Enrollment

It is not feasible to operate a course with fewer than ten registrants. When it is impossible to maintain a sufficient enrollment, classes are discontinued.

Eligibility

Courses are offered without reference to college credit. Evening School is open to individuals over 16 years of age. However, Apprentice Training Courses have been established to provide related training for apprentices only. It is required that the applicant be employed in the occupation for which training is desired.

Apprentice Related Courses

Apprentice training courses supply the related instruction necessary to complement daily on-the-job experience of the apprentice or trainee. Apprentices attend school for seven hours per week, two quarters per year.

Carpentry

- CPA 10 (Intro., Math. & BPR)
- CPA 11 (BPR, Plot Plan, Found. & Floors)
- CPA 20 (Framing)
- CPA 21 (Roof Framing)
- CPA 30 (Interior Finish)
- CPA 31 (Stairbuilding)
- CPA 40 (Rein. Concrete Constr.)
- CPA 41 (Heavy Timber & Log Constr.)

Electricity

- ELA 10 (Electricity I)
- ELA 11 (Electricity II)
- ELA 20 (Electricity III)
- ELA 21 (Electricity IV)
- ELA 30 (Electricity V)
- ELA 31 (Electricity VI)
- ELA 40 (Electricity VII)
- ELA 41 (Electricity VIII)

Ironworkers Layout

- ILA 10 (Geom. Drawings, Ele. & Par. Line Lay.)
- ILA 11 (Short Mthds., Prac. Proj. & Tr. Math.)
- ILA 20 (Geom. Drgs., Par. & Rad. Line Lay.)
- ILA 21 (Prac. Proj. & Tr. Mathematics)
- ILA 30 (Geom. Drgs. & Pattern Drft.)
- ILA 31 (Prac. Proj. & Tr. Math.)
- ILA 40 (Pattern Drafting)
- ILA 41 (Trade Mathematics)

Ironworking — Structural

- ISA 10 (Structural Ironworking I)
- ISA 11 (Structural Ironworking II)
- ISA 20 (Structural Ironworking III)
- ISA 21 (Structural Ironworking IV)
- ISA 30 (Structural Ironworking V)
- ISA 31 (Structural Ironworking VI)

Painting and Decorating

- PDA 10 (Tools, Eq., Safety & Prep. Proc.)
- PDA 11 (App. of Materials & Color)
- PDA 20 (Mat. Used & Wood Finishes)
- PDA 21 (Spec. Finishes & Paper Hanging)
- PDA 30 (Sur. Prep., App. of Pts. & Sp. Ptg.)
- PDA 31 (Wood, Wall & Spec. Fin.)

Pipe Fitting and Refrigeration

- PRA 10 (Basic Refrigeration I)
- PRA 11 (Fundamentals of Refrig. I)
- PRA 20 (Basic Refrigeration II)
- PRA 21 (Fundamentals of Refrig. II)
- PRA 30 (Basic Science & Supp. Topics)
- PRA 31 (Basic Heating & Supp. Topics)
- PRA 40 (Basic Electricity)
- PRA 41 (Systematic Trouble Shooting)
- PRA 50 (Air Conditioning)
- PRA 51 (Refrigeration)

Plumbing

- PLA 10 (Basic Fundamentals I)
- PLA 11 (Basic Fundamentals II)
- PLA 20 (Cast Iron Pipe I)
- PLA 21 (Cast Iron Pipe II)
- PLA 30 (Drainage)
- PLA 31 (Bldg. House Sewers & Supp. Topics)
- PLA 40 (Water Supply)
- PLA 41 (Miscellaneous Topics)
- PLA 50 (Sheet Lead, Rigging & Copper Pipe)
- PLA 51 (Cast Iron, 4" and 1½" Lead Joints)

Sheet Metal

- SMA 10 (Orient., Geom., Constr., Mech. Drawing and BPR)
- SMA 11 (Layout, Math, Parrallel Line Develop. and Triangulation)
- SMA 20 (Math. and Adv. Parallel Line)
- SMA 21 (Radial Line and Shop Problems)
- SMA 30 (Mathematics)
- SMA 31 (Air Conditioning Pattern Drafting)
- SMA 40 (Math. and Welding Processes)
- SMA 41 (Pattern Drafting)

Apprenticeship programs are offered upon request from industry to fit particular needs. Programs that are presently operating are as follows:

KENNECOTT COPPER CORPORATION

- Auto-Diesel
- Brickmasonry
- Boilermaker
- Carpentry
- Electricity
- Electronic Control Systems
- Machinist
- Painting
- Pipefitting
- Welding

EIMCO CORPORATION

- Machinist

OCCUPATIONAL EXTENSION

These programs are designed to aid the fully-trained worker or journeyman to keep abreast of new developments in his trade, and to help him prepare for job advancement. The programs include related technical information and shop practice.

Accounting	BUS 40, 41, 43, 45, 60, 61	2-5 hrs/wk
Architectural Drafting	ADT 10, 11, 12, 20, 21,	6 hrs/wk
Auto Mechanics	AM 10, 11, 12	24 clock hours
Business	BUS 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 31, 35	2-4 hrs/wk
Blueprint Reading	BPR 10, 20	5-6 hrs/wk
Cabinet & Furniture Making	BC 24	6 hrs/wk
Checkstand Training	MKT 15	6 hrs/wk
Commercial Art	CA 10, 11, 12, 13, 14, 20, 21, 23	6 hrs/wk
Construction Estimating	BC 30	6 hrs/wk
Drafting	DDT 10, 11, 12, 20, 21, 22	6 hrs/wk
FCC Study	ELT 15, 16	6 hrs/wk
Hair Styling	BR 90	6 hrs/wk
Machine Shop	MS 10, 11, 12, 13	6 hrs/wk
Mathematics	MTH 13	6 hrs/wk
Photography	PRT 30	6 hrs/wk
Printing	PRT 10, 11, 12, 13, 20, 21	6 hrs/wk
Refrigeration & Air Conditioning	REF 15, 16	6 hrs/wk
Upholstering	UPH 10	6 hrs/wk
Welding	WEL 10, 11, 12, 13, 14	6 hrs/wk

SUPERVISORY AND TECHNICAL TRAINING

Supervisory training courses designed to improve the skills of managers, supervisors and foremen are offered. Each class is designed to give information on new techniques, developments and improved methods in dealing with the problems of supervision, management, and automation. The time and length of each course is arranged on an individual class basis.

Executive Training for Supervisors

This course consists of training for effective diagnosis, how to be a leader, transplanting thoughts to others, results of indecisions, ways to welcome creative ideas, how to make the time you need, effective organizations, and responsibilities of executives. This series is comprised of eight sessions of two and one-half hours each.

Strategy of Working With People

Training for leadership in industry and business is provided through an objective study of the most outstanding problems in human relations. Such problems as building confidence, handling grievances, getting cooperation and developing desirable attitudes are discussed in these conferences. This course consists of eight sessions of two and one half hours each.

Supervisors as Teacher-Trainers

This series of eight, two and one-half hour sessions covers such instructional problems as the principles of learning, methods and techniques of instruction, use of instructional aids, occupational and job analysis, the preparation of training plans and the scheduling of training time.

English Essentials and Report Writing

This course is a review of Business English requirements, grammar and vocabulary usage, informal reports (letters, memoranda, etc.), report writing style, formal reports, mechanics of effective communications and use of tables, charts, illustrations, etc. This series is comprised of eight sessions of two and one-half hours each.

Organization Analysis and Production

These basic principles of sound management are studied with particular regard to the following functions of business management: planning, motivating, organizing, direction and controlling. The effective use of time and the development of an efficient production team are also stressed. This series is comprised of eight sessions of two and one-half hours each.

Work Simplification and Production

This eight-session course teaches the application of scientific procedures to job simplification, how to analyze a job for improvement through the use of process charts, application of time-motion studies, how to apply the five-step procedure for improving job methods, and how to prepare and present a new method to management.

Computer Concepts and Applications

This course consists of an introduction to computers and data processing, computer demonstration, data representation, computer storage and input-output devices, stored program concepts, programming languages, practical computer applications, and cost justification and evaluation. This series is comprised of eight sessions of two and one-half hours each.

Plant Safety

This series of eight two and one-half hour sessions is concerned with developing the supervisor's interest and knowledge of good safety practices within the industrial plant or business. Various techniques of increasing the workers' participation and interest in safety programs are emphasized.

Physical Plant Maintenance

This eight week course is designed to assist those who operate and maintain office buildings, industrial plants, hospitals, churches, schools and similar institutions to obtain maximum results from the facilities provided.

Job Related Technology Courses

These courses of eight to ten weeks duration are organized to provide education and training in the latest development of technological processes. Included are such programs as individual hydraulics, plastics technology, electronic control systems, numerical control of industrial machines, advanced computer programming, etc.

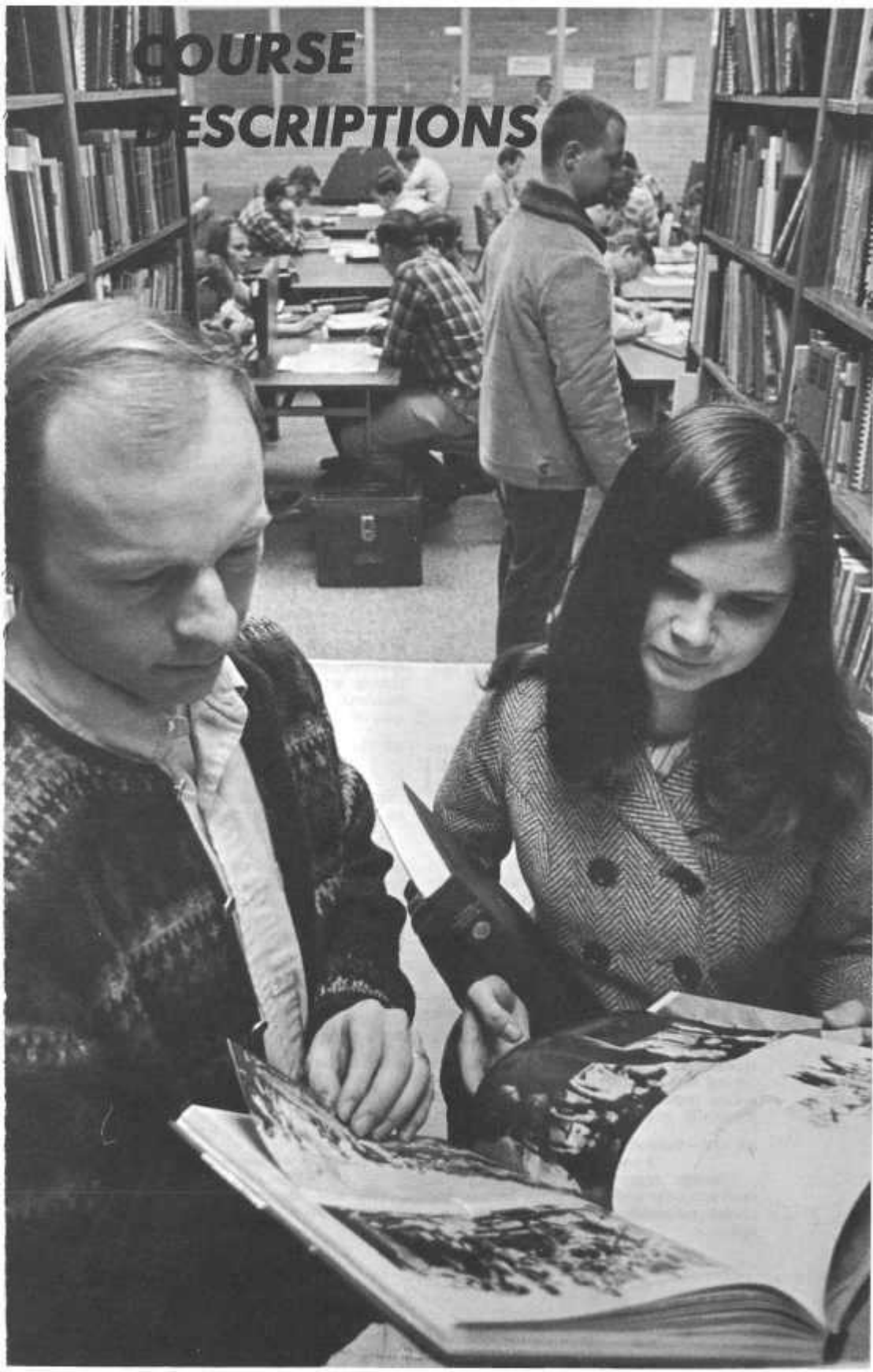
Personal Development in Business and Industry

A number of special classes are offered each quarter in personal development. Among these programs are scheduled classes in speed reading, public speaking, effective problem solving, sales leadership, computer languages, conversational Spanish, middle management administration, safeguarding your business, technical writing, public relations, etc. These classes are tailor-made to meet the demands of current industrial requirements for the individual and vary in length from eight to twelve weeks at two and one half hours per each weekly session.

Recertification Programs

Requests are often made for specific recertification courses co-sponsored with private, state and federal departments to certify individuals in these organizations. Included are programs for Public Works Inspectors, Cosmetologists, Professional Legal Secretaries, law enforcement personnel, etc.

COURSE DESCRIPTIONS



COURSE DESCRIPTIONS

All course descriptions are listed first in strict alphabetical order of prefixes designated in the sections on Day and Evening programs, and second by numerical increase within each prefix.

Those course descriptions marked with an asterisk (*) following the title are taught in the evening.

AB 110 — Auto Body Welding and Repair
20 hrs./wk. 7 cr.

Comprehensive welding course covering welds used in rebuilding automobiles. Includes repair procedures.

AB 111 — Metallurgy and Processing
5 hrs./wk. 5 cr.

Composition and characteristics of ferrous and non-ferrous metals. Includes process and use in sheet metal design and welding.

AB 114-124 — Auto Body Welding and Repair A-B*
6 hrs./wk. 2 cr.

Comprehensive course covering welds used in rebuilding automobiles. Includes repair procedures.

AB 115-125 — Metallurgy & Processing A-B*
2 hrs./wk. 2 cr.

Composition and characteristics of ferrous and non-ferrous metals. Includes process and use in sheet metal design and welding.

AB 120 — Auto Body Reconstruction
20 hrs./wk. 7 cr.

Repair of auto body and frame damage, panel replacement, trim and hardware service, glass service, electrical service, dents and body mechanics.

AB 121 — Stress Analysis, Specifications and Repair Principles
5 hrs./wk. 5 cr.

Stress conditions, ductility and dimensional relations present within panels and sub-assemblies. Final construction of a new automobile. Accurate damage analysis and repair sequence planning, specifications, body measurements, and tolerances.

AB 130 — Advanced Auto Body Reconstruction
20 hrs./wk. 7 cr.

Continued laboratory practice on all types of auto body damage. Emphasis on timing repair projects to determine individual production potential. Completion of totally wrecked project car.

AB 131 — Estimating
3 hrs./wk. 3 cr.

Damage repair estimating using flat rate manuals and estimating forms. Includes estimating non-measurable damage.

AB 132 — Alignment
2 hrs./wk. 2 cr.

Suspension systems and steering geometry.

AB 134-144 — Auto Body Reconstruction*
6 hrs./wk. 2 cr.

Repair of auto body and frame damage, panel replacement, trim and hardware service, glass service, electrical service, dents and body mechanics.

AB 135-145 — Stress Analysis Specifications & Repair Principles A-B*
2 hrs./wk. 2 cr.

Stress conditions, ductility and dimensional relation present within panels and sub-assemblies. Accurate damage analysis and repair sequence planning.

AB 154-164 — Advanced Auto Body Reconstruction A-B*
6 hrs./wk. 2 cr.

Continued laboratory practice on all types of auto body damage. Emphasis on timing repair projects to determine individual production potential. Completion of extensive repair jobs.

AB 155-165 — Estimating*
2 hrs./wk. 2 cr.

Damage repair estimating using flat rate manuals estimating forms. Includes estimating non-measurable damage.

ABP 110 — Automotive Painting Lab
20 hrs./wk. 7 cr.

Procedures and practices in handling equipment, use of materials, and in basic surface preparation for painting.

ABP 111 — Automotive Painting
5 hrs./wk. 5 cr.

Use and maintenance of equipment, painting materials and preparation of surfaces.

