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1972

General College Catalog 1971-1972

Utah Technical College at Salt Lake

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1971-72 GENERAL CATALOG

UTAH TECHNICAL COLLEGE at salt lake

UTAH TECHNICAL COLLEGE

AT SALT LAKE

GENERAL CATALOG

1971-72

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 accredited 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
1971-72

(Late registration fee is in effect on the day instruction begins each quarter, as shown below.)

Summer Quarter

May 24-26	Registration for Returning Students
May 27-28	New Student Registration
June 14	Instruction Begins
June 25	Last Day for Class Changes
July 5	Independence Day Holiday
July 23	Pioneer Day Holiday
August 26	Examination Period
August 27	Summer Graduation

Fall Quarter

August 2	Pre-Registration Commences
September 20	New Student Orientation
September 21-24	Registration
September 27	Instruction Begins
October 8	Last Day for Class Changes
October 15-18	Harvest Holiday
November 25-28	Thanksgiving Holiday
December 13-14	Examination Period
December 14	Fall Quarter Ends
December 15-Jan. 2	Christmas Holidays

Winter Quarter

December 6-10	Registration for Returning Students
December 16-17	New Student Registration
January 3	Instruction Begins
January 14	Last Day for Class Changes
March 3	Alumni Fellowship Banquet
March 14-15	Examination Period
March 15	Winter Quarter Ends

Spring Quarter

March 6-10	Registration for Returning Students
March 17	New Student Registration
March 20	Instruction Begins
March 31	Last Day for Class Changes
May 29	Memorial Day Holiday
May 30-June 1	Examination Period
June 2	Graduation

Summer Quarter

May 22-24	Registration for Returning Students
May 25-26	New Student Registration
June 12	Instruction Begins
June 23	Last Day for Class Changes
July 4	Independence Day Holiday
July 24	Pioneer Day Holiday
August 24	Examination Period
August 25	Summer Graduation

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

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STAFF

President	JAY L. NELSON
Vice-President	R. H. HANSEN
Treasurer	BURTON A. TALMAGE
Supervisor	D. A. BLACKHAM
Supervisor	A. CLAIR THOMSON
Supervisor	PAUL R. GUNDERSEN
Dean of Students	LLOYD V. TILT
Supt. of Buildings and Grounds	JOSEPH S. JOHNSON
Promotion and Development Director	BRYAN B. GARDNER
Registrar	RALPH BOREN

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Frank D. Sawyer
Robert L. Simpson
Rey R. Torres
Walter E. Ulrich, Jr.
W. L. Van Ert
L. Clair Williamsen
Ned Winder

GENERAL INFORMATION

AREAS OF INSTRUCTION

OBJECTIVES: The prime objective of Utah Technical College is to provide a satisfying educational experience for those individuals desiring training to prepare for, enter into, and progress in the world of work.

A secondary objective is to provide a supply of competent workers for business and industry.

The above objectives are met through a variety of programs which:

1. Provide pre-employment instruction in the developing of manipulative skills and technical knowledge, including emphasis on health and safety, job orientation, trade standards and ethics, human relations in industry, and the responsibilities of citizenship as a family member and as an effective citizen of the community and nation.
2. Provide extension and apprenticeship training for the further development of skills, technical knowledge, civic involvement and employment relations for those already employed in industry.
3. Contribute to the welfare of the business and industrial community by providing conscientious, productive and intelligent employees.
4. Provide lower division courses in general education leading to transfer to four year colleges.
5. Assist students in learning to think clearly and critically and to express their thinking with logic and effect.
6. Help students obtain an understanding of the world around us — its natural and physical phenomena, its peoples and their problems.

DAY SCHOOL OCCUPATIONAL PREPARATORY: Full time programs designed to train students for occupational entry. These programs are fully integrated with theory, related instruction and skill development in shops and laboratories.

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: Same subject matter as Day School Occupational Preparatory programs, but they are conducted during evening hours and 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 training. 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 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.

PRE-TECHNICAL PROGRAMS: These courses in mathematics, communications and reading are designed to upgrade students desiring to enter technical programs but 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.

General Education

(See pages 82-85)

Non-Discrimination

Utah Technical College at Salt Lake is a tax-supported institution operated under the direction of the Utah State Board for Vocational Education and the Utah State Board of Higher Education. Qualified students are admitted to the school and may enjoy all rights and privileges appropriate to students without regard to color, creed or national origin.

Advisory Committees

ADVISORY COMMITTEES, composed of leaders in industry and business, regularly review each course. This assures 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 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.

Selective Service

Each male student who desires a vocational student deferment from the draft should fill out the special selective service notification card each quarter at the time of registration.

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.

Skill Center

The College operates the Salt Lake Skill Center under contract with the Utah State Board of Education. The Skill Center provides an integrated program of Manpower Services which includes outreach, testing and evaluation, pre-vocational orientation, skill preparation, counseling, basic education, remedial education, adult basic education, high school completion, job referral and placement, and follow up. Applicants should contact the Skill Center Headquarters at the Hamilton School, 771 South 8th East, Salt Lake City, 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 student's Division Chairman.

Admission Procedure

Applicants for enrollment in the day school or extended day classes should follow one of the following procedures:

1. High School graduates with a C- (1.75) average or higher may enroll as follows:
   a. Complete the application for enrollment form.
   b. Attach a transcript of high school credits.
   c. Pay a $5.00 application fee.
   (i) If the above is done by mail, do not send cash. Send $5.00 check or money order.
   (ii) Applicants are notified of acceptance by the school.
2. Applicants who are *not* high school graduates or whose average is below C- (1.75).
   a. Complete the application for enrollment form.
   b. Pay the $5.00 application fee.
   c. Take the admissions and placement test given at the college. (Contact college for appointment.)

Note: *WHEN AN APPLICANT CANNOT VISIT THE COLLEGE HE MAY TAKE THE GENERAL APTITUDE TEST BATTERY AT HIS LOCAL EMPLOYMENT OFFICE AND SEND THOSE*

SCORES TOGETHER WITH THE APPLICATION FOR ENROLLMENT AND $5.00 APPLICATION FEE TO THE COLLEGE ADMISSIONS OFFICE

3. Evening students.

   a. Applications for admission to apprentice classes must be approved by the apprentice training coordinator before registration.

   b. Applicants for other evening classes will present their application to the evening registrar for approval prior to payment of fees.

Waiver of Credit Based On Previous Training and Experience

1. Any student who desires evaluation of prior experience and/or training must make application in writing through his major instructor to the supervisor. Transcripts of credit and other official papers will be required as evidence of previous training and experience and should be provided upon entrance.
2. Evaluation of prior experience and/or training *must* be applied for within the initial quarter of enrollment.
3. Grades of less than "C" will not be accepted for credit.
4. Trade and/or technical school transfers may receive hour-for-hour credit providing the objective is the same. If training is toward a different objective, only time for like units may be allowed.
5. In no event may the amount of credit granted be greater than 50 percent of the training time required.

Challenging of Classes for Credit

If the entering student does not have the necessary documents to verify previous training and experience he may challenge classes for credit. The following rules apply:

1. The student must be registered for the class to be challenged.
2. The student will make arrangements with the instructor to take an examination.
3. Upon successful completion of the examination, the student will be given a grade of P for the course.
4. If the student fails the examination, he may continue in the class as a regular student.

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 7:30 a.m. and 7 p.m., five days per week.

EXTENDED DAY classes are held weekdays from 5 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 8:30 a.m. to 3:30 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.

Ajax Presses
Alberta Henry Foundation (Bamberger Fund)
Alpha Delta Kappa
Altrusa Club
American Business Women's Association
Associated General Contractors
Associated Students of UTC/Salt Lake
Bonneville Kiwanis Club
Bountiful Rotary Club
Ford Motor Company
Granger Rotary Club
Granite National Bank
Holiday Rotary Club
Home Builders of Greater Salt Lake Auxiliary
KCPX-TV
Kennecott Copper Corporation
Kiwanis Club of Bountiful
Litton Industries
(Control Systems Division)
(Data Systems)
Maytime Manor, Incorporated
Memorial Scholarships
(Algot E. Anderson)
(Mike Eddy)
(Douglas K. Jones)
(Thomas Jones)
(Alice L. Preece)
(James L. Schricker III)

Mountain Fuel Supply Company
Pacific Auto Show
Soroptimist Club
Sugar House Rotary Club
Tooele County United Action Organization
Travis, Harriet C. — Charitable Trust
Utah Litho Club
Utah Nursing Home Association
Utah Personnel Association
Utah Power and Light Company
Utah State Board for Vocational Education Tuition Grants
Women in Construction
Zions First National Bank

Tuition and Fees
CREDIT CLASSES AND PRE-TECHNICAL PROGRAMS

Tuition and Fees (per quarter):

One Credit Hour	$27.00	Eight Credit Hours	$ 76.00
Two Credit Hours.....	34.00	Nine Credit Hours	82.00
Three Credit Hours	41.00	Ten Credit Hours	88.00
Four Credit Hours	48.00	Eleven Credit Hours ..	94.00
Five Credit Hours	55.00	Twelve Credit Hours To Twenty Credit Hours	100.00
Six Credit Hours.....	62.00		
Seven Credit Hours	69.00		

Maximum registration without special permission is 20 credit hours. Extra hours above maximum registration will cost $6.00 per credit hour and must be approved by a Supervisor or Division Chairman.

AUDITING CLASSES: The charge for auditing courses is the same as taking the course for credit or for a grade. Students must register for the course (s) they are going to audit: however, their registration slip and their class card will show "N" in the column where credit is normally shown. The students transcript of credit will show "N" instead of a grade for the course.

Nonresidents — $200.00 Tuition in addition to above
Late Fee: $5.00
Bad Check Charge: $5.00

A non-refundable $5.00 fee is charged for testing and/or admission. It is necessary for students to present the $5.00 receipt at the time of taking the test or submitting the application for enrollment.

Cap and Gown Fee: Cap and gown is required of all graduating students. The rental fee charge of approximately $5.00 will be the responsibility of the student.

Refunds: Only tuition refundable. Refund for tuition (applicable to either resident or non-resident) of 12 hours and below, prorated — 75% first week, 50% second week, no refund after class has commenced two weeks.

DAY SCHOOL — NON CREDIT CLASSES

Hospital Ward Clerk ..... $27.00 per course
Nurse Aide ..... $27.00 per course
Nursing Home Attendant ..... $27.00 per course
Power Sewing ..... $27.00 per course

(Tuition refund only — 75% during first two days of class, 50% next three days. No refund after five days).

EVENING SCHOOL — NON CREDIT CLASSES

Supervisory, Management, Technical Courses ..... $15.00 each
(No refund after first session of class)

Apprentice Related Training ..... $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 50, 51, 52, and 53 ..... 28.50 per quarter
Plumbing 91 ..... 30.50 per quarter
Welding 54 ..... 36.00 per quarter
Color Camera — PRT 61 ..... 31.00 per quarter
Men's Hair Styling — BR 90, 91, 92 ..... 31.00 per quarter
Upholstering ..... 26.00 per quarter
(Refund policy — same as credit classes above)

Special Fees and Exceptions

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 establishing a permanent domicile within the State of Utah prior to registration with the intention to maintain permanent residence within the state and abandonment of domicile elsewhere.

SCHOLARSHIP FEES: Students attending on a tuition-paid scholarship are required to pay $20 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.

PRACTICAL NURSING LAB FEE: Practical nursing students are required to pay a $15.00 lab. fee when they register for the Second Quarter.

Credit

The following numbering system for classes is employed by the College and is accepted by the Utah System of Higher Education.

001-049 Remedial or preparatory courses (non-credit)

050-099 Terminal courses — would not ordinarily satisfy baccalaureate requirements (non-transferable)

100-299 Lower division courses acceptable for transfer credit by all schools in the Utah System of Higher Education. However, they may not all be acceptable toward graduation requirements.

UNIT OF CREDIT: A quarter hour of credit represents a minimum of one class hour a week of lecture, demonstration or discussion, combined with two hours of preparation outside of class for each credit earned or three hours a week of laboratory, field, or shop work. Normally there are eleven weeks in each quarter and the class hour is 50 minutes. Quarter hours may be reduced to semester hours by multiplying by two-thirds.

MINIMUM REGISTRATION FOR A FULL-TIME STUDENT: The minimum registration for a full-time student load is considered to be twelve credits. To be eligible for student body offices, students are required to be registered for twelve credits or more. Veterans are required to be registered for twelve credits or more to qualify for full subsistence.

Books — Tools — Supplies

Cost of books, tools and supplies varies according to the class. Fluctuation in cost 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

Candidates for graduation must obtain and complete an Application for graduation from the Registrar or Division Chairman and file it with the Registrar during the fourth week of the next to last quarter of training.

Each applicant will receive a written report on his standing for graduation upon which to plan his program for the remainder of his training.

To be eligible for graduation from Utah Technical College, a student must have at least a 1.9 G. P. A. and 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.

DIPLOMA: The Diploma is awarded to those students who have satisfactorily completed a minimum of 96 quarter credit hours in a prescribed course of study. The chosen course of study includes the required general education, theory and laboratory classes.

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 which are designed to enhance the vocational and technical classes offered at the college.

General Education requirements for the Associate in Applied Science degree must be comprised of the following: Six quarter credit hours in the Humanities, Six quarter credit hours in the Social Sciences, Six quarter credit hours in the Physical Sciences and six quarter credit hours in a composite of the three fields. Any General Education courses listed in the catalog numbered 100 or above are acceptable. In addition the following classes are acceptable: PHY 81, 82, and 83; ENG 80; MTH 51, 52, & — for Business students — MTH 80.