ABP 114-124 — Automotive Painting Lab A-B*
6 hrs./wk. 2 cr.

Procedures and practices in handling equipment, use of materials, and in basic surface preparation for painting.

ABP 115-125 — Automotive Painting A-B*
2 hrs./wk. 2 cr.

Use and maintenance of equipment. Painting materials and preparation of surfaces.

ABP 120 — Color Application Lab
20 hrs./wk. 7 cr.

Application of principles covered in ABP 121. Preparation and painting of actual automobiles.

ABP 121 — Color Application
5 hrs./wk. 5 cr.

Techniques of color application and preparation of color paint.

ABP 130 — Color Matching Lab
25 hrs./wk. 8 cr.

Laboratory practice in mixing and matching colors by formula with a color mixing machine, and skill development in preparing surfaces and applying paint.

ABP 131 — Color Matching
5 hrs./wk. 5 cr.

Theory of mixing and matching colors by formula.

ABP 134-144 — Color Application Lab A-B*
6 hrs./wk. 2 cr.

Application of principles covered in ABP 135-145. Preparation and painting of actual automobiles.

ABP 135-145 — Color Application A-B*
2 hrs./wk. 2 cr.

Techniques of color application and preparation of color paint.

ABP 154-164 — Color Matching Lab A-B*
6 hrs./wk. 2 cr.

Laboratory practice in mixing and matching colors by formula with a color mixing machine, and skill development in preparing surfaces and applying paint.

ABP 155-165 — Color Matching A-B*
2 hrs./wk. 2 cr.

Theory of mixing and matching colors by formula.

ADT 10 — Architectural Drafting 1*

A basic course in drafting techniques including lettering, lines, tools, sections, elevations, plans. The student will develop a simple set of working drawings on a small frame structure.

ADT 11 — Architectural Presentation 1*

The techniques of representing an architectural project in transparent and opaque watercolor in perspective.

ADT 12 — Architectural Specifications 1*

The process of preparing complete specification documents for an architectural project.

ADT 20 — Architectural Drafting 2*

A continuation of ADT 10 with emphasis on detailing stairs, windows, doors and other structural and architectural elements. Plans are developed on a small residence. Prerequisite—ADT 10.

ADT 21 — Architectural Presentation 2*

A continuation of ADT 11 with emphasis on advanced techniques and style. Prerequisite—ADT 11.

ADT 100 — Architectural Orientation
5 hrs./wk. 1 cr.

A 10 clock hour introduction to the courses in curriculum and how they relate to each other and the value of the curriculum to the profession.

ADT 110 — Architectural Drafting I
12 hrs./wk. 5 cr.

The basic techniques of drafting including tools, sketching, lettering, plans, elevations, and sections.

ADT 111 — Materials and Methods I
5 hrs./wk. 3 cr.

Introduction to wood, steel and concrete construction and their use in various structural systems.

ADT 120 — Architectural Drafting II
15 hrs./wk. 5 cr.

Experience in working drawings on fireplaces, stairs, masonry and frame walls, cabinet details and perspective. Prerequisite ADT 110.

ADT 121 — Materials and Methods II
5 hrs./wk. 3 cr.

Study of building products, roofing, siding, metals, hardware, and finish materials. Prerequisite ADT 111.

ADT 130 — Architectural Drafting III
15 hrs./wk. 5 cr.

The study of site and room planning and the completion of a set of working drawings on a residence. Prerequisite ADT 120.

ADT 131 — Strength of Materials
5 hrs./wk. 5 cr.

Basic theory of forces, section modulus, shear, tension, compression, deflection and other forces in static structures.

ADT 202 — Mechanical Equipment
5 hrs./wk. 3 cr.

Design of electrical, heating, air conditioning, acoustical and plumbing requirements for buildings.

ADT 210 — Architectural Detailing
15 hrs./wk. 5 cr.

Research in a unit of construction and a complete detail of that unit.

ADT 212 — Structures - Wood and Steel

5 hrs./wk. 5 cr.

Introduction to structural systems and sizing members within these systems in wood and steel. Pre ADT 131.

ADT 213 — Specifications

4 hrs./wk. 3 cr.

The preparation of specifications on a typical construction project.

ADT 214 — Professional Practice

1 hr./wk. 1 cr.

Exploring the legal aspects of the architectural and engineering profession.

ADT 220 — Architectural Working Drawing

15 hrs./wk. 5 cr.

Planning, calculating, researching and development of a small commercial structure and the preparation of preliminary working drawings.

ADT 223 — Structures-Concrete

5 hrs./wk. 3 cr.

Introduction to concrete structural systems and sizing members within these systems. Prerequisite ADT 131.

ADT 224 — Codes and Zoning

5 hrs./wk. 4 cr.

Study of the Uniform Building Code, city and county codes and zoning ordinances as they affect architectural projects.

ADT 230 — Advanced Architectural Working Drawings

15 hrs./wk. 5 cr.

Working drawings on a small commercial structure including specifications, structural calculations, code search, contract forms and all necessary data for the completion of architectural services. Prerequisites ADT 202, ADT 212, ADT 213, ADT 220, ADT 223, ADT 224.

ADT 231 — Construction Layout

5 hrs./wk. 3 cr.

Introduction to basic surveying techniques with special emphasis on construction layout and site work. Prerequisite MTH 121.

ADT 232 — Estimating

5 hrs./wk. 3 cr.

Introduction to methods of quantity take off of a construction project.

ADT 233 — Structural Drafting

5 hrs./wk. 3 cr.

Introduction to structural details in wood, steel and concrete.

AM 10 — Automatic Transmissions*

24 clock hours

Review of principles of operations covering diagnosis, service and maintenance of late model automatic transmissions.

AM 11 — Automotive Tune-up*

24 clock hours

Diagnosis, service and repair of carburetion and ignition system components and use of electronic tune-up equipment.

AM 12 — Automotive Air Conditioning*

24 clock hours

Theory and operation of units in auto air conditioning systems. Service, trouble shooting and installation.

AM 110 — Automotive Chassis Repair

20 hrs./wk. 7 cr.

Service procedures and shop practices in repair and maintenance of automotive chassis components.

AM 111 — Automotive Chassis

5 hrs./wk. 5 cr.

Theory and function of components of the automotive chassis. Covers nomenclature, brakes, steering correction and suspension systems.

AM 120 — Fuel and Basic Electrical Systems Service

15 hrs./wk. 5 cr.

Service and repair of fuel systems and components. Service of basic electrical system and components.

AM 121 — Fuel and Basic Electrical Systems

5 hrs./wk. 5 cr.

Theory of fuel system servicing and introduction of fundamentals of automotive electrical system.

AM 130 — Automotive Engine Lab

20 hrs./wk. 7 cr.

Skill development in use of tools, safety practices, diagnosis, measuring, servicing, repairing and testing of automotive engines.

AM 131 — Automotive Engines

5 hrs./wk. 5 cr.

Theory of operation, parts nomenclature, production processes and major overhaul procedures of the automotive engine.

AM 210 — Electrical Components Lab

20 hrs./wk. 7 cr.

Service and repair of electrical systems, air conditioning and heating systems and major tuneup.

AM 211 — Electrical Components

5 hrs./wk. 5 cr.

Advance techniques of servicing automotive electrical system. Sophisticated test equipment, automotive air conditioning, heating system and major tuneup are covered.

AM 220 — Driving Mechanisms Lab.

20 hrs./wk. 7 cr.

Service and repair of automotive drive mechanisms, automatic transmissions, standard transmissions, overdrives, drive lines, differentials and rear axles.

AM 221 — Drive Mechanisms

5 hrs./wk. 5 cr.

Theory and operation of drive mechanisms. Includes automatic transmissions, standard transmissions, overdrives, drive shafts, differentials and rear axles.

AM 230 — Diagnosis and Application Lab.

20 hrs./wk. 7 cr.

Diagnosis and repair of the automobile, including all types of service procedures. Use of sophisticated testing equipment is stressed.

AM 231 — Diagnosis and Application

5 hrs./wk. 5 cr.

Application of preceding classes with emphasis on theory of diagnosis techniques, including the chassis dynamometer.

BC 24 — Cabinet and Furniture Making*

6 hrs./wk.

Care and use of hand and power tools used in cabinet and furniture making. Practical experience is provided in the layout and construction.

BC 30 — Construction Estimating*

6 hrs./wk.

Instruction in the methods of interpreting plans and specifications covering such topics as plan reading, quantity surveys, value of feedback, and estimating procedures.

BC 110 — Cabinet Construction

20 hrs./wk. 7 cr.

Practical experience is provided in design, layout and actual construction of cabinets. General safety practices in cabinet construction are stressed.

BC 111 — Tools of Construction

5 hrs./wk. 5 cr.

Care and use of hand and power tools in Building Construction. Safety principles relating to the safe use of tools will be stressed.

BC 120 — Materials of Construction

20 hrs./wk. 7 cr.

Practical application of materials covered in BC 121, where actual construction of forms, framing, etc. is accomplished.

BC 121 — Materials of Construction

5 hrs./wk. 5 cr.

Characteristics of natural and manufactured materials of construction and their processing, procurement and use. Includes information related to concrete work, and many other aspects and materials of the building industry.

BC 130 — Construction Layout

15 hrs./wk. 5 cr.

Actual experience utilizing the construction layout principles as taught in BC 131.

BC 131 — Construction Layout

5 hrs./wk. 5 cr.

Basic principles and methods of planning, laying out and erecting structural wood members in all aspects of the building industry.

BC 210 — House Construction

15 hrs./wk. 5 cr.

Advanced application of techniques involving instrument layout, rough framing, roof framing, siding and shingling provided by the construction of a full size home.

BC 211 — House Construction

5 hrs./wk. 5 cr.

Theory involved with location layout, rough framing, roof framing, siding application, shingling, and the use of the steel square.

BC 220 — Application of Interior Trim

15 hrs./wk. 5 cr.

Practical experience in application of interior trim. Supplies the student with the trade knowledge necessary to perform the operations skillfully.

BC 221 — Interior Trim

5 hrs./wk. 5 cr.

Study of varied materials available for application. Includes windows, doors, hardware, wall coverings, floor coverings and processes used in both commercial and home construction.

BC 230 — Applications of Building Technology

20 hrs./wk. 7 cr.

A practical study of combined stresses, reinforced beams, columns, fatigue and analysis of strength and rigidity of structural members in resisting applied forces. Several field trips are included in this course.

BC 231 — Technology of Building Construction

5 hrs./wk. 5 cr.

Technological aspects of the building construction industry.

BPR 10 — Blueprint Reading-Building*

Construction

6 hrs./wk.

Study of commercial plans and specifications in the construction industry with emphasis on the relationship of the architect, engineer, contractor and owner.

BPR 20 — Blueprint Reading-Machine Trades*

5 to 6 hrs./wk. as scheduled

Orthographic third angle projections including section conventions, auxiliary views and interpretation of fractional and decimal measurements. Application to machine trades is stressed.

BPR 100 — Blueprint Reading-Basic Course*

5 hrs./wk. 3 cr.

The study of orthographic third angle projection including sketching, section conventions, auxiliary views and interpretation of fractional and decimal measurements. The student is taught to translate from pictorial to orthographic projections.

BPR 101 — Blueprint Reading — Machine Shop

5 hrs./wk. 3 cr.

Continuation of BPR 100 with greater emphasis on symbols, measurements, drafting standards of blueprints, sections, auxiliary views, details and specifications as they relate to the machine trades.

BPR 102 — Blueprint Reading — Welding

5 hrs./wk. 3 cr.

Blueprint reading as it applies to the welding trade including welding symbols, layout, and fabricating procedures.

BPR 103 — Blueprint Reading 1, Building Construction

5 hrs./wk. 3 cr.

Theory of projection, architectural symbols, relationship of views and measurements, plan and elevation views, sections and details and familiarization of terms, specifications, and abbreviations associated with a blueprint.

BPR 104 — Blueprint Reading — Building Construction

5 hrs./wk. 3 cr.

A study of commercial plans and specifications in the construction industry with emphasis on the relationship of the architect, engineer, contractor and owner. Prerequisite BPR 103.

BPR 105 — Piping Practices

5 hrs./wk. 5 cr.

A study of commercial plans in the construction industry with emphasis on the refrigeration piping and specifications.

BR 90 — Men's Hair Styling*

6 hrs./wk.

Instruction in special haircutting for hair styling, razor cutting, blow-waving, hot comb, hair straightening, hair coloring, hair piece fitting, and cosmetics involved in Men's Hair Styling. Limited to journeymen or apprentices with a minimum of three years' experience. Certificate is issued on satisfactory completion of three quarters of instruction.

BR 110, 120, 130 — Barbering Lab

35 hrs./wk. 12 cr.

The barbering lab is organized similar to a regular shop where the student will work after graduation. Skills are developed through instruction and practice in the laboratory on haircuts, shaving, shampooing, massaging and tonics. The student will become thoroughly familiar with the barbering tools and their use in today's modern barber industry.

BR 111 — Barbering Theory

5 hrs./wk. 5 cr.

Instruction in barber history, tools, and accessories, shaving, haircutting, shampooing, hair tonics and massaging.

BR 112, 122, 132, 142 — Barbering Lab*

28 hrs./wk. 9 cr.

The barbering lab is organized similar to a regular shop where the student will work after graduation. Skills are developed through instruction and practice in the laboratory on haircuts, shaving, shampooing, massaging and tonics. The student will become thoroughly familiar with the barbering tools and their use in today's modern barber industry.

BR 113 — Barbering Theory*

4 hrs./wk. 4 cr.

Instruction in barber history, tools, and accessories, shaving, haircutting, shampooing, hair tonics and massaging.

BR 121 — Barbering Theory

5 hrs./wk. 5 cr.

Instruction in hygiene, bacteriology, sterilization and sanitation, anatomy and physiology, digestion, circulation and skeletal systems.

BR 123 — Barbering Theory*

4 hrs./wk. 4 cr.

Instruction in hygiene, bacteriology, sterilization and sanitation, anatomy and physiology.

BR 131 — Barbering Theory

5 hrs./wk. 5 cr.

Instruction in muscular systems, nervous systems, skin, face and scalp blood supply, electricity, chemistry and pharmacology and skin and scalp ailments.

BR 133 — Barbering Theory*

4 hrs./wk. 4 cr.

Instruction in digestion, circulation, skeletal systems, muscular systems, and nervous systems.

BR 143 — Barbering Theory*

4 hrs./wk. 4 cr.

Instruction in skin, face and scalp blood supply, electricity, chemistry and pharmacology and skin and scalp ailments.

BUS 11 — Typewriting I*

4 hrs./wk.

Introduction to keyboard, correct typing techniques, speed and accuracy building.

BUS 12 — Intermediate Typing*

4 hrs./wk.

Prerequisite—Completion of BUS 11 or equivalent—30 WPM. Keyboard drills. Speed and accuracy building. Improving techniques. Introduction to production typing.

BUS 13 — Advanced Typing*

4 hrs./wk.

Prerequisite—Completion of BUS 12 or equivalent—45 WPM. Refining of techniques, building higher speeds and accuracy. Production typing. Duplicating machines.

BUS 15 — Beginning Shorthand*

4 hrs./wk.

Introduction of theory. Dictation of practiced material. Previewed easy, new material for dictation and transcription practice.

BUS 16 — Shorthand*

4 hrs./wk.

Review of theory—Dictation and speed building. Continuation of BUS 15.

BUS 17 — Transcription*

4 hrs./wk.

Introduction to transcription of letters on the typewriter.

BUS 18 — Shorthand*

4 hrs./wk.

Speed building to achieve an acceptable speed for employment. Continuation of BUS 16.

BUS 19 — Transcription*

4 hrs./wk.

New material dictation and transcription of more advanced materials and specialized vocabulary. Continuation of BUS 17.

BUS 20 — Shorthand*

4 hrs./wk.

Prerequisite—Completion of BUS 18 or equivalent—60 WPM. Review, with emphasis on proportions and theory practice. Building of speed, and ability to read shorthand rapidly. Some transcription. Goal—80 WPM.

BUS 21 — Shorthand*

4 hrs./wk.

Prerequisite—Completion of BUS 20 or equivalent—80 WPM. Continuation of BUS 20 with emphasis on shortcuts. Goal—100 WPM.

BUS 22 — Transcription*

4 hrs./wk.