The Associate in Applied Science degree is offered in the following areas: Architectural Drafting Technology, Auto Mechanics, Building Construction, Business Management, Commercial Art, Data Processing, Drafting and Design Technology, Electronic Technology, Executive Secretary, Heavy Duty Mechanics, and Welding.

Non-high School graduates are expected to pass G.E.D. Equivalency Tests prior to receiving the Associate Degree. The tests are administered by the College. A $5.00 fee is imposed on applicants taking the test.

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 Regulations

Students attending Utah Technical College have elected to attend to prepare themselves for employment. Classes are operated to simulate working conditions and, therefore, regular attendance and punctuality are stressed.

Persistent unexcused tardiness or excessive absence without legitimate and justifiable reason may result in termination.

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 Change in Registration Card from the Registrar's Office. The card must be filled out completely and properly signed by the instructor and Division Chairman or Supervisor. The Change in Registration Card must be returned to the Registrar's Office before the end of the second week. Changes not returned to the Registrar's Office by the end of the second week 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.

Note: Students who merely stop attending class and do not follow the official withdrawal 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 division chairman and the Registrar. Withdrawals after the second week of school will be shown on the official transcript of the student as a "WP" or a "WF." Students withdrawing during the last two weeks of any quarter should be given a grade of "F."

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.

Academic Probation

The following general probation policies will be maintained. A student will be placed on probation if he fails to earn a total grade point average of 1.9 during any quarter. A student will be removed from probation upon earning a grade point average of 2 or better during the probation quarter. A student may be dismissed if he fails to make a grade point average of 1.9 during his probation quarter.

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

*All work must be satisfactorily completed within 3 months of the grade of "I," or it will be changed to "F."

Counseling and Guidance Services

The College provides guidance services which are intended to supplement instruction and out-of-class activities at the college. Cooperative effort of students, faculty, and administration, together with professional guidance personnel, assist applicants and students with admission and selection of vocation, course selection and planning, solution of social and emotional problems, job placement, scholarship, and financial problems.

It is the desire of the school's administration that all students enter college with the optimum opportunity for success and be assisted through the college programs to achieve objectives which will enrich both individual and community.

Placement

The Placement Counselor 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.

Financial Aids Counselor

The Financial Aids Counselor assists worthy and needy students to finance their education through scholarships, loans, grants, work-study and other means.

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. It is strongly recommended that students not attempt to work full-time while registered for a full time school program.

Student Dress and Appearance Standards

Utah Technical College at Salt Lake recognizes the right of individuals to select their own fashion. At the same time, the College recognizes the relationship between employability and appearance. The primary purpose of training is defeated when students do not recognize and accept this relationship. Prospective employers have expressed their dissatisfaction with the appearance of some students, and this has jeopardized job and training opportunities for many others. Students in several programs are required, as part of their training, to work on the job and are expected to meet the employment standards of that business. Failure to do so could result in the termination of further training privileges because of the action of one student.

The student body officers have recommended guidelines regarding dress and grooming standards on the basis that it is useless to train a student for employment if he or she then dresses in such a manner as to alienate prospective employers. Accordingly, the following dress and grooming standards have been adopted and approved for all students attending Utah Technical College at Salt Lake:

1. Students shall appear neat and clean to imply to the public that this is a technical college; that students are studying and working to improve themselves in their chosen field; that they are willing and eager to accept employment in their field of endeavor; and that the student body encourages companies to visit the campus, conduct employment interviews, and employ students.

2. Appropriate dress is characterized by cleanliness, neatness, and good taste. The majority of students recognize the satisfaction of being properly dressed for every occasion.

3. In the shop or laboratory, dress should conform with industry standards for safety and appearance. Clothing or hair styles that can be hazardous to students in training should not be worn.

4. Men are expected to have acceptable haircuts. While men's hair styles can be longer, excessive length is not acceptable. Generally, hair length that hangs below the shirt collar is considered too long. Of equal importance in men's and women's hair styles is that they be neatly trimmed, clean, well groomed and not appear unkempt.

5. Standards of dress for the classroom and school activities should be consistent at all times with good taste. Pant suits and culotte skirts are considered acceptable attire for girls, but cut-offs, short pants, bermudas, "hot pants," etc., are not considered acceptable. Men are expected to wear shirts or sweaters with sleeves, reaching at least to the bicep. Both men and women should wear shoes at all times. The key to this dress standard is to be *neat and clean* and wear clothing that is appropriate and in good taste for the working environment.

Each student is expected to help maintain a good technical college image. UTC students want to show those who visit the campus that the student body is working to improve the college, and to encourage companies to visit the campus, conduct employment interviews and employ students.

Responsibility for the enforcement of these dress standards rests initially with the Dean of Students and the Admissions Counselor at the time of acceptance to the college. At registration time for each quarter, students who appear to be in violation of these will be referred to the Dean of Students' Office by those conducting registration. At all other times, the enforcement of dress standards rests with the individual instructor and the Department Chairman. After once being accepted and registered, a student may appeal any alleged violations of these dress standards before the Student Body Executive Council and receive a determination regarding his grievance.

In special cases, administrative amnesty (through the Dean of Students) may be granted to students who require by occupation any variation of these dress standards.

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
Building Construction — white overalls
Diesel Mechanics — blue and white striped twill coveralls
Electricity — blue shirts
Machine Shop — blue aprons
Welding — brown aprons with leg ties

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. First time offenders, who are otherwise clean cut students, *may* remain in school after counseling.

Individuals convicted of using illegal drugs or who have been taken into custody for possession of illegal drugs, will not be permitted to return to school. (They may, if conditions warrant, be allowed to register at a later time.)

College Store

The College Store carries all required books, tools and supplies as well as sundry other 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.

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.

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 will be held on Friday, March 3, 1972.

ALUMNI OFFICERS — 1971-72

Kyle Riches	President
John Wilson	Vice President
Mrs. LaRue Olsen	Secretary
Mrs. Mary Boswell	Treasurer
Mrs. Eldean K. Belnap	Historian

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.

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.

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. 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. The first transcript will be issued free. Each transcript thereafter will cost the applicant $1.00. Transcripts will not be released for any student who has any financial obligation to the college.

Student Insurance

The students' insurance fee provides coverage for accidental bodily injury to students while attending class or participating in school sponsored activities. Travel by insured persons is covered while traveling directly between their home premises and the place of such activity.

Institutional Liability

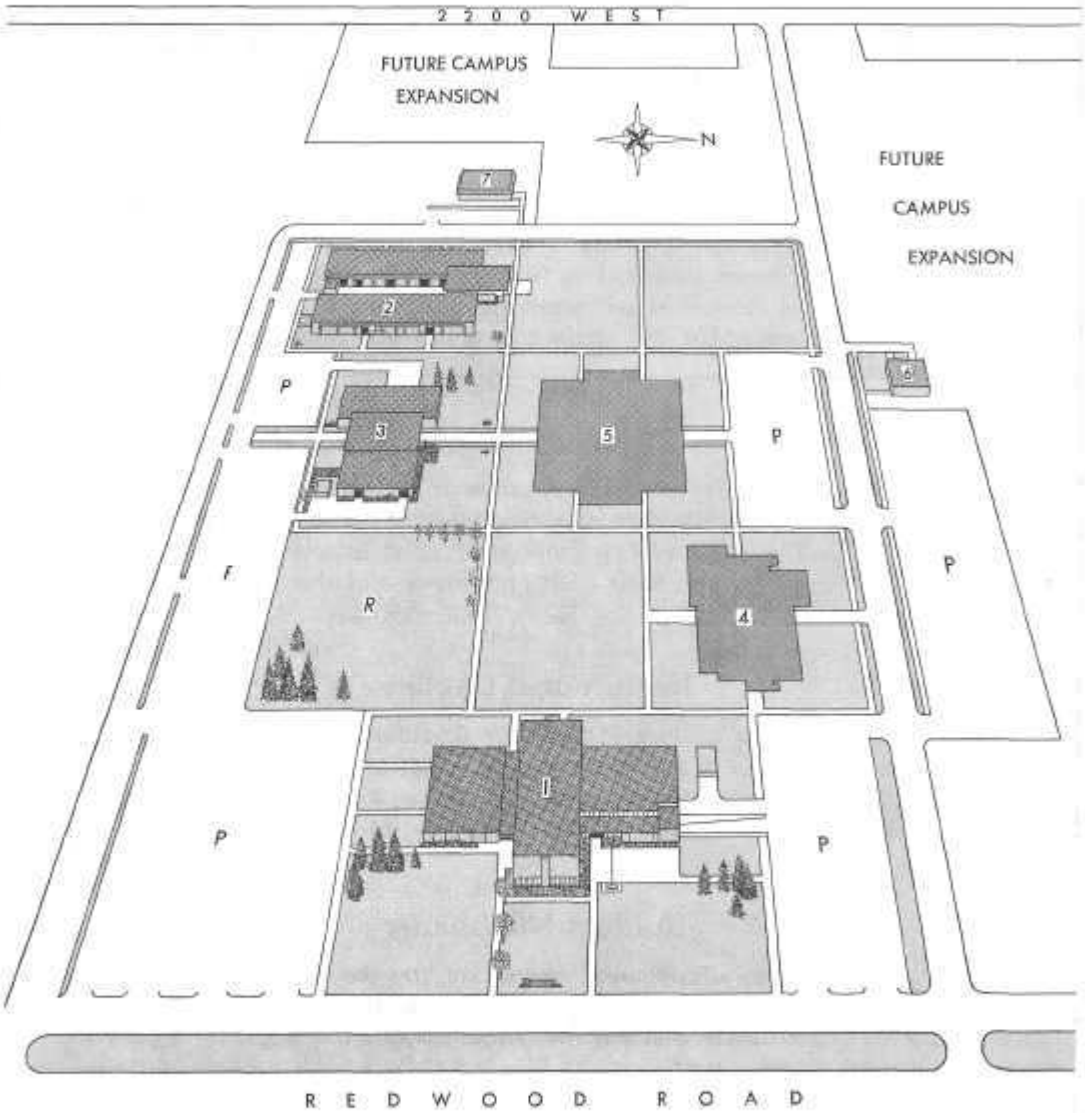
Utah Technical College at Salt Lake disclaims liability of any kind for injury or illness of any student as a result of participation in any activities connected with the school. Every reasonable effort is made to provide safe conditions for the conducting of all activities.

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.

MAIN CAMPUS OF
UTAH TECHNICAL COLLEGE
AT SALT LAKE

4600 SOUTH REDWOOD ROAD
SALT LAKE CITY. UTAH 84107
PHONE 299-3411



1 ADMINISTRATION BUILDING
2 AUTOMOTIVE BUILDING
3 METALS BUILDING
4 TECHNOLOGY BUILDING·Under Construction
5 STUDENT CENTER BUILDING·Under Construction
6 HEATING PLANT
7 L.D.S. INSTITUTE
P PARKING LOT
R RECREATION AREA


DAY AND EVENING
INFORMATION

ACCOUNTING (ELEMENTARY)

Designed to train students to use objective measuring methods in 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. The student will receive a Certificate in Elementary Accounting at the completion of the one-year program. The student may return for additional training in Business Management, or Accounting.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 131 Office Machines	—	5	3
BUS 160 Elem. Acctg. I	5	—	5
BUS 170 Accounting Lab	—	5	2
MTH 80 Business Math	3	2	3
ENG 80 Business English	3	—	3
MKT 104 Intro. to Business	4	—	4
	15	12	20

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 132 Office Machines	—	5	3
BUS 161 Elem. Acctg. II	5	—	5
BUS 171 Accounting Lab	—	5	2
MTH 138 Business Math	3	2	3
CIV 55 Voc. Civics	3	—	3
ECN 101 Gen. Economics	3	—	3
ENG 115 Bus. Report Writing	3	—	3
	14	12	19

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 156 Business Law	5	—	5
BUS 162 Elem. Acctg. III	5	—	5
BUS 172 Accounting Lab	—	5	2
MKT 102 Princ. of Mkt.	3	2	4
DP 101 Basic Comp. Concepts	2	3	3
	12	8	15

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

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.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
ADT 110 Arch. Draft. I	1	14	5
ADT 112 Materials	3	2	4
MTH 51 Ele. Algebra	5	—	5
COM 55 Communications	5	—	5
	14	16	19

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
ADT 120 Arch. Draft. II	1	14	5
BUS 128 Office Machines	—	5	2
PHY 81 Gen. Phy.	5	—	3
MTH 141 Slide Rule	1	—	1
MTH 52 Elem. Trig.	2	—	2
ADT 133 Arch. Hist.	2	—	2
	11	19	16

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
ADT 130 Arch Draft III	1	14	5
ADT 132 Str. of Materials	3	2	4
ADT 135 Perspect & Del.	2	3	3
PHY 82 or 83 Gen. Phy.	5	—	3
	11	19	15

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
ADT 210 Arch. Detailing	1	14	5
ADT 215 Structures-Wd & Stl.	3	2	4
ADT 202 Mechanical Equip.	2	3	3
ADT 216 Specifications	3	2	4
	9	21	16

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
ADT 220 Arch. Wkg. Drawing	1	14	5
ADT 226 Structure-Concrete	3	2	4
ADT 227 Codes & Prof. Prac.	2	3	3
ADT 228 Arch. Model Making	1	4	3
	7	23	15