Prerequisite—Enrolled in BUS 21. Office style dictation, transcription of letters, manuscripts, and composition of letters. Office standard of secretarial performance.

BUS 23 — Shorthand*

4 hrs./wk.

Prerequisite—Completion of BUS 21 or equivalent—100 WPM. Continuation of BUS 21 with emphasis on speed and vocabulary building. Dictation will cover the full spectrum of business usage. Goal—120 WPM.

BUS 24 — Transcription*

4 hrs./wk.

Prerequisite—Enrolled in BUS 23. Continuation of BUS 22. Emphasis on speed, accuracy, ability to use good judgment, and mailable transcripts first time.

BUS 25 — Mach. Transcription*

4 hrs./wk.

Instruction in operating IBM, Stenocard, and Dictaphones transcribing equipment. It is designed to develop typewriter production skill in setting up letters, memos, and other documents from material on magnetic and grooved belts.

BUS 31 — Office Machines*

4 hrs./wk.

Introduction to rotary calculator, ten-key adding-listing machine, full keyboard adding machine, key-driven calculator, with emphasis on accuracy.

BUS 35 — Clerical Record Keeping*

4 hrs./wk.

Practice on business forms, cashier's records, checks and bank statements, petty cash records, budget records, sales records, purchase records, payroll.

BUS 40 — Accounting*

4 hrs./wk.

Basic fundamentals of the accounting cycle. The balance sheet income statement accounts are studied. How they increase and decrease and affect the proprietorship.

BUS 41 — Accounting*

2 hrs./wk.

Accounting lab held for special attention to problems dealt with in BUS 40. (Accounting Part I).

BUS 43 — Accounting*

4 hrs./wk.

Adjusting and closing the accounts, purchases, Sales and Inventory accounting, emphasis on partnership and division of profits as well as problems of valuation on specific classes of assets and liabilities.

BUS 45 — Accounting*

2 hrs./wk.

Accounting lab for giving students help with problems pertaining to BUS 43, (Accounting Part II).

BUS 60 — Accounting*

4 hrs./wk.

Emphasis on corporate accounting; formation of corporations, kind of stock, dividends, bonds, branch operations, financial statement analysis and cost accounting.

BUS 61 — Accounting*

2 hrs./wk.

Accounting Lab held to give students assistance with problems covered in BUS 60. (Accounting Part III).

BUS 101 — Typewriting I

10 hrs./wk. 3 cr.

Introduction to keyboard, correct typing techniques, speed and accuracy building.

BUS 102 — Intermediate Typing

10 hrs./wk. 3 cr.

Keyboard drills. Speed and accuracy building. Improving techniques. Introduction to production typing. Prerequisite—Completion of BUS 101 or equivalent—30 WPM.

BUS 103 — Advanced Typing

10 hrs./wk. 3 cr.

Refining of techniques, building higher speeds and accuracy. Production typing. Duplicating machines. Prerequisite—Completion of BUS 102 or equivalent—45 WPM.

BUS 104 — Advanced Production Typing

10 hrs./wk. 3 cr.

An advanced program to develop competent typists. Medical typing and legal typing are stressed. Correspondence, records, indexing, filing, manuscripts, and reports. Prerequisite—Completion of BUS 102 or equivalent—55 WPM.

BUS 105 — Beginning Shorthand

5 hrs./wk. 3 cr.

Introduction of theory. Dictation of practiced material. Previewed easy, new material for dictation and transcription practice.

BUS 106 — Shorthand

5 hrs./wk. 3 cr.

Review of theory—Dictation and speed building. Continuation of BUS 105.

BUS 107 — Transcription

5 hrs./wk. 2 cr.

Introduction to transcription of letters on the typewriter.

BUS 108 — Shorthand

5 hrs./wk. 3 cr.

Speed building to achieve an acceptable speed for employment. Continuation of BUS 106.

BUS 109 — Transcription

5 hrs./wk. 2 cr.

New material dictation and transcription of more advanced materials and specialized vocabulary. Continuation of BUS 107.

BUS 110 — Shorthand

5 hrs./wk. 5 cr.

Review, with emphasis on proportions and theory practice. Building of speed, and ability to read shorthand rapidly. Some transcription. Goal — 80 WPM. Prerequisite—Completion of BUS 108 or equivalent—60 WPM.

BUS 111 — Shorthand

5 hrs./wk. 5 cr.

Continuation of BUS 110 with emphasis on shortcuts. Goal — 100 WPM. Prerequisite—Completion of BUS 110 or equivalent—80 WPM.

BUS 112 — Transcription

5 hrs./wk. 2 cr.

Office style dictation, transcription of letters, manuscripts, and composition of letters. Office standard of secretarial performance. Prerequisite—Enrolled in BUS 111.

BUS 113 — Shorthand

5 hrs./wk. 5 cr.

Continuation of BUS 111 with emphasis on speed and vocabulary building. Dictation will cover the full spectrum of business usage. Goal — 120 WPM. Prerequisite—Completion of BUS 111 or equivalent—100 WPM.

BUS 114 — Transcription

5 hrs./wk. 2 cr.

Continuation of BUS 112. Emphasis on speed, accuracy, ability to use good judgment, and mailable transcripts first time. Prerequisite—Enrolled in BUS 113.

BUS 115 — Mach. Transcription

5 hrs./wk. 3 cr.

Instruction in operating IBM, Stenocard, and Dictaphones transcribing equipment. It is designed to develop typewriter production skill in setting up letters, memos, and other documents from material on magnetic and grooved belts.

BUS 120 — Secretarial Training

3 hrs./wk. 1 cr.

Preparing for the office job. Application and interview training, good grooming, office procedures, duties of the receptionist, emphasis on attitudes.

BUS 125 — Personal Finance

5 hrs./wk. 3 cr.

A practical course in money management with particular reference to utilization of savings.

BUS 128 — Office Machines

5 hrs./wk. 2 cr.

Basic training on 10-key adding machine, printing calculator and rotary calculator; application of decimal equivalents, fractions, some measurements, and contracting problems.

BUS 131 — Office Machines

5 hrs./wk. 2 cr.

Introduction to rotary calculator, ten-key adding-listing machine, full keyboard adding machine, key-driven calculator, with emphasis on accuracy.

BUS 132 — Office Machines

5 hrs./wk. 2 cr.

Practice on rotary calculators, ten-key adding-listing machines, key-driven calculator and full keyboard adding machines, working on business forms. Continuation of BUS 131.

BUS 135 — Clerical Record Keeping

5 hrs./wk. 5 cr.

Practice on business forms, cashier's records, checks and bank statements, petty cash records, budget records, sales records, purchase records, payroll.

BUS 143 — Data Processing

5 hrs./wk. 5 cr.

Introduction to Data Processing. Automation in industry, use of terminology, card punch, sorter, binary number system.

BUS 150 — Filing

2 hrs./wk. 2 cr.

Scope of filing, equipment and supplies. Practice of card and correspondence filing in alphabetical, numerical, geographic, and subject systems. Retention of records.

BUS 151 — Business Law

3 hrs./wk. 3 cr.

Introduction to business law and its enforcement, contracts and sales, negotiable instruments, partnership and corporations, insurance and property.

BUS 152 — Business of Beauty

2 hrs./wk. 2 cr.

Business of Beauty, secretarial personality, and charm classes will vary a little from quarter to quarter depending on the professional help that is contracted to do the job.

Visual Poise is a course designed to help you to become a more attractive "YOU." Figure control, diet, posture, correct walking, standing, and sitting will be stressed to develop more individual poise.

BUS 153 — Business of Beauty

2 hrs./wk. 2 cr.

Grooming is a course designed to assist you in becoming a more attractive person by working on proper dress, hair-styling, skin and nail care.

BUS 154 — Business of Beauty

2 hrs./wk. 2 cr.

Gracious living will bring to you confidence in knowing what is proper in business and social graces. It will involve voice culture, etiquette and personality development. All designed to create a more charming you.

BUS 155 — Filing

5 hrs./wk. 3 cr.

Filing equipment and supplies. Practice of card and correspondence filing in alphabetical, numerical, geographic, and subject systems. Retention of records.

BUS 160 — Accounting I*

5 hrs./wk. 5 cr.

Basic fundamentals of the accounting cycle. The balance sheet income statement accounts are studied. How they increase and decrease and affect the proprietorship.

BUS 161 — Accounting II*

5 hrs./wk. 5 cr.

Adjusting and closing the accounts, purchases, Sales and Inventory accounting, emphasis on partnership and division of profits as well as problems of valuation on specific classes of assets and liabilities.

BUS 162 — Accounting III*

5 hrs./wk. 5 cr.

Emphasis on corporate accounting; formation of corporations, kind of stock, dividends, bonds, branch operations, financial statement analysis and cost accounting.

BUS 170 — Accounting Lab*

5 hrs./wk. 2 cr.

Accounting lab held for special attention to problems dealt with in BUS 160, (Accounting Part I).

BUS 171 — Accounting Lab*

5 hrs./wk. 2 cr.

Accounting lab for giving students help with problems pertaining to BUS 161, (Accounting Part II).

BUS 172 — Accounting Lab*

5 hrs./wk. 2 cr.

Accounting Lab held to give students assistance with problems covered in BUS 162, (Accounting Part III).

BUS 201 — Advanced Type

5 hrs./wk. 2 cr.

A review for the Executive Typist of special parts of letters—placement and arrangement, business forms, legal forms, manuscripts and tables.

BUS 202, 203 — Executive Typing

2 hrs./wk. 1 cr.

A special executive program to develop competent typists who are capable of handling any typing task an employer might assign them. Speed and accuracy development.

BUS 210 — Investments

5 hrs./wk. 3 cr.

Operation of the security markets with development of one's ability to analyze corporate securities. Introduces investment objectives and design of portfolios for the individual.

BUS 212 — Corporate Finance

5 hrs./wk. 5 cr.

Introduction to the elements of financial management from the viewpoint of the business manager. Emphasizing profitability, liquidity, and long range planning.

BUS 213 — Marketing

5 hr./wk. 3 cr.

Principles, concepts, and problems concerned with distribution of goods from producer to consumer. Includes treatment of buyer behavior, product planning, pricing, and promotion.

BUS 214 — Business Organization and Management

5 hrs./wk. 5 cr.

Introduction to organization, planning, and decision-making as a foundation for business administration.

BUS 220 — Secretarial Practice

5 hrs./wk. 3 cr.

Preparation for employment and promotions. Gives practice in communications, services, and memorized office operations. Executive Secretarial course.

BUS 221 — Specialized Secretarial Procedures

15 hrs./wk. 8 cr.

Specialized training using technical dictation and transcription practice sets, and simulated office situations in legal, medical, government and science-engineering employment.

BUS 222 — Specialized Secretarial Procedures

15 hrs./wk. 8 cr.

Specialized training using technical dictation and transcription practice sets, and simulated office situations in legal, medical, government and science-engineering employment.

BUS 224—Systems Design and Development II

10 hrs./wk. 7 cr.

Systems and teleprocessing systems.

BUS 230 — Executive Accounting Practice

2 hrs./wk. 1 cr.

The secretaries go through medical or legal practice set. They are prepared for general record keeping in the professional office.

BUS 245 — Dictation

5 hrs./wk. 3 cr.

The course is designed for a theory review, special business, shorthand shortcuts, speed and transcription development.

BUS 246 — Transcription

5 hrs./wk. 2 cr.

Designed to prepare students in use of transcription techniques to enable them to work efficiently and comfortably under office conditions.

BUS 250 — Intermediate Accounting

5 hrs./wk. 5 cr.

Financial Statement Analysis, Transaction Flow, Understanding the Accounting Process, Working Capital.

BUS 251 — Intermediate Accounting

5 hrs./wk. 5 cr.

Noncurrent Assets and Liabilities, Corporate Equity, Analytical Processes, Partnerships, Specific Sales Procedures.

BUS 252 — Intermediate Accounting

5 hrs./wk. 5 cr.

Specialized Accounting Problems, Valuation, Budgeting, Statistics.

BUS 253 — Accounting Lab for BUS 252

5 hrs./wk. 2 cr.

BUS 255 — Executive Dictation

5 hrs./wk. 3 cr.

Advanced dictation, effective transcription and procedures. Development of systematic procedures in handling office-style dictation. Helps students gain a realistic comprehension of business world activities.

BUS 256 — Transcription

3 hrs./wk. 1 cr.

Designed to prepare students in use of transcription techniques to enable them to work efficiently and comfortably under office conditions.

BUS 260 — Cost Accounting

5 hrs./wk. 5 cr.

Materials, labor, overhead job cost, process cost, standard cost.

BUS 261 — Accounting Lab for BUS 251

5 hrs./wk. 2 cr.

BUS 262 — Cost Accounting*

5 hrs./wk. 5 cr.

Introduction to principles and practices of cost accounting.

BUS 265 — Executive Dictation

5 hrs./wk. 3 cr.

Advanced dictation, effective transcription and procedures. Development of systematic procedures in handling office style dictation. Helps students gain a realistic comprehension of business world activities.

BUS 266 — Transcription

3 hrs./wk. 1 cr.

Designed to prepare students in use of transcription techniques to enable them to work efficiently and comfortably under office conditions.

BUS 270 — Federal Income Tax Accounting

5 hrs./wk. 3 cr.

Basic Federal Tax Legislation and regulation for the individual.

CA 10 — General Art*

An introductory course in basic elements of commercial art including lettering, composition, perspective, design and shading.

CA 11 — Color and Still Life Painting 1*

This course is designed to help the students paint in oils or acrylics. A foundation is laid in the area of composition, drawing, shape building, lighting and color. It also trains the eyes to see and the mind to exaggerate.

CA 12 — Photo Retouching*

Basic retouching of photos for course and fine screen reproduction, cropping of photos, handling of negatives.

CA 13 — Layout & Design 1*

An introductory course including psychology of graphic selling, researching a design problem, symbolism, conventionalization of forms, creative processes, preparing a morgue as applies to the advertising media.

CA 14 — Figure Drawing*

This class develops the students in drawing directly from live models. It teaches them to see proper relationships and gives them a good foundation in length, size, direction, rhythm, anatomy and gesture. Prerequisite—CA 20.

CA 20 — Beginning Drawing*

This class teaches the student to see things as they are and to transfer this information to paper. Students will be drawing from third dimensional objects. This develops them in the area of length size and direction.

CA 21 — Color and Still Life Painting 2*

A continuation of CA 11 with emphasis on more advanced techniques. Prerequisite—CA 11.

CA 23 — Layout & Design 2*

An advanced course designed to allow students to solve problems from advertising orders going from research, thumbnails, roughs, comprehensives to finished art. Prerequisite—CA 13.

CA 105 — Commercial Art

5 hrs./wk. 3 cr.

Students in printing plan and prepare layouts, assemble art and copy for reproduction. Also included is lettering and color theory.

CA 114 — Lettering I

10 hrs./wk. 4 cr.

Introduction to brush and pen lettering, including use and care of instruments.

CA 115 — Drawing I

5 hrs./wk. 2 cr.

Beginning drawing with emphasis on observation and execution.

CA 116 — Principles and Elements of Art

5 hrs./wk. 3 cr.

A study of the principles and elements of art as they apply to commercial art.

CA 117 — Media and Techniques I

5 hrs./wk. 3 cr.

Introduction to basic commercial art media: pencil, pen and ink, tempera, wash, and brush with ink.

CA 123 — Perspective

5 hrs./wk. 2 cr.

Theory and practice in basic perspective.

CA 125 — Lettering II

5 hrs./wk. 2 cr.

Development of skill in brush and pen lettering and application to commercial art. Prerequisite CA 110.

CA 126 — Anatomy

5 hrs./wk. 3 cr.

Using the model as reference in conjunction with study of skeletal and muscle structure.

CA 127 — Color

5 hrs./wk. 3 cr.

Theory and practice in pigment color.

CA 128 — Media and Techniques II

5 hrs./wk. 3 cr.

Development of skill in basic commercial art media, introduction of secondary media.

CA 135 — Typography I

5 hrs./wk. 3 cr.

Lettering indication, study of typography in general, study of specific type faces.

CA 136 — Figure Drawing

5 hrs./wk. 2 cr.

Drawing from the model, including use of the figure in fashion drawings. Prerequisite CA 121.

CA 137 — Design I

5 hrs./wk. 3 cr.

Introduction to principles of advertising design, including the creative processes.

CA 138 — Layout I

5 hrs./wk. 2 cr.