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
ADT 230 Adv. Arch Wkg Draw	1	14	5
ADT 234 Constr. Layout	3	2	4
ADT 235 Occ. Orient	3	—	3
PSY 55 Human Relations	3	—	3
	10	16	15

Approximate cost of books, tools, and supplies = $205.00

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. Lec.	Lab.	Cr.
ABP 110 Auto Paint Lab.	—	20	7
ABP 111 Auto Painting	5	—	5
MTH 50 Voc. Math.	5	—	5
	10	20	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
ABP 120 Color Applic. Lab.	—	20	7
ABP 121 Color Application	5	—	5
COM 55 Communications	5	—	5
	10	20	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
ABP 130 Color Matching Lab.	—	20	7
ABP 131 Color Matching	5	—	5
PSY 55 Hum. Rel.	3	—	3
	8	20	15

Approximate cost of books, tools and supplies = $70.00

AUTO BODY REPAIR

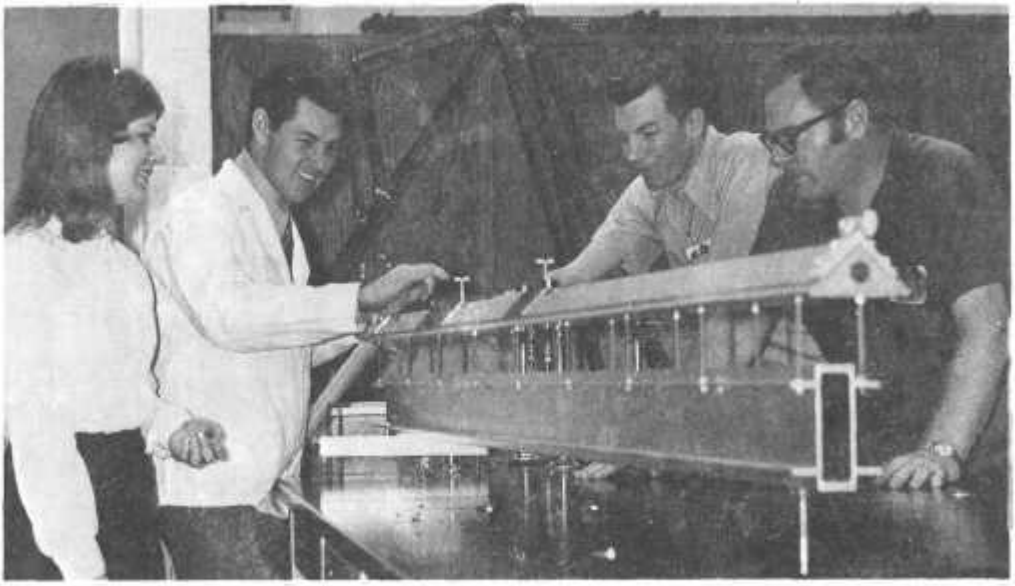
Familiarization with problems encountered in analyzing and repairing collision damage on automobiles. Experience is gained by working on a variety of damaged cars, including complete reconstruction of total wrecks. It is recommended that students return for a second year in Auto Painting.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
AB 110 Auto Body Rep.	—	20	7
AB 111 Metals & Proc.	5	—	5
MTH 50 Voc. Math.	5	—	5
	10	20	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
AB 120 Auto Body Recons.	—	20	7
AB 121 Stress Analysis	5	—	5
COM 55 Communications	5	—	5
	10	20	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
AB 130 Adv. Body Rec.	—	20	7
AB 131 Estimating	3	—	3
AB 132 Alignment	2	—	2
PHY 55 Applied Physics	5	—	5
	10	20	17

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.
AB 114 Auto Body Rep. A	—	6	2
AB 115 Metal & Process A	2	—	2
ABP 114 Auto Paint Lab A	—	6	2
ABP 115 Auto Painting A	2	—	2
	4	12	8

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
AB 124 Auto Body Rep. B	—	6	2
AB 125 Metal & Process B	2	—	2
ABP 124 Auto Paint Lab B	—	6	2
ABP 125 Auto Painting B	2	—	2
	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 Applic. A	2	—	2
	4	12	8

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
AB 144 (Auto Bdy Reconst. B)	—	6	2
AB 145 (Stress Analysis B)	2	—	2
ABP 144 (Color Applic Lab B)	—	6	2
ABP 145 (Color Application B)	2	—	2
	4	12	8

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
AB 154 (Ad. Auto Bdy Rec A)	—	6	2
AB 155 (Estimating A)	2	—	2
ABP 154 (Color Match Lab A)	—	6	2
ABP 155 (Color Matching A)	2	—	2
	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
	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.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
AM 110 Auto Chassis Rep.	—	20	7
AM 111 Auto Chassis	5	—	5
WLD 105 Welding	2	3	3
	7	23	15

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
AM 120 Fuel & Elec. Sys. Ser.	—	20	7
AM 121 Fuel & Elec. Sys.	5	—	5
PSY 55 Human Relations	3	—	3
	8	20	15

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
AM 130 Auto Eng. Lab.	—	20	7
AM 131 Auto Engines	5	—	5
MTH 50 Voc. Math.	5	—	5
	10	20	17

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
AM 220 Drive Mech. Lab.	—	20	7
AM 221 Drive Mech.	5	—	5
COM 55 Communications	5	—	5
	10	20	17

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
AM 210 Auto Elec Comp Lab	—	20	7
AM 211 Auto Elec Comp	5	—	5
PHY 55 Applied Phys.	5	—	5
	10	20	17

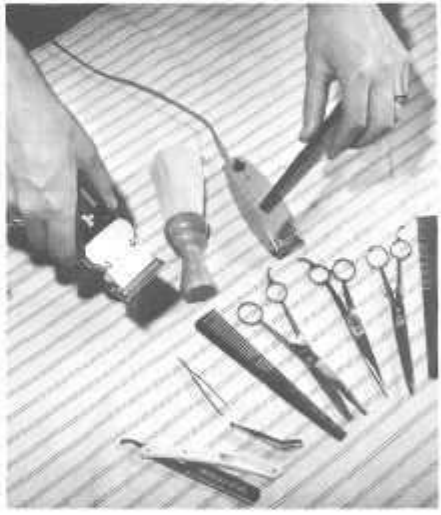
Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
AM 230 Diag & Applic. Lab.	—	20	7
AM 231 Diag. & Applic.	5	—	5
CIV 55 Voc. Civics	3	—	3
	8	20	15

Approximate cost of books, tools and supplies = $252.00

BARBERING

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 January, April, July and October.

If a student desires to complete his training just prior to one of these examination dates he should enroll no later than the first week of January, April, July and October.



First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BR 110 Barbering Lab.	—	35	12
BR 111 Barbering Theory	5	—	5
	5	35	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BR 120 Barbering Lab.	—	35	12
BR 121 Barbering Theory	5	—	5
	5	35	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BR 130 Barbering Lab.	—	35	12
BR 131 Barbering Theory	5	—	5
	5	35	17

Approximate cost of books, tools and supplies = $115.00

BARBERING (Extended Day)

Students may start training at any time during the regular school year. There are no classes conducted during Summer Quarter in the Evening Program.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BR 112 Barbering Lab.	—	28	9
BR 113 Barbering Theory	4	—	4
	4	28	13

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BR 122 Barbering Lab.	—	28	9
BR 123 Barbering Theory	4	—	4
	4	28	13

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BR 132 Barbering Lab.	—	28	9
BR 133 Barbering Theory	4	—	4
	4	28	13

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BR 142 Barbering Lab.	—	28	9
BR 143 Barbering Theory	4	—	4
	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.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BC 112 Tools of Constr.	—	15	5
BC 113 Tools of Constr.	5	—	5
MTH 50 Voc. Math	5	—	5
BC 103 Blueprint Reading	2	3	3
	12	18	18

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BC 122 Millwk. & Cabinets	—	20	7
BC 123 Millwk. & Cabinets	5	—	5
BC 53 Const. Math	5	—	5
	10	20	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BC 132 Forming & Framing	—	15	5
BC 133 Forming & Framing	5	—	5
COM 55 Communications	5	—	5
BC 104 Blueprint Reading	2	3	3
	12	18	18

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BC 210 House Construction	—	15	5
BC 211 House Construction	5	—	5
WLD 105 Welding	2	4	3
CIV 55 Voc. Civics	3	—	3
	10	19	16

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BC 220 App. Int. Trim	—	15	5
BC 221 Interior Trim	5	—	5
PSY 55 Human Relations	3	—	3
PHY 55 Applied Physics	5	—	5
	13	15	18

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BC 232 Constr. Specialities	—	20	7
BC 233 Constr. Specialities	5	—	5
BC 224 Fund. Plumb & Elect.	5	—	5
	10	20	17

Approximate cost of books, tools and supplies = $200.00

BUSINESS MANAGEMENT

The Management Program is entered following successful completion of the ELEMENTARY ACCOUNTING PROGRAM. The series of classes will assist the student in gaining the necessary background for objective business decisions. His introduction to investments, budgeting, cost, personnel and other management classes provide salable skills at the junior management level or higher.

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
MTH 51 Ele. Algebra	5	—	5
BUS 284 Sm. Bus. Mgmt.	5	—	5
BUS 263 Cost Accounting	2	3	3
† Elective(s). . . . 3 to 6 cr.	6	—	6
	18	3	19

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 286 Personnel & Labor	5	—	5
PSY 101 Gen. Psychology	3	—	3
† Elective(s). . . .6 to 9 cr.	9	—	9
	17	—	17

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 210 Investments	3	—	3
BUS 287 Off. Sys. & Prod.	5	—	5
† Elective(s). . . .6 to 9 cr.	9	—	9
	17	—	17

Electives: (must be selected with departmental approval.)

BUS 288 Budgeting
MKT 104 Intro. to Business
General Education Subjects
ENG 115 Bus., Report Write
BUS 270 Fed. Inc. Tax Acctg.
BUS 204 Banking & Finance
DP 101 Bus. Comp. Concepts
MKT 102 Principles of Marketing
BUS 158 Business Law II
MKT 120 Salesmanship
MKT 109 Hotel-Motel Management

Approximate cost of books, tools, and supplies = $205.00

BUSINESS MANAGEMENT — ACCOUNTING ORIENTED

A course designed to train students in objective measuring and management through a program of intermediate accounting, income tax accounting, auditing, advanced accounting, and cost accounting. Emphasis will be placed on measuring and reporting financial changes accurately for efficient and profitable operations. Students may enter the program after successful completion of the Elementary Accounting Program. The optional enrichment classes are designed for those students who plan to prepare for the CPA examination.

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
MTH 51 Elem. Algebra	5	—	5
BUS 250 Intermed Acctg.	5	—	5
BUS 271 Accounting Lab.	—	5	2
BUS 263 Cost Accounting	2	3	3
BUS 158 Business Law II	3	—	3
	15	8	18

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 275 Auditing	2	3	3
BUS 252 Adv. Acctg. I	5	—	5
BUS 273 Accounting Lab	—	5	2
BUS 210 Investments	5	—	5
Elective	3	—	3
	15	8	18

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 270 Federal Inc. Tax Acctg.	3	2	3
BUS 251 Intermed. Acctg.	5	—	5
BUS 272 Accounting Lab	—	5	2
BUS 204 Banking & Finance	5	—	5
Elective	3	—	3
	16	7	18

OPTIONAL ENRICHMENT CLASSES—
For CPA Candidates
(not required for graduation)

BUS 253 Advanced Acctg. II	5	—	5
BUS 254 CPA Review	5	—	5
BUS 264 Advanced Cost Acctg.	5	—	5
BUS 274 Advanced Inc. Taxes	3	2	3
	18	2	18

Electives: (must be selected with departmental approval. See those listed under Business Management Program.)

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 Quarter	Hrs./wk. Lec.	Lab.	Cr.
CA 115 Drawing I	1	3	2
CA 116 Princ. & Elem. of Art	3	1	3
CA 117 Media & Tech. I	2	3	3
CA 118 Lettering I	2	6	3
COM 55 Communications	5	—	5
	13	13	16

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
CA 123 Perspective	1	3	2
CA 125 Lettering II	1	3	2
CA 126 Anatomy	2	3	3
CA 127 Color	3	1	3
CA 128 Media & Tech. II	2	3	3
MTH 50 Voc. Math.	5	—	5
	14	13	18

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
CA 135 Typography I	2	3	3
CA 136 Figure Drawing	1	3	2
CA 137 Design I	2	2	3
CA 140 Layout I	2	3	3
CA 139 Drawing II	1	4	2
PSY 55 Human Relations	3	—	3
	11	15	16

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
CA 220 Art Preparation II	2	2	3
CA 239 Design II	2	3	3
CA 242 Elec. Art I (op)	2	2	3
CA 243 Elec. Art II (op)	2	2	3
CA 227 Typography II	1	3	2
PRT 105 Printing	2	3	3
	11	15	17

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
CA 215 Art Preparation I	2	3	3
CA 216 Illustration	2	3	3
CA 217 Cartooning (op)	2	2	3
CA 229 Retail Illust.	2	3	3
CA 230 Layout II	2	3	3
ECN 55 Applied Econ.	3	—	3
	13	14	18

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
CA 235 Promotional Design (op)	2	3	3
CA 236 Occ. Orientation	3	—	3
CA 237 Portfolio	2	3	3
CA 241 Studio Production	3	6	5
DDT 205 Tech. Illustrating	2	3	3
	12	15	17

(op) Optional course — Student must select a minimum of 1 option during the second year to qualify for graduation.