Introduction to advertising layout, including thumbnails and roughs.

CA 139 — Drawing II

5 hrs./wk. 2 cr.

Advanced drawing, including drawing from nature. Prerequisite CA 111.

CA 215 — Art Preparation I

5 hrs./wk. 3 cr.

Introduction to camera-ready art preparation.

CA 216 — Illustration

5 hrs./wk. 3 cr.

Landscape and still life painting in various media. Prerequisite CA 122.

CA 217 — Cartooning

5 hrs./wk. 3 cr.

Introduction to cartooning principles and techniques.

CA 218 — Photo Retouch

5 hrs./wk. 3 cr.

The development of skills used in adapting photographs for reproduction.

CA 219 — Layout II

5 hrs./wk. 2 cr.

Advanced layout with emphasis on comprehensives. Prerequisite CA 138.

CA 220 — Art Preparation II

5 hrs./wk. 3 cr.

Advanced techniques in camera-ready art, including color separation and mechanics of reproduction. Prerequisite CA 215.

CA 225 — Design II

5 hrs./wk. 2 cr.

Advanced design with emphasis on corporate logos and advertising design applications. Prerequisite CA 137.

CA 226 — Elective Art

10 hrs./wk. 6 cr.

Student will elect from a list of selected subjects.

CA 227 — Typography II

5 hrs./wk. 2 cr.

Intensive study of various type faces and their application in commercial art. Prerequisite CA 135.

CA 235 — Promotional Design

5 hrs./wk. 3 cr.

Class will research and attempt to solve the total design problem of an institution or commercial firm.

CA 236 — Occupational Orientation

5 hrs./wk. 3 cr.

Study of art studies, advertising agencies, sign shops, engraving and printing plants and field trips. Techniques and deportment in job interviews.

CA 237 — Portfolio

5 hrs./wk. 3 cr.

Building an art portfolio for use in employment interviews.

CA 238 — Studio Production

10 hrs./wk. 4 cr.

On-the-job simulated work. Actual advertising problems presented under working conditions.

CIV 115 — Vocational Civics

2 hrs./wk. 2 cr.

Basic understanding of human relations, economics, and business principles.

COM 10 — Reading—Pre-technical

5 hrs./wk.

A basic reading program employing a linguistic approach and presented in a programmed format for students reading on a junior high school level or less. Individual instruction is emphasized.

COM 11 — Reading—Pre-technical

5 hrs./wk.

A program designed to increase the reading skills of poor readers reading on a junior high and tenth grade reading level. Increased reading skills are accomplished through observing and correcting eye and lip movement, vocabulary study, extensive outside reading, and reading machines. Prerequisite: COM 10 or equivalent.

COM 15 — Basic English—Pre-technical

5 hrs./wk.

Basic principles of English to include parts of speech and conventional use of spelling, punctuation, capitalization and abbreviations. Required of students registering in Pre-technical, level A.

COM 16 — Basic English—Pre-technical
5 hrs./wk.

A basic review of the principles of English taught in COM 15 to include oral and written communication and conventional use of spelling and individual speech analysis and applications of the dictionary. Required of students registering in Pre-technical, level B. Prerequisite: COM 15 or equivalent.

COM 17 — Basic English—Pre-technical
5 hrs./wk.

A continuation of COM 15 and 16 to include oral and written communication, spelling, punctuation and sentence structure. Required of students registering in Pre-technical, level C. Prerequisite: COM 15 and COM 16 or equivalent.

COM 110 — Communications
3 hrs./wk. 3 cr.

Review of oral and written communications to include conventional use of spelling, punctuation, and individual speech analysis.

COM 120 — Communications*
5 hrs./wk. 5 cr.

Review of oral and written communications to include conventional use of spelling, punctuation, individual speech analysis and grammar. Practical instruction is also given in job interview procedures and preparation of resumes.

COM 130 — Technical Writing*
5 hrs./wk. 5 cr.

Introduction to technical writing. Includes study of style, language, and mechanics. Practical work is expected from each student in writing technical reports.

COM 134 — Business English*
4-5 hrs./wk. 5 cr.

Review of grammar, punctuation, sentence structure, paragraphing, and the composition of letters.

COM 135 — Business Report Writing*
3-4 hrs./wk. 3 cr.

Effective documentation of programming in business and industry. Prerequisite COM 134.

COM 140 — Effective Reading*
2 hrs./wk. 1 cr.

Designed to increase vocabulary, comprehension, reading speed, and comprehension of general data processing materials.

COS 110, 120, 130 — Cosmetology Lab.
35 hrs./wk. 12 cr.

Learning by doing is emphasized in the Cosmetology lab. Laboratory instruction and practice are an integral part and extend over the length of the program.

During the first three quarters the laboratory work covers shampooing, scalp treatments, manicuring, haircutting, hair styling, permanent waving, facials, massaging, care and styling of wigs and wigs, finger waving, and hair dyeing and bleaching.

COS 111 — Cosmetology Theory
5 hrs./wk. 5 cr.

Instruction in sterilization and sanitation, hygiene, anatomy, and physiology, personality, and other related information topics directly connected with the practical units of instruction in the lab.

COS 121 — Cosmetology Theory
5 hrs./wk. 5 cr.

Instruction in diseases of hair, skin and nails, electricity, and other related information topics directly connected with practical units of instruction in the lab.

COS 131 — Cosmetology Theory
5 hrs./wk. 5 cr.

Instruction in courtesy, telephone conversation, ethics, salesmanship and other related information topics directly connected with the practical units of instruction in the lab.

COS 140 — Cosmetology Lab.
35 hrs./wk. 12 cr.

Final preparation on all phases of Cosmetology laboratory work for graduation and for taking the State Board Licensing Examination.

COS 141 — Cosmetology Theory
5 hrs./wk. 5 cr.

Student is coached in final preparation on all phases of Cosmetology theory work for graduation and for taking the State Board Licensing Examination.

CPA 10 — Introduction, Math & Blueprint Reading*
7 hrs./wk.

Introduction to carpentry, the apprenticeship system, mathematics, job planning, and blueprint reading.

CPA 11 — Blueprint Reading, Plot Plans, Foundations and Floors*
7 hrs./wk.

Introduction to pre-job planning and blueprint reading. Interpretation and use of the plot plan. Information on various types of foundations and floors.

CPA 20 — Framing*
7 hrs./wk.

Framing methods and procedures, layout and use of the story pole, framing and finish lumber, floor framing, wall and partition framing, use of the square, etc.

CPA 21 — Roof Framing*

7 hrs./wk.

Roof framing types and styles, mathematics, tool blueprints, gable roof, layout of different types of rafters.

CPA 30 — Interior Finish*

7 hrs./wk.

Types of joints, tools and machinery, lumber, cabinet details, interior coverings and trim, fitting and hanging doors, wood and steel window sash, hardware and finish floors.

CPA 31 — Stairbuilding*

7 hrs./wk.

Methods and procedure of stairbuilding. Includes design, types and layout, mathematics, problems and material listing.

CPA 40 — Reinforced Concrete Construction*

7 hrs./wk.

History, materials, methods, forms, layout construction, types and problems of reinforced concrete construction.

CPA 41 — Heavy Timber & Log Construction*

7 hrs./wk.

Development of timber construction, characteristics, types, uses and cost. Also, selection, handling and layout of log construction.

DDT 10 — Mechanical Drafting 1*

6 hrs./wk.

Fundamental of drafting including sketching, lettering, orthographic projection, auxiliary views and sectioning.

DDT 11 — Pipeline Drafting*

6 hrs./wk.

Basic fundamentals of drawing tank designs, cryogenics, and piping systems in industrial application including spools, P & I and plans.

DDT 12 — Layout for Fabricators 1*

6 hrs./wk.

The fundamentals of graphic layout of complex objects in flat pattern.

DDT 20 — Mechanical Drafting 2*

6 hrs./wk.

Advanced techniques including assembly production, dimensions, tolerances, surface quality, specifications and basic descriptive geometry. Prerequisite DDT 10.

DDT 21 — Structural Drafting*

6 hrs./wk.

The basic fundamentals of drawing structural steel and steel connections, for fabrication. Smoley's tables, estimating.

DDT 22 — Layout for Fabricators 2*

6 hrs./wk.

A continuation of DDT 12. Prerequisite DDT 12.

DDT 110 — Drafting Fundamentals

15 hrs./wk. 5 cr.

Laboratory practice with drafting tools, media, lettering, sketching and basic drafting techniques.

DDT 111 — Plane Descriptive Geometry

5 hrs./wk. 3 cr.

Geometric construction, orthographic projection, auxiliary views and sectional views.

DDT 212 — Mechanics and Strength of Materials

5 hrs./wk. 5 cr.

Theory of forces, section modulus, shear, tension and compression and how these forces are applied to machines. Prerequisite PHY 121.

DDT 213 — Topographic Drafting

15 hrs./wk. 5 cr.

Surface features of the earth are drawn and depicted by conventional symbols.

DDT 115 — Mechanical Drafting 1*

16 hrs./wk. 8 cr.

The fundamentals of basic drawing including tools, lettering, orthographic projection, auxiliary views and descriptive geometry.

DDT 122 — Descriptive Geometry

20 hrs./wk. 10 cr.

The study of points, lines, planes and polyhedrons and their manipulation in space. The intersections of objects and their developments. Prerequisite DDT 111, DDT 110.

DDT 125 — Mechanical Drafting 2*

12 hrs./wk. 5 cr.

A continuation of DDT 115 with special emphasis on sectional views, fastenings, shop processes, materials and dimensioning. Prerequisite DDT 115.

DDT 132 — Engineering Drawing

20 hrs./wk. 10 cr.

Fundamentals of working drawing including, tolerance and true positioning, use of handbooks and catalogs, steel detailing, charts and graphs and pictorials. Prerequisite DDT 122.

DDT 135 — Mechanical Drafting 3*

12 hrs./wk. 5 cr.

Introduction to the fundamentals of tolerancing and limits, pictorial drawing and basic working drawing detailing. Prerequisite DDT 125.

DDT 205 — Technical Illustrating

5 hrs./wk. 3 cr.

A course for commercial art students designed to introduce the student to drafting techniques such as lines, lettering, orthographic projection, dimensioning, pictorial, dimetric and trimetric drawings.

DDT 215 — Mechanical Drafting 4*

12 hrs./wk. 5 cr.

Application of detail working drawings in springs, gearing, splines, cams and introduction to assembly drawings.

DDT 216 — Mechanics and Strength of Materials*

4 hrs./wk. 4 cr.

Basic theory of forces, force systems, section modulus, shear, tension and compression and properties of materials and how they apply to machines.

DDT 221 — Machine Tool Drafting

15 hrs./wk. 5 cr.

Design and elementary research of small units in machine tools applied to working drawings.

DDT 222 — Machine Design

5 hrs./wk. 5 cr.

The design of shafts, bearings, fasteners, couplings, gears and cams etc., as they apply to the machine field. Prerequisite DDT 212.

DDT 225 — Machine Tool Drafting*

8 hrs./wk. 3 cr.

Design and elementary research of small units in machine tools applied to working drawings.

DDT 226 — Machine Design*

4 hrs./wk. 4 cr.

The application of principles learned in DDT 216 as they apply to the design of shafts, bearings, fasteners, couplings, gears, and cams etc., as they apply to the machine field. Prerequisite DDT 216.

DDT 230 — Electrical and Electronic Drafting

15 hrs./wk. 10 cr.

A board coverage of components, materials, symbols, standards, industrial diagrams, wiring harnesses and printed circuits and military standards.

DDT 232 — Pipeline Drafting

5 hrs./wk. 3 cr.

Plumbing, heating and pipe drafting. Completion of finished drawings involved their installations.

DDT 234 — Manufacturing Processes

5 hrs./wk. 3 cr.

Procedures of planning, estimating, pattern making, casting, welding, forging, machining and assembling to produce economical manufacturing.

DDT 236 — Pipe Drafting*

5 hrs./wk. 3 cr.

Specialized training in controls, symbols, fittings, part specifications, diagrams and detail drawings as they apply to piping.

DDT 237 — Structural Drafting*

5 hrs./wk. 3 cr.

A specialized course in detailing, sizing, estimating of structural steel with special emphasis on the use of Smoley's Tables.

DDT 238 — Electro Mechanical Drafting*

6 hrs./wk. 3 cr.

A specialized course in electrical schematics, component design, P.C. and terminal boards and assemblies.

DP 100 — Basic Computer Concepts*

10 hrs./wk. 7 cr.

The course teaches the terminology, syntax, and basic concepts pertaining to computers. Introduces the student to programming languages. Prerequisite: Satisfactory score on Programming Aptitude Test Battery or special consent from business department head.

DP 110 — Basic Computer Programming*

15 hrs./wk. 7 cr.

Teaches basic assembly language programming and concepts of programming. Familiarizes the student with actual operation of the computer. Prerequisite: A grade of "C" or better in DP 100 and a passing grade in MTH 130 and BUS 160.

DP 120 — Basic COBOL Programming*

15 hrs./wk. 7 cr.

Training and instruction in COBOL with strong emphasis on the use of problem-oriented languages. Prerequisite: A grade of "C" or better in DP 110, passing grade in MTH 131 and BUS 161.

DP 210 — Basic Fortran Programming*

10 hrs./wk. 7 cr.

Basic principles and fundamentals of Fortran Programming. Prerequisite: Grade of "C" or better in DP 110 and a passing grade in MTH 132 and BUS 161.

DP 220 — Applied COBOL Programming*

10 hrs./wk. 5 cr.

Advanced programming techniques used in COBOL with emphasis on case studies. Prerequisite: A grade of "C" or better in DP 120, passing grade in MTH 132 and BUS 162.

DP 230 — Applied Computer Programming*

10 hrs./wk. 7 cr.

Advanced programming principles with emphasis on MACROS, subroutines and software techniques. Prerequisite: A grade of "C" or better in DP 215 and DP 220.

DP 240 — Applied Computer Programming

Advanced programming principles with emphasis on program in a problem—Oriented Language. Prerequisite: A grade of "C" or better in DP 215 and DP 220.

DP 270 — Basic Business Statistics

5 hrs./wk. 5 cr.

Basic statistical concepts encountered in the normal course of business. Prerequisite MTH 132.

DP 280 — Business Systems Design*

10 hrs./wk. 7 cr.

Methods and techniques of non-scientific systems analysis as practiced in business, industry and government training is intended to provide the student with a clear understanding of systems discipline and instruction in a designed body of methods and techniques using basic COBOL.

DP 281 — Management Systems

5 hrs./wk. 3 cr.

Understanding Systems and Data Flow, Computer Science Techniques, Management Requirements.

DP 285 — Applied Systems Design

10 hrs./wk. 7 cr.

Lectures and discussions similar to those covered in DP 280, Business Systems Design, with added material at a level for those in advanced COBOL and FORTRAN programming.

DP 290—Advanced Programming Techniques*

10 hrs./wk. 7 cr.

Field proven sophisticated techniques in FORTRAN, COBOL or Assembly Languages. Prerequisite: A grade of "C" in DP 220 for COBOL or a grade of "C" in DP 215 and a passing grade in MTH 134. MTH 134 may be taken concurrently by permission.

DP 291 — Computer Management Sciences

5 hrs./wk. 3 cr.

Use of the computer in all phases of management personnel, budget, inventory, and planning. GPSS, PERT, and Game theory management tools.

DP 295 — Individual Case Studies*

10 hrs./wk. 5 cr.

Selected practical problems for actual production situations in COBOL, FORTRAN or Assembly. Prerequisite: A grade of "C" or better in DP 280. FORTRAN programmers must have a passing grade in MTH 135. MTH 135 may be taken concurrently with permission.

DP 299 — CDP Review Course

1 hr./wk. 1 cr.

This course is designed to prepare the two-year graduate for passing the CDP examination.

ECN 100 — Basic Economics

5 hrs./wk. 5 cr.

A study of personal, consumer, and national economics. The production and use of goods and services, money and credit, income and taxes.

ELA 10 — Electricity I*

7 hrs./wk.

Orientation, job information, mathematics, electrical theory and electrical code.

ELA 11 — Electricity II*

7 hrs./wk.

Job information, mathematics, code, electrical theory, introduction to blueprint reading.

ELA 20 — Electricity III*

7 hrs./wk.

Safety, job information, electrical theory, electrical code, and mathematics.

ELA 21 — Electricity IV*

7 hrs./wk.

Blueprint reading, mathematics, electrical code, electrical theory, and job information.

ELA 30 — Electricity V*

7 hrs./wk.

Introduction to motor controls and continuation of blueprint reading, mathematics, electrical theory, and electrical code.

ELA 31 — Electricity VI*

7 hrs./wk.

Motor controls, blueprint reading, and the electrical code.

ELA 40 — Electricity VII*

7 hrs./wk.

Introduction to basic electronics and atomic safety. Continuation of blueprint reading and electrical code.

ELA 41 — Electricity VIII*

7 hrs./wk.

Electronics, static motor control, blueprint reading and the electrical code.

ELC 10 — Basic Electricity*

6 hrs./wk.

Basic overview of the fields of Electricity and Electronics. Sample problems, exploratory work.

ELC 102 — Electric Code

5 hrs./wk. 5 cr.

National electrical code covering residential, commercial, industrial, and hazardous wiring requirements. Also includes work with Electrical Blue Prints.

ELC 104 — AC-DC Fundamentals

5 hrs./wk. 3 cr.

Electron theory, Ohms law, Watts law, Kirchoffs law, circuits, and National Electrical Code.

ELC 105 — AC-DC Circuits

5 hrs./wk. 3 cr.

Study of electrical circuits as related to the appliance field. Includes motors and transformers, operation, maintenance and overhaul. Introduction to controls.

ELC 110 — Electric Wiring

15 hrs./wk. 5 cr.

Laboratory application of principles covered in ELC 101 & 102. Also includes wiring of home constructed by college.

ELC 111 — Basic Electricity

5 hrs./wk. 5 cr.

Electron theory, Ohm's Law, Watt's Law, Thevenin's Theorem, Kirkchoff's Law, Magnets, Magnetism; Electrical and Magnetic Circuits.

ELC 120 — Electric Motors

15 hrs./wk. 5 cr.

Laboratory application of principles covered in ELC 121. Also includes motor rewinding.

ELC 121 — Electrical Devices

5 hrs./wk. 5 cr.

Study of Electric Motors, their construction, operation, maintenance, selection application, repairs, conversion, overhaul, and maintenance. Also generators and transformers.

ELC 130 — Industrial Controls

15 hrs./wk. 5 cr.

Laboratory application of principles covered in ELC 131. Includes work on industrial voltages.

ELC 131 — Basic Instrumentation

5 hrs./wk. 5 cr.

Theory and operation of automation and instrumentation in modern industry.

ELC 150 — Advanced Motor Control

5 hrs./wk. 3 cr.

Motor control, development analysis, maintenance, installation, modification, trouble shooting. Emphasis on electromagnetic with basic introduction to static control.

ELT 15 — FCC Study*

6 hrs./wk.

Study of typical F.C.C. Questions and the theory behind each question. Designed to help pass second class F.C.C. test. Prerequisite: Student should have some background in electronics, either through some school or work experience.

ELT 16 — Advanced FCC Study*

6 hrs./wk.

Study of typical F.C.C. Questions and the theory behind each question. Designed to help pass F.C.C. First Class Test. Prerequisite ELT 15 or equivalent.

ELT 105 — Auto Electricity

5 hrs./wk. 5 cr.

Theory of series and parallel electrical circuits as applied to the automotive field. Basic semiconductor characteristics as applied in alternators, voltage regulators, and transistorized ignition systems. Applicable problems.

ELT 108 — Electronic Drafting*

5 hrs./wk. 3 cr.

A broad coverage of electronic components, graphic symbols, standards, industrial diagrams, wiring harnesses, printed circuits, reference designations and electronic equipment design.

ELT 110 — Direct Current and Alternating**Current Application and Practice***

10 hrs./wk. 3 cr.

Application of D.C. and A.C. principles. Familiarization with basic test equipment. Practice with soldering and wiring techniques. Study of meters and associated circuitry.

ELT 111 — Direct Current and Alternating**Current Fundamentals***

10 hrs./wk. 8 cr.

Basic electronics including electron theory, direct current, alternating current, meters, series and parallel circuits, and batteries.

ELT 120 — Design and Application of**Amplifying Devices***

10 hrs./wk. 3 cr.

Application of characteristic curves in design of amplifying circuits in both solid state and vacuum tubes; testing and trouble shooting of amplifier circuits.

ELT 121 — Solid State and Vacuum Tube**Fundamentals***

8 hrs./wk. 6 cr.

Vacuum tube and transistor theory and characteristic curves and parameters. Design of amplifiers and circuitry.

ELT 130 — Application and Testing of**Electronic Communications Devices***

10 hrs./wk. 3 cr.

Use of amplifiers built previous quarter to assemble receivers, and transmitter circuits; test and repair receivers.

ELT 131 — Principles of Electronic**Communication Devices***

8 hrs./wk. 6 cr.

Theory of oscillators, audio amplifiers, radio frequency amplifiers, superheterodyne receivers, transmitters, frequency modulation, amplitude modulation.

ELT 210 — Application of Integrated Systems*

10 hrs./wk. 3 cr.

Study of application of all principles studied in previous courses as they are integrated into a working system. Trouble shooting and supervised repair work is emphasized.

ELT 211 — Advanced Communications and**Television***

8 hrs./wk. 6 cr.

Application of electronics communications theory to circuits involved in transmission and reception of both color and black and white TV systems.

ELT 220 — Operation of Advanced Test and Microwave Equipment*
10 hrs./wk. 3 cr.

Instruction in operation of advanced test equipment — calibration and alignment. Study of integrated radar and microwave circuits.

ELT 221 — Radar and Microwave Systems Analysis*
5 hrs./wk. 5 cr.

Principles of basic radar circuit analysis including microwave and servo system functions and hardware, and operation of radar equipment.

ELT 230 — Laboratory Analysis of Digital and Analog Concepts*
10 hrs./wk. 3 cr.

Construction and analysis of logic circuits used in computers. Practice in programming and familiarization of computer systems.

ELT 231 — Computer Technology*
5 hrs./wk. 5 cr.

Concepts of pulse and digital circuitry, logical design of digital computers, data transmission, system analysis. Emphasis on technical aspects of computers. Programming of both digital and analog computers.

ELT 240 — Medical Electronics Laboratory*
10 hrs./wk. 3 cr.

Application and operation of Medical Electronic Equipment as studied in ELT 241. Alignment, adjustment and trouble shooting and supervised repair work is emphasized. Field trips to various medical centers are emphasized. Prerequisite ELT 241 or concurrent.

ELT 241 — Medical Electronics*
8 hrs./wk. 6 cr.

Design and operation of Medical Electronic Equipment including: X-Ray and related instrumentation. Coronary care instrumentation including: EKG, Rate Meters, Defibrillators, Synchronizers, Pacemakers, Strain Gauges and Amplifiers, Nuclear Medicine Instrumentation including: Radiation detection devices, counting devices scalars and scanning devices. Biological potentials are considered. Computer applications as used in medicine are considered. Prerequisite ELT 231.

ELT 250 — Instrumentation*
10 hrs./wk. 3 cr.

The lab section deals with the processes of calibration and standardization of test equipment. Prerequisite ELT 251 or concurrent.

ELT 251 — Instrumentation*
8 hrs./wk. 6 cr.

This course is designed to provide training in the repair, calibration and standardization of electronic test equipment. The theory section is devoted to the operation and circuits common to each type of basic test equipment. Prerequisite ELT 131.

ELT 260 — Color Lab*
10 hrs./wk. 3 cr.

Application of trouble-shooting techniques and testing circuitry of color television receivers.

ELT 261 — Color TV*
8 hrs./wk. 6 cr.

Study of application of TV principles as they pertain to the color television system. Prerequisite ELT 211.

ELT 270-280 — Electromech Lab*
10 hrs./wk. 3 cr.

This Lab will stress these Mechanisms in an Electromechanical System with respect to their input and output characteristics.

Emphasis will be placed on Methods of Controlling and Analyzing Malfunctions. ELT 280 is a continuation of ELT 270.

ELT 271-281 — Electromech Tech*
8 hrs./wk. 6 cr.

The study of Fundamental Concepts as found in basic Mechanical and Electromechanical Mechanisms. These mechanisms will be studied in terms of their specifications and operating characteristics. Emphasis will be placed on the use of these mechanisms in integrated electromechanical systems as found in Business Machines and Data Processing Equipment. ELT 281 is a continuation of ELT 271.

FS 103 — Fire Fighting Tactics and Strategy I*
3 hrs./wk. 3 cr.

Review of fire chemistry; equipment and manpower; basic fighting tactics and strategy; methods of attack; pre-planning fire problems. Prerequisites: 1. Introduction to Fire Prevention; 2. Introduction to Fire Suppression or Employment with a Fire Service Agency.

FS 104—Fire Fighting Tactics and Strategy II*
3 hrs./wk. 3 cr.

Continuation of FS 103 with emphasis on flammable liquids, types of extinguishing agents, and ventilation procedures.

FS 115 — Arson Investigation*
3 hrs./wk. 3 cr.

Introduction to arson and incendiarism, arson laws, and types of incendiary fires. Methods of determining fire cause, recognizing and preserving evidence, inter-

viewing and determining witnesses. Procedure in handling juveniles; court procedure and giving court testimony.

HDM 110 — Diesel Engines Lab 2 Cycle

20 hrs./wk. 7 cr.

Practical experience in maintenance, rebuilding, trouble shooting, and repair of 2 cycle diesel engine.

HDM 111 — Diesel Engines 2 Cycle

5 hrs./wk. 5 cr.

Basic diesel engines with emphasis on 2 Cycle Detroit Diesel Engine. Maintenance, rebuilding procedures, parts nomenclature and theory of operation.

HDM 120 — Diesel Engines Lab 4 Cycle

20 hrs./wk. 7 cr.

Practical experience in operation, maintenance, rebuilding procedures, trouble shooting and repair of the 4 cycle diesel engine.

HDM 121 — Diesel Engines 4 Cycle

5 hrs./wk. 5 cr.

Four cycle diesel engine operation and maintenance with emphasis on all engine systems.

HDM 132 — Electrical Systems Lab.

20 hrs./wk. 7 cr.

Practical experience in the operation, maintenance, rebuilding and trouble shooting of all electrical units of the heavy duty mechanical field.

HDM 133 — Electrical Systems

5 hrs./wk. 5 cr.

Instruction on all units of the electrical systems, including repair testing and adjustments.

HDM 200 — Highway Equipment Engines

20 hrs./wk. 7 cr.

Practical experience in diagnosis and preventative maintenance on Highway Truck Diesel engines and supporting systems.

HDM 201 — Highway Equipment

5 hrs./wk. 5 cr.

Diagnosis and preventative maintenance on Highway Truck Diesel engines and supporting systems.

HDM 205 — Construction Equipment Engines

20 hrs./wk. 7 cr.

Practical experience on injection, electrical, lubricating, cooling, air and filtration systems, and engine tune-up and trouble shooting.

HDM 206 — Construction Equipment

5 hrs./wk. 5 cr.

Instruction on injection, electrical, lubrication, cooling, air and filtration systems, and engine tuneup and trouble shooting.

HDM 220 — Highway Equipment Drive Systems Lab

20 hrs./wk. 7 cr.

Practical experience on highway truck power transmission systems. Diagnosis, maintenance and repair of transmissions, clutches, differentials and drive lines.

HDM 221 — Highway Equipment Drive Systems

5 hrs./wk. 5 cr.

Instruction on injection, electrical, transmission systems. Theory, trouble diagnosis and preventive maintenance of transmissions, clutches, differentials, and drive lines.

HDM 225 — Construction Equipment Drive Systems Lab

20 hrs./wk. 7 cr.

Practical experience on maintenance and overhaul procedure on torque converters, power shift transmissions, planetary drives, torque brakes and retarders, clutches, tracks, rollers, sprockets, and recoil systems.

HDM 226 — Construction Equipment Drive Systems

5 hrs./wk. 5 cr.

Instruction on operation and overhaul procedures of torque converters power shift transmissions, planetary drives, clutches, tracks, rollers, sprockets and recoil systems.

HDM 230 — Highway Equipment Support Systems

20 hrs./wk. 7 cr.

Practical experience in trouble diagnosis and maintenance on support systems; air brakes, electrical, steering suspension, lubrication, and frame assembly.

HDM 231 — Highway Equipment Support Systems

5 hrs./wk. 5 cr.

Instruction on diagnosis and preventative maintenance of the support systems; air brakes, electrical, steering, suspension, lubrication, and frame assembly.

HDM 235 — Construction Equipment Hydraulics and Components Lab.

20 hrs./wk. 7 cr.

Practical experience on maintenance and overhaul procedures on hydraulic systems, power steering, air and hydraulic brake systems, blades, buckets, bodies, and rippers.

HDM 236 — Construction Equipment Hydraulics and Components

5 hrs./wk. 5 cr.

Instruction on operation and overhaul procedures on hydraulic systems, power steering, air and hydraulic brake systems, blades, buckets, bodies, and rippers.

HWC 115 — Nursing Clerical Assistant

14 hrs./wk. 14 cr.

Basic knowledge and understanding of hospital patient care and the role of the Ward Clerk as a clerical assistant to the nurse. Includes public relations, ethics, common medical terminology, and basic understanding of medical science.

HWC 116 — Nursing Clerical Assistant Lab.

16 hrs./wk. 5 cr.

Supervised practical experience in the hospital clinical setting with emphasis on application of principles learned in the classroom.

ILA 10 — Geometric Drawings, Elementary & Parallel Line Layout*

7 hrs./wk.

Orientation, geometric drawing, developing elementary layout patterns. Principles and exercise for developing patterns of parallel line shapes and profiles for elbows and round pipe.

ILA 11 — Short Methods, Practical Projection & Trade Mathematics*

7 hrs./wk.

Developing patterns by short methods and principles of rapid layout. Introduction to Orthographic Projection, principles of projection, and mathematics.

ILA 20 — Geometric Drawings, Parallel and Radial Line Layout*

7 hrs./wk.

Construction of geometric drawings and developing patterns for parallel and radial line layout.

ILA 21 — Practical Projection and Trade Mathematics*

7 hrs./wk.

Practical projection of plane figures, cylinders and cones. Mathematics involving proportion, ratio, percentages, and shop methods for finding circumference.

ILA 30 — Geometric Drawing and Pattern Drafting*

7 hrs./wk.

Constructing a parabola and hyperbola, equable spirals, scrolls and an ionic volute. Principles and practices for developing and drafting a variety of patterns.

ILA 31 — Practical Projection and Trade Mathematics*

7 hrs./wk.

Intersection of solids, prisms, cylinders, cones, a sphere intersected by a cylinder, intersecting cylinders of unequal diameters. Trade mathematics including equations, formulas, and the law of the right triangle.

ILA 40 — Pattern Drafting*

7 hrs./wk.

Additional principles and practices for developing and drafting a variety of patterns.

ILA 41 — Trade Mathematics*

7 hrs./wk.

Areas of circles, triangles, squares, trapezoids, and semicircular-sided figure. Volume of cubes, square prisms, rectangular solids, cylindrical and semicircular-sided solids.

ISA 10 — Structural Ironworking I*

7 hrs./wk.

Mechanical drawing and blueprint reading, mathematics, rigging and safety, trade terms, welding, social science and structural.

ISA 11 — Structural Ironworking II*

7 hrs./wk.

Mechanical drawing and blueprint reading, mathematics, rigging and safety, welding and cutting, social science, trade terms and safety.

ISA 20 — Structural Ironworking III*

7 hrs./wk.

Mechanical drawing and blueprint reading, mathematics, rigging and safety, trade terms, welding and cutting, social science and safety.

ISA 21 — Structural Ironworking IV*

7 hrs./wk.

Ornamental work and continuation of ISA 20.

ISA 30 — Structural Ironworking V*

7 hrs./wk.

Blueprint reading, mathematics, safety, rigging, welding and cutting, social science and ornamental work.

ISA 31 — Structural Ironworking VI*

7 hrs./wk.

Blueprint reading, mathematics, structural, ornamental, reinforcing, and welding and cutting.

(In general, LPN courses must be taken in numbered sequence with lecture and related lab. classes being taken concurrently. LPN 111, LPN 115, LPN 116 are all *pre-requisites* to classes in subsequent units.)