Approximate cost of books, tools, and supplies = $290.00

COSMETOLOGY

The Cosmetology Department features the very latest and up to date methods of teaching and equipment. Students have placed FIRST in styling, coloring and cutting competitions. Each student receives personal instruction not only in the basics such as permanent waving, hair cutting, finger waving, etc., but also are given special classes in modern hair design and current trend styling.

The course requires 1500 hours of instruction and meets requirements for the State Licensing Examination.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
COS 110 (Cosmet. Lab.)	—	35	12
COS 111 (Cosmet. Theory)	5	—	5
	5	35	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
COS 120 (Cosmet. Lab.)	—	35	12
COS 121 (Cosmet. Theory)	5	—	5
	5	35	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
COS 130 (Cosmet. Lab.)	—	35	12
COS 131 (Cosmet. Lab.)	5	—	5
	5	35	17

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
COS 140 (Cosmet. Lab.)	—	35	12
COS 141 (Cosmet. Theory)	5	—	5
	5	35	17

Approximate cost of books, tools and supplies = $100.00

DATA PROCESSING — PROGRAMMER

At the completion of the first year, students can program using basic assembly language or COBOL and may receive a Certificate as a Junior Programmer. Prerequisite to second year is a grade point average of "C" or better in Data Processing classes and passing grades in Math and Accounting classes. At the completion of the second year, students will be able to program with fortran, COBOL, and Assembly Language. Prerequisite for the course is passing basic math test at 75th percentile, and the S.R.A. computer test at 35th percentile.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
DP 101 Bas. Comp. Concepts	2	3	3
DP 112 Bas. Comp. Prog. I	5	5	7
MTH 51 Elem. Algebra	5		5
ENG 80 Business English	3		3
	15	8	18

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
DP 120 Bas. COBOL Program	5	10	7
BUS 161 Elem. Acctg. II	5		5
MTH 105 College Algebra	5		5
	15	10	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
DP 115 Bas. Comp. Prog. II	5	10	7
BUS 160 Elem. Acctg. I	5		5
MTH 101 Intro. to College Alg.	5		5
ENG 115 Bus. Report Writing	3		3
	16	12	20

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 162 Elem. Acctg. III	5		5
MTH 106 Plane Trig.	5		5
DP 220 Applied COBOL	3	7	5
DP 231 Applied Prog.	5	5	5
	18	12	20

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DP 290 Adv. Programming	5	5	7
DP 211 Fortran-Apply Mth	5	5	7
BUS 263 Cost Accounting	2	3	3
	12	13	17

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DP 295 Ind. Case Studies	3	7	5
DP 280 Bus. Systems Design	5	5	7
PSY 101 Gen. Psychology	3		3
DP 298 Case Study Seminar	1		1
	12	12	16

Approximate cost of books, tools and supplies = $250.00

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

Instruction is given in basic precision drawing with tools and basic design, along with general education classes. The curriculum encompasses two levels of training. A one year certificate is offered as a Mechanical Detailer; a two year program is offered as a Mechanical Designer.

MECHANICAL DETAILER — CERTIFICATE

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 112 Plane Des. Geo.	2	8	5
DDT 110 Drafting Fund	2	8	5
BUS 128 Office Machines		5	2
MTH 51 Elem. Algebra	5		5
	9	21	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 123 Descriptive Geo.	2	10	5
DDT 213 Topographic Draft OR	2	8	5
DDT 126 Pipeline Drafting			
MTH 52 Elem. Trig.	2		2
DDT 238 Elec. Mech. Draft OR	2	3	3
DDT 237 Structural Draft			
MTH 141 Slide Rule	1		1
	9	21	16

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 133 Engr. Drawing I	2	10	5
DDT 134 Engr. Drawing II	2	8	5
COM 55 Communications	5		5
MS 227 Machine Shop	2	2	2
	11	20	18

Approximate cost of books, tools and supplies = $107.00

MECHANICAL DESIGNER — DIPLOMA

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 112 Plane Des. Geo.	2	8	5
DDT 110 Drafting Fund	2	8	5
BUS 128 Office Machines		5	2
MTH 51 Elem. Algebra	5		5
	9	21	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 125 Shape Desc.	2	10	5
DDT 124 Adv. Des. Geo.	2	8	5
MTH 52 Elem. Trigonometry	2	—	2
MTH 141 Slide Rule	1	—	1
PHY 81 Gen. Physics	5	—	3
	12	18	16

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 133 Engr. Drawing I	2	10	5
DDT 134 Engr. Drawing II	2	8	5
PHY 82 or 83 Gen. Phy.	5	—	3
MS 227 Machine Shop	2	2	3
	11	20	16

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 214 Topo. Draw. (or)	5	15	10
DDT 217 Tech. Ill			
DDT 216 Mech & Str. Mat.	4	—	4
DDT 270 Basic Design	3	2	3
	12	17	17

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 221 Mach. Tool Draft	—	15	5
DDT 226 Mach. Design.	4	—	4
DDT 234 Manuf. Processes	2	3	3
COM 55 Communications	5	—	5
	11	18	17

Sixth Quarter (option)	Hrs./wk. Lec.	Lab.	Cr.
DDT 223 Str. Draft	—	15	5
DDT 224 Steel Design	4	—	4
DDT 231 Photo Draft.	2	3	3
PSY 55 Human Relations	3	—	3
	9	18	15

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 230 Elec. & Electr. Dr.	5	15	10
ELT 109 Electronics	2	3	3
PSY 55 Human Relations	3	—	3
	10	18	16

Approximate cost of books, tools and supplies = $179.00

DRAFTING AND DESIGN (Extended Day)

MECHANICAL DETAILER — CERTIFICATE

Instruction is given in basic precision drawing with tools and basic design. The curriculum leads to a one-year certificate as a detailer.

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

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 123 Descriptive Geo.	2	10	5
MTH 51 Ele. Algebra	5		5
	7	10	10

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 133 Engr. Drawing I	2	10	5
MTH 52 Elem. Trigonometry	2		2
MTH 141 Slide Rule	1		1
	5	10	8

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 134 Engr. Drawing II	2	8	5
DDT 216 Mech. & Str. of Mat.	4		4
	6	8	9

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 225 Mach. Tool Draft.		8	3
DDT 226 Machine Design	4		4
MS 227 Machine Shop	2	2	3
	6	10	10

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
DDT 237 Structural Draft.	2	3	3
DDT 236 Pipe Drafting.	2	3	3
DDT 238 Elec. Mech. Draft.	2	3	3
	6	9	9

Approximate cost of books, tools and supplies = $115.00

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 Electricity	5		5
ELC 102 Electrical Codes	2	3	3
MTH 60 Applied Math	5		5
	12	18	18

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELC 120 Electric Motors		15	5
ELC 121 Elec. Devices	5		5
MTH 52 Elem. Trig.	2		2
MTH 141 Slide Rule	1		1
PHY 55 Applied Physics	5		5
	13	15	18

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELC 130 Ind. Controls		15	5
ELC 131 Instrumentation	5		5
ELC 150 Adv. Motor Cont.	2	3	3
COM 55 Communications	5		5
	12	18	18

Approximate cost of books, tools and supplies = $188.00

ELECTRONIC TECHNOLOGY

Instruction in basic electron theory, component parts, electronics communications and supporting general education subjects. The curriculum encompasses two different levels; a One-year Certificate or a two-year Industrial Technician Program.