LPN 110 — Basic Nurs. Fundamentals Lab

3 hrs./wk. 1 cr.

Supervised laboratory and hospital practice in effective application of basic nursing principles.

LPN 111 — Nursing Fundamentals

5 hrs./wk. 5 cr.

Instruction in the basic principles guiding nursing care.

LPN 113 — Orientation to Nursing

1 hr./wk. 1 cr.

Orientation to personal needs in becoming a qualified practitioner on the nursing health team.

LPN 115 — Anatomy and Physiology

4 hrs./wk. 4 cr.

Basic knowledge of the normal structure and functions of the human body.

LPN 116 — Pharmacology for Prac. Nurses

4 hrs./wk. 4 cr.

Basic medicines and reaction in the human body. Emphasis on accuracy in administration. Includes review of basic mathematics, percentages, and metric and apothecary systems.

LPN 117 — Nutrition

2 hrs./wk. 2 cr.

Normal nutritive elements necessary to and related to the normal function of the human body.

LPN 119 — Microbiology

1 hr./wk. 1 cr.

General types of organisms and how they affect the human body and its surroundings.

LPN 120 — Adv. Nurs. Fundamentals Lab.

12 hrs./wk. 4 cr.

Supervised hospital application of nursing fundamentals.

LPN 127 — Introduction to Med-Surg. Nursing

6 hrs./wk. 5 cr.

Introduction to disease conditions in med-surg. nursing. Psychological and sociological human behavior, dietary methods, rehabilitation and care of the elderly.

LPN 128 — Med-Surg. Nursing Lab.

12 hrs./wk. 4 cr.

Supervised hospital application of principles of medical-surgical nursing.

LPN 129 — Med-Surg Nursing

6 hrs./wk. 5 cr.

Human illness affecting the circulatory, digestive, and genito-urinary systems. Emphasis on principles of nursing care.

LPN 130 — Med-Surg. Nursing Lab.

12 hrs./wk. 4 cr.

Supervised hospital application of principles of medical-surgical nursing taught in LPN 131.

LPN 131 — Med-Surg. Nursing

6 hrs./wk. 5 cr.

Human illness affecting the endocrine, respiratory and muscular-skeletal systems with emphasis on principles of nursing care.

LPN 132 — Med-Surg. Nursing Lab.

12 hrs./wk. 4 cr.

Supervised hospital application of principles of medical-surgical nursing taught in LPN 133.

LPN 133 — Med-Surg. Nursing

6 hrs./wk. 5 cr.

Human illness affecting the nervous system and special sensory organs with emphasis on nursing care. Includes nursing in Civil Defense, First Aid, and employment orientation.

LPN 142 — Pediatric Nursing Lab.

12 hrs./wk. 4 cr.

Supervised hospital application of principles of pediatric nursing.

LPN 143 — Pediatric Nursing

6 hrs./wk. 5 cr.

Normal human growth and development from birth through adolescence with emphasis on principles of nursing care during illness.

LPN 146 — Obstetrical Nursing Lab.

12 hrs./wk. 4 cr.

Supervised hospital application of principles of obstetrical nursing.

LPN 147 — Obstetrical Nursing

6 hrs./wk. 5 cr.

Principles of nursing care in both normal and abnormal pregnancy before, during, and after the birth of a baby.

LPN 152 — Psychiatric Nursing Lab.

12 hrs./wk. 4 cr.

Supervised hospital application of principles of psychiatric nursing.

LPN 153 — Psychiatric Nursing

6 hrs./wk. 5 cr.

Abnormal psychological - sociological human behavior with emphasis on principles of nursing care in mental illness.

MKT 15 — Checkstand Training*

6 hrs./wk.

Instruction in fundamentals of operation of cash registers, scales, and automatic checkstands. Procedures in making change, cashing checks, issuing trading stamps, bagging merchandise, Grooming and public relations.

MKT 51 — Real Estate*

6 hrs./wk.

Basic principles and practices of real estate, preparation for licensing examination and work as real estate salesman.

MKT 52 — Advanced Real Estate*
6 hrs./wk.

Designed to upgrade licensed Real Estate salesman, includes information on real estate concepts, working procedures, a review of Utah real estate law.

MKT 53 — Insurance*
6 hrs./wk.

Basic principles and practices of auto, fire and casualty insurance, preparation for licensing examination and work as insurance underwriter.

MKT 101 — Principles of Marketing
5 hrs./wk. 5 cr.

Introductory course designed to acquaint students with problems and policies of manufacturers, wholesalers and retailers as related to marketing of goods and services.

MKT 105 — Principles of Retailing
5 hrs./wk. 5 cr.

Careers and opportunities in retailing are examined. Specialization in food, department, variety or petroleum service.

MKT 110 — Marketing Management
5 hrs./wk. 5 cr.

Continuation of MKT 101 with emphasis on decision making procedures and practices.

MKT 115, 125, 135 — Cooperative Work Training
15 hrs./wk. 5 cr.

Cooperative work training featuring placement of students in real occupational situations and training in responsibilities and attitudes required on the job.

MKT 120 — Salesmanship
5 hrs./wk. 5 cr.

Basic sales class relating psychology and tested selling techniques to each step of the sale—pre-approach, determining wants and needs, product information and organization.

MKT 130 — Advertising
5 hrs./wk. 5 cr.

Introduction to the field of advertising and its role in marketing today.

MKT 151 — Small Business Management
5 hrs./wk. 5 cr.

Emphasis on establishment and profitable operation of small businesses.

MKT 153 — Credit Management
5 hrs./wk. 5 cr.

Retail and commercial credit are covered, including obtaining, controlling and collecting credit.

MS 10 — Basic Machine Tool A*
6 hrs./wk.

Basic machine shop theory including mathematics, blueprint reading, introduction to the engine lathe, care and maintenance.

MS 11 — Basic Machine Tool B*
6 hrs./wk.

Continuation of MS 10 including additional mathematics, blueprint reading and machine shop lab practice.

MS 12 — Advanced Machine Tool A*
6 hrs./wk.

Advanced applied math and blueprints. Use of drilling machines and sawing machines. Advanced lathe operation.

MS 13 — Advanced Machine Tool B*
6 hrs./wk.

Practical geometry, advanced blueprints, safe practices and operation of milling machines.

MS 110 — Machine Shop Practice
15 hrs./wk. 5 cr.

Laboratory application of principles covered in MS 111. Includes operation of drill presses, lathes and extensive bench work with hand tools.

MS 111 — Basic Machine Operations
5 hrs./wk. 5 cr.

Basic machine shop theory including operation and performance of drill presses, lathes, and basic hand tools. Includes problems in measurement and accuracy.

MS 120 — Machine Shop Practice
15 hrs./wk. 5 cr.

Continuation of MS 110 and application of principles covered in MS 121. Includes operation of shapers, mills and planers.

MS 121 — Machine Operations
5 hrs./wk. 5 cr.

Theory and operation of more complex machine tools including shapers, mills and planers. Emphasis is placed on operation, maintenance and performance.

MS 122 — Machine Shop
5 hrs./wk. 3 cr.

An introduction to various machine shop operations and processes demonstrated to drafting students.

MS 130 — Advanced Machine Practice
15 hrs./wk. 5 cr.

Laboratory application of principles covered in MS 131. Includes manufacture of gears, heat treating, use of grinders, quality assurance, and numerical control.

MS 131 — Advanced Machine Operations
5 hrs./wk. 5 cr.

Advanced application of machining

principles including instruction in gears, gearing, grinders, round-it-out, heat treating and introduction to quality assurance and numerical control.

MS 227 — Machine Shop*
4 hrs./wk. 3 cr.

An introduction to actual machine processes demonstrated in the machine shop including N.C.

MTH 10 — Mathematics—Pre-Technical
10 hrs./wk.

A modern approach to basic mathematics. A review of mathematics taught in grades 3 through 10. Subjects taught include addition, subtraction, multiplication, and division of whole and sign numbers and operations with fractions. Required of students registering in Pre-Tech, level A.

MTH 11 — Mathematics—Pre-Technical
10 hrs./wk.

A modern approach to logic and reasoning through investigation of sets, expanded notation, Venn diagrams, addition, subtraction of whole numbers and the operation on sign numbers. Required of students registering in Pre-Tech, level B. Prerequisite: MTH 10 or equal.

MTH 12 — Mathematics—Pre-Technical
8 hrs./wk.

A modern approach and review of graphs, measurements of length, triangles, translation to and from base ten, and a rapid review of subjects taught in MTH 10 and MTH 11. Required of students registering in Pre-Tech, level C. Prerequisite: MTH 10 and MTH 11 or equal.

MTH 13 — Mathematics—Industrial*
6 hrs./wk.

Intensive study of whole numbers, decimals, fractions, square roots and percentages.

MTH 105 — Mathematics 1, Machine Shop
5 hrs./wk. 5 cr.

Fractions, decimals, square roots, manipulation of equations, geometry, and logarithms as applied to the machinist occupations.

MTH 106 — Mathematics 2, Machine Shop
5 hrs./wk. 5 cr.

Includes geometry, solution of triangles by trigonometry, with application to tapers, indexing, and gear trains.

MTH 110 — Mathematics 1, General Trade*
5 hrs./wk. 5 cr.

An intensive study of whole numbers, decimals, fractions. Square roots and percentages. Application will be made to the various trades.

MTH 111 — Mathematics 2, General Trade*
5 hrs./wk. 5 cr.

Emphasis on ratio and proportion, areas, volumes, and selected topics pertinent to the particular trade.

MTH 115 — Mathematics 1, Electricity
5 hrs./wk. 5 cr.

Manipulation of common fractions, decimal fractions, percentages, square roots, powers of ten, slide rule and electrical equations.

MTH 116 — Mathematics 2, Electricity
5 hrs./wk. 5 cr.

Continuation of MTH 115 including the study of algebraic equations, simultaneous equations, exponents, quadratic equations, and the solution of right triangles by the use of trigonometry as applied to the electricity trade.

MTH 117 — Basic Algebra
3 hrs./wk. 3 cr.

General Numbers, Addition, Subtraction, Multiplication, and Division of sign numbers, simple equations, special products, and factoring.

MTH 120 — Mathematics 1, Drafting
5 hrs./wk. 5 cr.

Manipulation of common fractions, decimal fractions, percentages, squares and square roots, ratio and proportions, slide rule, and basic algebra.

MTH 121 — Mathematics 2, Drafting
5 hrs./wk. 5 cr.

Basic algebra including adding, subtracting, multiplying, and dividing polynomials, linear equations, formulas, areas of polygons and circles, and right angle trigonometry as applied to drafting. Prerequisite: MTH 120 or equal.

MTH 122 — Mathematics 1*
4 hrs./wk. 4 cr.

Manipulation of common fractions, decimal fractions, percentages ratios and proportions, squares and square roots, areas of rectangles, triangles and circles.

MTH 123 — Mathematics 2*
4 hrs./wk. 4 cr.

Functions of polygons and circles, areas of solids, right angle trigonometry and use of smoley's tables.

MTH 126 — Business Math
3 hrs./wk. 3 cr.

Continuation of 134 with emphasis on inventor and accounting-type problems.

MTH 130 — Mathematics-Business*
5 hrs./wk. 5 cr.

Basic arithmetic operations including fractions and decimals plus applied business math.

MTH 131 — Mathematics—Algebra 1*
5 hrs./wk. 3 cr.

Introduction to algebra, special products, algebraic fractions, linear equations.

MTH 132 — Mathematics—Algebra 2*

5 hrs./wk. 3 cr.

Continuation of MTH 131. Includes simultaneous equations, complex numbers, quadratic functions and equations, matrices, logarithms, and an introduction to trigonometry.

MTH 133 — Mathematics—Advanced Algebra*

5 hrs./wk. 3 cr.

Manipulation and solution of polynomials and systems of quadratic equations involving logarithms, exponentials, exponents and radicals.

MTH 134 — Mathematics—Trigonometry

5 hrs./wk. 3 cr.

Solution of right triangles, oblique triangles, solution of trigonometric formulas using identities, permutations and combinations.

MTH 135 — Mathematics—Analytic Geometry

5 hrs./wk. 3 cr.

Properties of circles, parabolas, hyperbolas, ellipses and straight lines. Includes curve fitting and parametric equations.

MTH 138 — Mathematics—Business

5 hrs./wk. 3 cr.

Continuation of MTH 130 with emphasis on interest, mortgages, loans, annuities, and accounting type problems.

MTH 151 — Algebra*

5 hrs./wk. 3 cr.

Content includes basic equations, special products, factoring, fractions, fractional equations, and solution of right triangles with trigonometry.

MTH 152 — Algebra*

5 hrs./wk. 3 cr.

Continuation of MTH 151. Includes simultaneous equations, exponents, radicals, quadratic equations and logarithms.

MTH 153 — Advanced Algebra*

5 hrs./wk. 3 cr.

Includes a review of intermediate algebra, functions, graphs, complex numbers, quadratic functions and equations, logarithms, trigonometric functions, and introduction to analytic geometry.

MTH 154 — Differential Calculus*

5 hrs./wk. 3 cr.

Content includes average rates, limits, derivatives, differentials, higher derivatives, maxima and minima.

MTH 155 — Integral Calculus*

5 hrs./wk. 3 cr.

Content includes integrals, definite integrals, trigonometric functions, logarithmic and exponential functions.

MTH 156 — Boolean Algebra*

5 hrs./wk. 3 cr.

Includes decimal and binary number system, binary (add, subtract, multiply

and division) fundamentals, application of basic switching circuits, analysis and simplification of switching circuits as applied to electronics. Prerequisite MTH 153.

MTH 160 — Smoley's Tables*

6 hrs./wk.

Application of Smoley's four combined tables in calculations involving logarithms, right triangle trigonometry, squares, bevels, slopes, coordinate axes, inscribed regular polygons, etc. Pre-requisite: Previous exposure to trigonometry.

NA 116 — Nursing Fundamentals—Lab.

24 hrs./wk. 8 cr.

Supervised practice in the laboratory and in a clinical facility in the role of a nurse aide as an assistant to the nurse giving patient care-based on application of principles learned in the classroom.

NA 117 — Nursing Fundamentals

11 hrs./wk. 11 cr.

An over-all fundamental knowledge of basic nursing principles. Includes some basic human needs and needs during illness with emphasis on skills used in assisting the nurse in meeting these needs.

OH 110 — Soil Science I

7 hrs./wk. 5 cr.

Introductory course stressing functions of soil as a medium to support plant life, and the biological, chemical, and physical aspects of soil related to agriculture.

OH 111 — Applied Botany

7 hrs./wk. 5 cr.

Practical aspects of plants and their growth, environmental relationships, physiology, structure, function, reproduction and evolution.

OH 112 — Operation and Maintenance of power equipment

7 hrs./wk. 3 cr.

Selection, operation, adjustment and maintenance of landscape power equipment.

OH 120 — Soil Science II

7 hrs./wk. 5 cr.

Fertilizer use, formulation and chemical composition. Soil sampling and testing organic materials, water relationships and PH will be considered. Prerequisite OH 110.

OH 121—Landscape Design and Interpretation

7 hrs./wk. 5 cr.

Principles of landscape design. Use of plant material according to texture, color, mass, growth, and environmental requirements. Reading of landscape blueprints and making interpretation for installation.

OH 122 — Irrigation

7 hrs./wk. 5 cr.

Plant soil-water relationships, and sources, storage, and measurement of irrigation water. Drainage systems and methods of distribution, land grading calculations, sprinkler design and installation, and laws and regulation applying to installation.

OH 131 — Plant and Tree Identification, Installation and Maintenance

18 hrs./wk. 8 cr.

Identification, growth habits, cultural requirements, and landscape use of ornamental shrubs, vines, ground covers, and trees adapted to Utah. Proper planting and maintenance techniques. Prerequisite OH 111.

OH 132 — Insect, Weed, and Disease Control

7 hrs./wk. 5 cr.

Symptoms, identification, and methods of control of principal diseases, pests and weeds. Materials, equipment and application techniques. Chemical, biological, and cultural control and prevention.

ORT 110 — O.R. Scrub Nurse Lab.*

6 hrs./wk. 2 cr.

Supervised laboratory practice in a hospital operating room setting handling supplies and equipment used during a surgical operation.

ORT 111 — O.R. Scrub Nurse*

6 hrs./wk. 6 cr.

Instruction in basic principles guiding the technician handling sterile instruments and supplies during a surgical operation.

ORT 120 — O.R. Scrub Nurse Lab.*

9 hrs./wk. 3 cr.

Supervised practice in a hospital operating room handling sterile instruments during a surgical operation. Emphasis is placed on correct application of principles learned in ORT 111 and practiced in ORT 110.

PDA 10 — Tools, Equipment, Safety & Preparatory Procedure*

7 hrs./wk.

Care and cleaning of brushes and rollers. Spray equipment techniques and failures. Preparation of various surfaces, and application of paints. Safety.

PDA 11 — Application of Materials and Color*

7 hrs./wk.

Application and handling problems. Painting of exterior woodwork, masonry, metal surfaces, roofs, plaster walls, and dry wall and accoustical. Color systems, colors in oil, mixing and matching.

PDA 20 — Materials Used and Wood Finishes*

7 hrs./wk.

Nature of component parts and purpose of paint. Types of wood and wood finishes and their application to floors and interior woodwork.

PDA 21 — Specialty Finishes and Paper Hanging*

7 hrs./wk.

Specialty finishes including glazing, antique, stipple, gild, stencil, marble, and grain. Materials, tools and preparation for hanging paper and special materials.

PDA 30 — Surface Preparation, Application of Paints and Spray Painting*

7 hrs./wk.

Mechanical and chemical surface preparation. Uses and application of paints. Spray painting principles, application and equipment.

PDA 31 — Wood Finishes, Wall Covering & Specialty Finishes*

7 hrs./wk.

Types of wood and their preservation. Surface preparation, tools and equipment. Color mixing and matching, and specialty finishes.

PHY 10 — Science—Pre-Technical

5 hrs./wk.

An elementary mathematical approach to science including measurements systems, properties of matter, chemical changes and atomic structure.

PHY 110 — Applied Physics*

5 hrs./wk. 4 cr.

A lecture-demonstration course including properties of solids, liquids, gases, forces, equilibrium, motion, simple machines, compound machines, mechanics of solids, and pressures as applied to the automotive trades.

PHY 113 — Applied Physics

5 hrs./wk. 4 cr.

A lecture-demonstration course including properties of solids, liquids, gases, forces, equilibrium, motion, simple machines, compound machines, mechanics of solids, and pressures as applied to the welding trades.

PHY 120 — General Physics I

5 hrs./wk. 4 cr.

A lecture-demonstration course designed to cover properties of matter, mechanics and heat with emphasis on practical problem solving.

PHY 121 — General Physics 2

5 hrs./wk. 4 cr.

A lecture-demonstration course covering heat, sound, light, and electricity with emphasis on practical problem solving. Prerequisite: PHY 120.

PHY 125 — Applied Physics

5 hrs./wk. 4 cr.

A study of the properties of matter, work-power energy, basic machines, rotary motion, heat, electricity and magnetism.

PHY 151 — Physics—Mechanics*

3 hrs./wk. 3 cr.

A lecture-demonstration course in mechanics (force and motion; work and energy) with emphasis on problem solving.

PHY 152 — Physics—Fluid Mechanics & Heat

5 hrs./wk. 3 cr.

A continuation of PHY 151 covering the subjects of fluid mechanics and heat with a two-hour lab included.

PHY 153 — Physics — Sound & Modern

3 hrs./wk. 3 cr.

The final course of the three-part series covering sound and the properties of matter including atomic and nuclear physics.

PHY 154 — Physics — Mechanics

5 hrs./wk. 3 cr.

Study of mechanics with stress on problem solving. A two-hour lab is included.

PHY 155—Physics—Electricity and Magnetism

3 hrs./wk. 3 cr.

A theoretical approach to the fundamentals of electricity and magnetism on a college level with emphasis on basic concepts.

PHY 156—Physics—Optics and Modern Physics*

5 hrs./wk. 3 cr.

The final course of this series. A mathematical study of optics and atomic and nuclear physics taught on a college level.

PLA 10 — Basic Fundamentals I*

7 hrs./wk.

Mathematical review including addition, subtraction, multiplication, division, fractions, percentages, and square root. Also, instruction on screw pipe and fittings.

PLA 11 — Basic Fundamentals II*

7 hrs./wk.

Mathematics, pipe classification and measuring, 45-degree offsets, screw pipe fittings, and connections.

PLA 20 — Cast Iron Pipe I*

7 hrs./wk.

Cast-iron pipe weights, measuring and cutting, preparation and completing vertical and horizontal joints, and related trade mathematics.

PLA 21 — Cast Iron Pipe II*

7 hrs./wk.

Soil pipe fittings and their uses, C.I. soil pipe offset bends, pipe hangers, clamps, and supports.

PLA 30 — Drainage*

7 hrs./wk.

Screwed drainage fittings and their uses, the plumbing trap, vents on plumbing systems, house drain and branches, test methods, and plumbing stacks and branches.

PLA 31 — Building House Sewers and Supplemental Topics*

7 hrs./wk.

Building sewers as they apply to housing. Blueprint reading, labor laws, plumbing repairs, steam and hot water fitting, mathematics, and isometric drawings.

PLA 40 — Water Supply*

7 hrs./wk.

Building water systems, hot water supply system and the cold water supply system.

PLA 41 — Miscellaneous Topics*

7 hrs./wk.

Cross-connections, installing supports and fixtures, gas piping, and cutting large screw pipe.

PLA 50 — Sheet Lead, Rigging & Copper Pipe*

7 hrs./wk.

Theory, demonstrations and practical assignments using sheet lead, rigging techniques and copper pipe.

PLA 51 — Cast Iron, 4" and 1½" Lead Joints*

7 hrs./wk.

Information demonstrations and practical exercises on cast iron, 4" lead joints and 1½" lead joints.

PRA 10 — Basic Refrigeration I*

7 hrs./wk.

Basic principles of refrigerants, the vapor compression cycle, evaporators and compressors.

PRA 11 — Fundamentals of Refrigeration I*

7 hrs./wk.

Definitions, the refrigeration cycle, compressors, condensers and receivers, and evaporators.

PRA 20 — Basic Refrigeration II*

7 hrs./wk.

Mechanical components, refrigerant controls, electricity and service analysis.

PRA 21 — Fundamentals of Refrigeration II*

7 hrs./wk.

Metering devices, basic cycle controls, refrigerant characteristics and refrigerant oils.

PRA 30—Basic Science & Supplemental Topics*
7 hrs./wk.

Basic science, blueprint reading, labor laws and plumbing repairs.

PRA 31 — Basic Heating and Supplemental Topics*
7 hrs./wk.

Basic heating, steam and hot water fitting, mathematics and isometric drawings.

PRA 40 — Basic Electricity*
7 hrs./wk.

Introduction to servicing of electrical mechanical equipment.

PRA 41 — Systematic Trouble Shooting*

Discussion of troubles and solutions. Analyzation of most frequently encountered problems from the obvious to complex inspection points.

PRA 50 — Air Conditioning*
7 hrs./wk.

Fundamentals of air conditioning including heat, humidity, the psychrometric chart, ventilation, air requirements, refrigeration and refrigerants, fans and air distribution.

PRA 51 — Refrigeration*
7 hrs./wk.

Review of refrigeration principles and controls.

PRT 10 — Offset Printing & Duplicating 1*
6 hrs./wk.

Introduction to offset presswork, feeders and delivery systems, pressure adjustments, ink and water balance, printing of line and halftones, paper and inks.

PRT 11 — Offset Camera—Black & White*
6 hrs./wk.

A basic course in operation of cameras, processing film, calibrating screens, shooting line and halftone negatives. Also includes masking and platemaking.

PRT 12 — Linotype & Copy Preparation*
6 hrs./wk.

The basic operation of linotype machines, and the preparation of type for reproduction proofs, and letterpress printing. Also includes layout, type balance and type design.

PRT 13 — Printing Management*
6 hrs./wk.

The study of printing plant operation, utilization of equipment, work flow, plant layout, and design. Emphasis on pricing and estimating jobs utilizing Franklin Catalog.

PRT 20 — Offset Printing & Duplicating 2*
6 hrs./wk.

A continuation in depth of the subjects taught in PRT 10 including register printing of line and halftones. Prerequisite: PRT 10.

PRT 21 — Offset Camera — Color*
6 hrs./wk.

A course in color separation of art from transparencies and reflective copy. Also masking and plate processing for four color process printing.

PRT 30 — Photography*
6 hrs./wk.

Basic course in the understanding and use of cameras, lighting and darkroom procedures. Camera aperture settings, shutter speeds and films. Outdoor lighting, flash, strobe, flash fill-in and multiple lighting. Included is instruction in developing black and white film, contact printing, cropping, contrast control, enlargements, finish prints and retouching.

PRT 105 — Printing-Commercial Art
5 hrs./wk. 3 cr.

Utilization of commercial art layouts, drawings and photographs in making plates, film negatives, and color proofs. Students will operate cameras, platemakers, and other equipment necessary to complete projects.

PRT 110 — Copy Preparation
5 hrs./wk. 2 cr.

Elementary methods of copy preparation, for press ready or camera ready composition.

PRT 114 — Camera and Platemaking
5 hrs./wk. 2 cr.

Elementary camera platemaking in preparation of plates for the offset press.

PRT 115 — Printing Theory
5 hrs./wk. 3 cr.

Theory of copy preparation for press and camera. Preparation of plates for the offset press. Operation of the offset press and the letterpress.

PRT 118 — Presswork
10 hrs./wk. 3 cr.

Introduction to offset and letterpress pressmanship. Emphasis on introduction of general presswork.

PRT 120 — Copy Preparation
5 hrs./wk. 2 cr.

Methods of copy preparation by use of linotype and type composition.

PRT 124 — Camera and Platemaking
5 hrs./wk. 2 cr.

Emphasis on camera work and platemaking. Introduction to screen photography.

PRT 125, 135, 215 — Printing Theory

5 hrs./wk. 5 cr.

Theory of copy preparation by use of linotype and type composition, screen photography, and advanced use of letterpress and offset presses.

PRT 128 — Presswork

10 hrs./wk. 3 cr.

Increased training on letterpress and offset presses. Greater depth in craftsmanship.

PRT 130 & 210 — Copy Preparation

5 hrs./wk. 2 cr.

Advanced linotype operation and type composition.

PRT 134 & 214 — Camera and Platemaking

5 hrs./wk. 2 cr.

Advanced screen photography and screen platemaking.

PRT 138 & 218 — Presswork

10 hrs./wk. 3 cr.

Advanced offset and letterpress pressmanship, with emphasis on screen presswork.

PRT 216 — Printing Management

5 hrs./wk. 5 cr.

Study of printing plant operation, utilization of equipment, work flow, plant layout and design with emphasis on pricing and estimating printing jobs.

PS 110 — Political Science*

5 hrs./wk. 5 cr.

A study of the Constitution, branches of the Federal government, and State government. A history of the development of government in the United States.

PSY 120 — Industrial Psychology*

5 hrs./wk. 5 cr.

Psychological concepts as applied to industry. Includes personnel procedures, testing, efficiency, motivation, work environment, supervision, personality, consumer psychology, and abnormal behavior.

PSY 121 — Industrial Psychology

3 hrs./wk. 3 cr.

A review of basic psychological concepts, oriented toward fire science with emphasis on motivation, learning, personality theory, and abnormal behavior.

REF 15-16 — Refrigeration and Air**Conditioning***

6 hrs./wk.

Refrigeration principles and electricity. Emphasis is placed on basic concepts, especially single phase hermetic units, relays, overloads and electrical diagnosis.

REF 110, 120 — Basic Refrigeration Systems

15 hrs./wk. 5 cr.

Refrigerants, domestic refrigerators and freezer systems, commercial applications, cooling systems and applications including building of a complete system.

REF 111 — Fundamentals of Refrigeration

5 hrs./wk. 5 cr.

Development and operation of basic types of refrigeration systems, compression systems and controls, tools and uses.

REF 121 — Refrigeration Application

5 hrs./wk. 5 cr.

Characteristics and uses of different types of refrigeration systems.

REF 130 — Problems of Service

15 hrs./wk. 5 cr.

Air conditioning systems, heating and humidifying, cooling and dehumidifying, cleaning, controls and instruments. Installation of equipment.

REF 131 — Automatic Control Systems

5 hrs./wk. 5 cr.

Theory and application of control systems used in all types of refrigeration systems.

**SMA 10—Orientation, Geometric Construction
Mechanical Drawing, and BPR***

7 hrs./wk.

Orientation, the apprenticeship system, safety, hand and powered machine operations, principles and exercises in geometric construction, mechanical drawing and blueprint reading.

**SMA 11 — Layout Mathematics, Parallel Line
Development and Triangulation***

7 hrs./wk.

Mathematics, elementary layout, parallel line development, and triangulation.

**SMA 20 — Mathematics and Advanced
Parallel Line***

7 hrs./wk.

Sheet metal mathematics and advanced parallel line development.

SMA 21 — Radical Line and Shop Problems*

7 hrs./wk.

Radial line development and shop problems.

SMA 30 — Mathematics*

7 hrs./wk.

Applied sheet metal mathematics.

SMA 31 — Air Conditioning Pattern Drafting*

7 hrs./wk.

Air conditioning metal layout.

SMA 40—Mathematics and Welding Processes*

7 hrs./wk.

Advanced mathematics and theory of welding as it applies to sheet metal.

SMA 41 — Pattern Drafting*

7 hrs./wk.

Developing and drafting a variety of patterns.

STS 10 — Study Skills—Pre-Technical

2 hrs./wk.

Improvement of vocabulary, comprehension, rate of reading, concentration, remembering, study habits and critical reading techniques.

UPH 10 — Upholstering—Furniture*

6 hrs./wk.

Instruction in furniture frames, fabrics—their identification and uses, wood finishing, power sewing slip cover fabrication, mathematics and safety practices.

WLD 10 — Fundamentals of Welding*

6 hrs./wk.

Arc welding equipment and electrodes. Lap and tee joints in all positions.

WLD 11 — Fundamentals of Welding*

6 hrs./wk.

Oxygen and acetylene welding and cutting equipment. Safety. Lap, tee, and butt joints.

WLD 12 — Fundamentals of Welding*

6 hrs./wk.

Welding procedures, metal properties, machine cutting, arc air cutting, fundamental blueprint reading. Use of weld symbols. Corner and butt joints in all positions.

WLD 13 — Fundamentals of Welding*

6 hrs./wk.

Testing and inspecting welds. A.S.M.E. test procedures. Bevel butt joints in all positions.

WLD 14 — Inert Gas Arc Welding*

6 hrs./wk.

Theory and practice of inert gas processes on steel, copper, aluminum and stainless steels.

WLD 105 — Welding—Related

4-6 hrs./wk. as scheduled. 3 cr.

Basic principles of arc and acetylene welding including flat, horizontal, vertical and overhead welds; also brazing and cutting techniques.

WLD 110—Welding Practices—Arc & Acetylene

15 hrs./wk. 5 cr.

Laboratory application of principles in WLD 111. Includes arc welding in all positions of fillet welding on mild steel and acetylene welding in all positions on butt and corner joints.

WLD 111 — Fundamentals of Welding

5 hrs./wk. 5 cr.

Basic welding theory and familiarization with welding equipment, electrodes, and filler metals.

WLD 120—Welding Practices—Arc & Acetylene

15 hrs./wk. 5 cr.

Continuation of WLD 110 and application of principles covered in WLD 121; includes arc and acetylene welding.

WLD 121 — Fundamentals of Welding

5 hrs./wk. 5 cr.

Theory of arc and acetylene welding of lap and corner joints in all positions on mild steel plate; includes acetylene cutting practices.

WLD 130—Welding Practices—Arc & Acetylene

20 hrs./wk. 7 cr.

Practical experience in arc welding of butt joints, acetylene welding of T-joints, cutting by hand and machine, and arc air cutting.

WLD 131 — Fundamentals of Welding

5 hrs./wk. 5 cr.

Theory and operation of oxy-acetylene cutting equipment both hand and machine operated, arc air cutting equipment, testing of welds, and methods of arc welding butt joints in all positions and oxy-acetylene welding of T-joints.

WLD 210 — Advanced Welding Processes

15 hrs./wk. 5 cr.

Laboratory application of principles covered in WLD 131 with emphasis placed on pipe welding and testing.

WLD 211 — Pipe Welding and Testing

10 hrs./wk. 8 cr.

Pipe welding and testing. Includes principles of welding pipe with emphasis placed on methods of executing standard Navy and A.S.M.E. plate tests. Arc and acetylene processes are taught.

WLD 220 — Advanced Welding Processes

15 hrs./wk. 5 cr.

Laboratory application of principles covered in WLD 221, applications in the welding of non-ferrous metals and metals other than mild steel.

WLD 221 — Specialty Welds

10 hrs./wk. 8 cr.

Theory of welding non-ferrous metals and metals common to the trade, other than mild steel, by use of standard welding processes.

WLD 230 — Advanced Welding Processes

15 hrs./wk. 5 cr.

Laboratory application of principles covered in WLD 231, includes practical application of inert gas welding.

WLD 231 — Metal Fabrication

10 hrs./wk. 8 cr.

Theory and application of fabricating practical jobs common to the trade with special instruction in inert gas welding and wire feed processes.

FACULTY

- T & I** means the instructor holds the state Trade and Industrial Certificate.
- BAKER, Joseph J. (1964)** **Electronics**
Experience: Electronics Technician, Sperry Utah; Instructor, B.Y.U., etc.
Radio Institute Certificate; T & I.
- BALLARD, Davis (1968)** **Related Instruction**
Experience: Instructor, Davis and Beaver Schools; Draftsman, Utah State
Road Commission. B.S.; T & I.
- BARNETT, O. Lee (1967)** **Accounting**
Experience: Research Analyst, Goodbody & Co.; Teacher, Murray Schools,
etc. B.S.; T & I.
- BARRUS, James C. (1967)** **Data Processing**
Experience: Systems Analyst, Utah State Highway Dept., etc. T & I.
- BARTHOLOMEW, Earl R. (1961)** **Business Dept. Head**
Experience: Tax consultant; various office positions. B.S.; T & I.
- BEEBE, Robert (1968)** **Refrigeration and Air Conditioning**
Experience: Refrig. Tech., John H. Wernli Co.; Service Mgr. Schoppe Co.,
Rebuilding Specialists. Refrig. and A/C Journeyman; T & I.
- BLACK, Dall L. (1965)** **Related Instruction**
Experience: Supervisor-Instructor, U.S. Army. B.S.; M.S.; T & I.
- BLACK, June A. (1951)** **Automotive**
Experience: General Manager, Deluxe Motors; Instructor, Carbon College,
etc. T & I.
- BLACK, Sally N. (1968)** **Related Instruction**
Experience: Secretarial, U.C.L.A. Medical Center; Instructor, California
and Murray Schools; etc. B.S.; T & I.
- BOULTON, Franklin F. (1958)** **Machine Shop**
Experience: Machinist, McGee & Hogan Machine Works, H.A.F.B.; In-
structor, Calif. Poly. State College. Assoc. Degree, Weber State College;
B.S.; M.S.; T & I.
- BOWN, J. Ralph (1959)** **Machine Shop**
Experience: Machinist: McGee & Hogan Machine Works, H.A.F.B., etc.
B.S.; M.S.; T & I.
- BRINGHURST, George S. (1950)** **Welding**
Experience: Welding, Comb., Bechtel Corp., S.L.C. Board of Education,
etc. T & I.
- BRINKERHOFF, Joseph D. (1964)** **Electronics Dept. Head**
Experience: Instructor, Granite Schools, Weltech College; electronic tech-
nician, Thiokol Chemical Corp., etc. B.S.; U.S.A.F. Certificate; T & I.
- BRUNSON, Ronald M. (1960)** **Machine Shop**
Experience: Machinist, D. & R.G.W., Chesapeake & Ohio Railroad, etc.
Chesapeake & Ohio Railroad Certificate; T & I.
- BURCH, H. Kent (1966)** **Heavy Duty Mechanics**
Experience: Heavy Duty Mechanic, Gibbons & Reed, Morrison-Knudsen,
etc. T & I.
- BURT, Wallace G. (1951)** **Electricity**
Experience: U.S. Army, Pearl Harbor, etc. B.S.; Pearl Harbor Trade School
Certificate; T & I.
- BUTLER, Alexander K. (1967)** **Health Occupations**
Experience: Nursing Supervisor, Cottonwood Hospital, Salt Lake General
Hospital, etc. B.S.; R.N. (Utah); T & I.
- CAMERON, John E. (1963)** **Automotive**
Experience: Auto mechanic, Gledhill Dodge, etc. McSweeney's Auto School
Certificate; T & I.
- CARR, Mary B. (1968)** **Health Occupations**
Experience: Head Nurse, Holy Cross Hospital; Staff Nurse, Shriner's Hos-
pital, etc. R.N. (Utah); T & I.
- CHILD, Ralph S. (1965)** **Marketing**
Experience: Insurance Underwriter; Manager, Safeway Stores. B.S.; T & I.

- CHRISTENSEN, Dallis J. (1967) **Electronics**
Experience: Instructor, Weltech College, etc. B.S.; T & I.
- COTTAM, Lester G. (1966) **Machine Shop**
Experience: Machinist, U.S. Mining & Smelting Co., Rice Machine Works, etc. Assoc. Degree, Dixie College; T & I.
- CULLIGAN, James J. (1956) **Electronics**
Experience: Senior Electronics Technician, Sperry Utah, Hill Air Force Base, etc. Delehanty Institute of Radio & TV Certificate; T & I.
- DAY, Clinton E. (1967) **Related Instruction**
Experience: Aircraft Engine Mechanic; Manager, Factory Engineering, Litton Industries. B.S.; T & I; Electrician's License.
- DeGATTIS, Kathryn C. (1967) **Business**
Experience: Secretarial, Senior & Senior, University of California, etc. B.S.; T & I.
- DEAN, Ross E. (1959) **Building Construction**
Experience: Carpenter, W. J. Dean Sons, etc. B.A.; M.S.; T & I.
- DENSLEY, Mary Lou (1961) **Business**
Experience: Secretarial; instructor, Jordan Schools. B.S.; T & I.
- DYE, Alfred G. (1968) **Data Processing**
Experience: CPA; Mgr. Tax Dept.; Ernst and Ernst, CPA's; Staff Acct., Reed and Moran, CPAs; USAF Auditing Officer. B.S.; T & I.
- EDMONDS, Horace B. (1963) **Electronics**
Experience: Supervisor, Hercules Inc.; Technician, Hill Air Force Base, etc. Radio Institute Certificate; T & I.
- ELLISON, Thomas R. (1965) **Drafting & Design**
Experience: Designer, Hercules Powder Co., Dallons Labs. etc. T & I.
- ERICKSON, Ann (1968) **Related Instruction**
Experience: Secretarial; Instructor, Murray Schools. B.S.; T & I.
- ERICKSON, Edith (1968) **Health Occupations**
Experience: Head Nurse, LDS Hospital; Supervisor, S. L. Co. General Hospital; Instructor, Utah State Voc. Ed. Dept. B.S.; R.N. (Utah); T & I.
- FOULKS, Ruth (1964) **Health Occupations**
Experience: Head Nurse, St. Mark's Hospital, etc. St. Mark's Hospital Certificate; R. N. (Utah); T & I.
- GIBSON, B. Dale (1960) **Printing**
Experience: Journeyman Printer, Newspaper Agency Corporation, etc. I.T.U. Certificate; T & I.
- GRAHAM, Raymond C. (1957) **Heavy Duty Mechanics**
Experience: Mechanic, Lang Equipment Co., etc. National Schools Certificate; T & I.
- GRAVES, Joseph T. (1968) **Related Instruction**
Experience: Instructor, Salt Lake City Schools. B.S.; T & I.
- GROVER, Neal D. (1964) **Autobody Repair**
Experience: Owner Operator, Grover's Body & Fender Shop, etc. UTC Certificate; T & I.
- HALL, Ken (1968) **Architectural Drafting**
Experience: Designer Draftsman, various architectural firms. T & I.
- HANSEN, Dorthy H. (1954) **Health Occupations**
Experience: Supervisor, Dee Memorial Hospital, Hill Air Force Base Hospital, etc. L.D.S. Hospital Certificate; R.N. (Utah); T & I.
- HANSEN, Levern (1949) **Autobody Repair**
Experience: Autobody Repairman, Fisher Pontiac, etc. Weber State College Certificate; T & I.
- HITE, Thamer S. (1962) **Barbering**
Experience: Barber & Beautician, Salt Lake City. SLAVS Certificate; Carel's Institute of Beauty Culture Certificate; T & I; Utah State Barber's License.
- HULET, Grant M. (1968) **Commercial Art**
Experience: Art Director, Jarman and Skaggs Advertising, Ross Journey and Associates. B.S.; T & I.

- JENSEN, Evan E. (1948) **Commercial Art**
Experience: Freelance Artist and Illustrator, Phoenix Art Institute Certificate; Art Center Certificate; Illustrator's Club Certificate; T & I.
- JOHNSON, Wallace K. (1966) **Heavy Duty Mechanics**
Experience: Heavy Duty Mechanic, Sumsion Construction, Ford Construction, etc. B.S.; U.S.N. Training School Certificate; T & I.
- JORDAN, Ivan Douglas (1968) **Commercial Art**
Experience: Artist, Evans Advertising; Freelance Artist, Jordan Art. B.A.; T & I.
- JULANDER, Hal D. (1966) **Automotive**
Experience: Line Mechanic, Hinckley Dodge, Chrysler and Ford Training Schools. B.S., T & I.
- KNUTESON, Martin H. (1948) **Barbering**
Experience: Barber and Beautician, Salt Lake City. Molers Barber College Certificate; Auerbach's School of Beauty Certificate; T & I; Utah State Barber's License.
- KRANENDONK, Daniel (1967) **Heavy Duty Mechanics**
Experience: Shop Foreman, Archer Tractor Co.; Service Manager, Heiner Equipment & Supply Co. T & I.
- LARSEN, Jean K. (1963) **Health Occupations Dept. Head**
Experience: Director, Nursing Services, Holy Cross Hospital, etc. B.S.; R.N. (Utah); T & I.
- MATERN, Mary Todd (1965) **Health Operations**
Staff Nurse, Holy Cross Hospital; Head Nurse, Veteran's Hospital, etc. B.S.; L.D.S. Hospital Certificate; R.N. (Utah); T & I.
- MONROE, Wm. J., A.I.A. (1968) **Architectural Drafting**
Experience: Wm. J. Monroe, Architectural Associates, etc. BFA; Licensed Architect; T & I.
- NIELSON, Robert S. (1966) **Automotive**
Experience: Mechanic, Gail Bywater, U.S. Navy, etc. General Motors Training Center Certificate; T & I.
- NINOW, Richard (1966) **Architectural Drafting**
Experience: Structural Designer, Draftsman, Alberta, Canada. Cape Technical College Certificate; T & I.
- OLSEN, Anna Lee (1966) **Business**
Experience: Secretarial, Allen & Garcia Co., etc. A.S., B.S.; T & I.
- OSBORNE, Thomas G. (1968) **Related Instruction**
Experience: Instructor, S.L. City Schools; Tabulating Equip. & Computer Opr., Souvall Brothers. A.S.; B.S.; T & I.
- PARR, A. Reed (1967) **Related Instruction**
Experience: Instructor, Granite Schools, etc. B.S.; T & I.
- PARRISH, Martha (1955) **Health Occupations**
Experience: Staff Nurse, L.D.S. Hospital, U.S. Navy, etc. B.S.; R.N. (Utah); T & I.
- POULSEN, Violet N. (1957) **Health Occupations**
Experience: House Supervisor, Cottonwood Hospital; General Staff Duty, S.L. General County Hospital, etc. B.S.; S.L. General County Hospital Certificate R.N. (Utah); T & I.
- PRATT, Parker M. (1949) **Automotive**
Experience: Mechanic, various firms. General Motors Training Center Certificate; Delco Remy Certificate; T & I.
- REISNER, Reed H. (1968) **Electronics**
Experience: Electronics Instructor, RCA Institutes, Inc.; Liaison Engineer, Douglas Aircraft Co. BVE; T & I.
- RICHARDS, Marlene K. (1968) **Health Occupations**
Experience: Gen. Duty, Head Nurse and Supervisor, S.L. Co. Hospital; Gen. Duty, Valley West Hospital; Head Nurse, Hercules, Inc. R.N. (Utah); T & I.
- RODI, Johanna R. (1966) **Business**
Experience: Secretary, Cornwall General Hospital; Office Manager, Morton-Parker Ltd. Secondary Teaching Certificate, Ontario; T & I.

- SALMOND, J. Lowell (1963)** **Related Instruction**
Experience: Electronics Technician, Thiokol Chemical Corporation; Instructor, Weber State College. B.S.; Ogden Business College Certificate; T & I.
- SCHNIREL, James R. (1962)** **Graphic Arts Dept. Hard**
Experience: Draftsman, various architectural firms. B.S.; Delhi Agr. and Technical Institute Certificate; T & I.
- SEAMAN, Karl (1968)** **Drafting and Design**
Experience: Draftsman and Designer, Thiokol Chemical, Hercules, Inc., Christensen Diamond, Eimco. T & I.
- SHULTS, C. Smithey (1957)** **Drafting and Design**
Experience: Instructor, Kansas, Wyoming, Utah. B.S.; M.S.; T & I.
- SOCHOR, Edna Q. (1968)** **Health Occupations**
Experience: Nurse, St. Mark's Hospital, Utah Valley Hospital, etc. R.N. (Utah); T & I.
- SORENSEN, Dale W. (1955)** **Building Construction**
Experience: Contractor; Carpenter, Young Construction Co., New York Trade School Certificate; T & I.
- SOUTHWICK, Ray M. (1965)** **Automotive**
Experience: Mechanic, Fred A. Carleson, Bountiful Motors, etc. B.S.; General Motors Institute Certificate; T & I.
- SPAINHOWER, Orrin W. (1951)** **Autobody Paint**
Experience: Foreman, Lyman Motor; Painter, Freed Motor, etc. General Motors Training Center Certificate; Ditzler Factory Certificate; T & I.
- STEARNS, Donald R. (1968)** **Data Processing**
Experience: Chief Data Processor, U.S. Navy. U.S. Navy Instructor Certificate; T & I.
- STEWART, Calvin B. (1961)** **Related Instruction**
Carpenter, Lester Brough; Project Director, Modern Home Builders, etc. B.S.; M.S.; U.S. Army Certificate; Carpenter's License; T & I.
- UDY, John A. (1968)** **Welding**
Experience: Maintenance and Machine Shop Welder, Research and Production Foreman, Thiokol Chemical Corp. T & I.
- VAN OS, Hulbert (1965)** **Machine Shop**
Experience: Machinist, Eimco Corporation. Eimco Corporation Certificate; T & I.
- VIGEN, Harriet B. (1948)** **Business**
Experience: Secretary, Agriculture Administration; Instructor, Utah Trade Technical Institute, etc. Calhoun Secretarial School Certificate; T & I.
- WALKER, Dwayne (1962)** **Mechanical Drafting**
Experience: Design Engineer, Sperry Univac, etc.
- WALKER, William C., Jr. (1968)** **Electronics**
Experience: Instructor, Virginia Schools, Salt Lake Schools; Medical Electronics Engineering, Thomas Dee Hospital. B.S.; T & I.
- WEIGHT, Gordon L. (1965)** **Printing**
Experience: Printing Supervisor, Paragon Press, Hercules Powder Co., etc. U.S. Air Force Certificate; T & I.
- WELLARD, Richard D. (1948)** **Welding**
Experience: Welding Maintenance, U.T.C.; Shop Foreman, Lang Company, etc. John Huntington Institute Certificate; T & I.
- WHITE, Walter L. (1967)** **Printing**
Experience: Lithographer, Mercury Publishing Co., Paragon Press, etc. Colorado Certificate of Apprenticeship; T & I.
- WILLIAMS, Mary Jane (1948)** **Health Occupations**
Experience: Charge Nurse, Veteran's Hospital; Head Nurse, S.L. General Hospital. B.S.; R.N. (Utah); T & I.

Staff Assistants

BOREN, Ralph C.	Training Coordinator
GANT, Ralph W.	Assistant Dean of Students
HANSEN, Charles W.	Placement Director
McDONALD, Russell T.	Special Instruction Coordinator
MEANS, William W.	Bookstore Manager
MO, Jenny	Assistant Librarian
PIACITELLI, Florence	Registrar