The following classes may be used as electives in the second-year program.

ELT 240 & 243—Medical Electronics with Lab
ELT 250 & ELT 253—Instrumentation with Lab
ELT 260 & ELT 263—Color Television with Lab
ELT 264 & ELT 265 — Closed Circuit and Transmission principles with Lab.

All electronic technology classes are offered also in the evening program. Check with Division Chairman for further information.

CERTIFICATE PROGRAM

This program is designed to train students in electronic fundamentals; direct current circuits through communications equipment. The student may return for additional training in black and white or color television.

Prerequisite: One successful year High School Algebra or equivalent. Tenth grade reading level, and math placement test.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 110 DC-AC App	10		3
ELT 111 DC-AC Cir. Fund.	7	3	8
MTH 51 Ele. Algebra	5		5
MTH 52 Elem. Trig.	2	—	2
MTH 141 Slide Rule	1	—	1
	15	13	19

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 120 App. Amp. Dev.	10		3
ELT 123 Solid St. Fund.	7	3	8
DDT 108 Elt. Drafting	2	3	3
MTH 142 Intermed. Alg.	5		5
	14	16	19

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 130 App. Com. Dev.	10		3
ELT 133 Elt. Com. Dev.	7	3	8
COM 55 Communications	5		5
	12	13	16

Approximate cost of books, tools and supplies = $195.00

ELECTRONICS INDUSTRIAL TECHNICIAN

Prerequisites: One year High School Algebra; one year Geometry, successful placement exam; twelfth grade reading level.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 110 DC & AC App.	10		3
ELT 111 DC-AC Cir. Fund	7	3	8
MTH 52 Elem. Trig.	2		2
MTH 141 Slide Rule	1		1
MTH 51 Elem. Algebra	5		5
	15	13	19

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 120 App. Amp. Dev.	10		3
ELT 123 Solid St. Fund.	7	3	8
DDT 108 Elec. Draft	2	3	3
MTH 101 Int. Algebra	5	—	5
	14	16	19

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 130 App. Com. Dev.	10		3
ELT 133 Elt. Com. Dev.	7	3	8
CEM 101 Intro. to Chem.	5	—	5
ENG 101 English Comp.	3	—	3
	14	16	19

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 210 Integ. Systems	10		3
ELT 213 Adv. Comm. & TV	7	3	8
PHY 81 General Physics	3	2	3
MTH 105 Adv. Algebra	5	—	5
	15	15	19

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 220 Microwave Equip.		10	3
ELT 223 Micro. Sys. Anal.	7	3	8
ENG 102 English Comp.	3	—	3
PHY 82 General Physics	3	2	3
	13	15	17

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
ELT 230 Dig. Anal. Concepts		10	3
ELT 233 Comp. Tech.	7	3	8
PHY 83 General Physics	3	2	3
ENG 130 Tech. Writing	3		3
	13	15	17

Approximate cost of books, tools and supplies = $330.00

EXECUTIVE SECRETARY

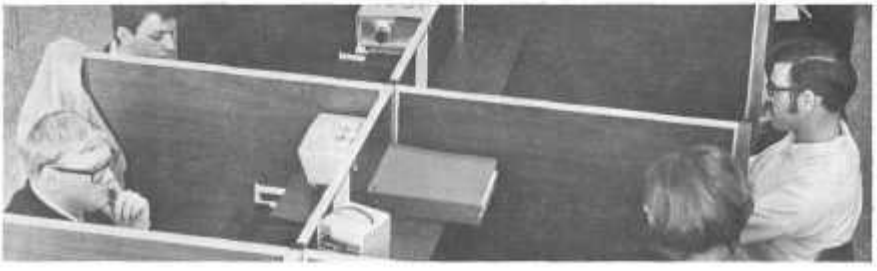
A course designed to prepare executive secretaries for positions in business, industry, and the professions. Admission is selective and programs are individually designed. Emphasis is placed on human relations, personality development, administrative ability, superior skills and knowledge.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 201 Advanced Typing	—	5	2
BUS 247 Dictation	5	—	5
BUS 248 Transcription	—	2	1
BUS 200 Sec. Procedures	5	—	5
BUS 165 Business of Beauty	1	1	1
MTH 80 Business Math	3	2	3
ENG 101 English Comp.	3	—	3
	17	10	20

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 202 Exec. Typing	1	2	2
BUS 257 Exec. Dictation	5	—	5
BUS 256 Transcription	—	2	1
BUS 166 Business of Beauty	1	1	1
ENG 115 Bus. Report Write	3	—	3
BUS 221 Sec. Procedures	5	8	8
Selected From:			
Medical, Legal, Science Engineering			
	15	13	20

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 203 Exec. Typing	—	2	1
BUS 258 Exec. Dictation	5	—	5
BUS 267 Transcription	1	2	2
BUS 167 Business of Beauty	1	1	1
BUS 259 Exec. Acctg. Prac.	3	—	3
BUS 222 Sec. Procedures	5	8	8
	15	13	20

Approximate cost of books, tools and supplies = $200.00



GENERAL OFFICE CLERK — CLERK TYPIST PROGRAM

Students are instructed in the use of the typewriter and office machines; receive training in business communications, business mathematics, and other related subjects. After completion, students will have clerical ability which will enable them to secure employment in business or industry.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 101 Typewriting I OR BUS 102 Intermed. Typing	5	5	4
MTH 80 Business Math	3	2	3
BUS 131 Office Machines	—	5	3
BUS 165 Business of Beauty	1	1	1
ENG 80 Business English	3	—	3
BUS 129 Cler. Rec. Keep.	3	2	3
	15	15	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 102 Intermed. Typing OR BUS 103 Adv. Typing	5	5	4
BUS 132 Office Machines	—	5	3
BUS 166 Business of Beauty	1	1	1
ENG 115 Bus. Report Write	3	—	3
BUS 127 Data Processing	2	3	3
BUS 136 Sec. Trng.	3	—	3
	14	14	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 103 Advanced Typing OR BUS 104 Adv. Prod. Typing	5	5	4
BUS 134 Mach. Transcription	2	3	3
BUS 167 Business of Beauty	1	1	1
BUS 155 Filing	3	2	3
ENG 140 Effective Reading	3	—	3
Elective	5	—	5
	19	11	19

Elective: (may be added with departmental approval.)

Approximate cost of books, tools and supplies = $95.00

HEAVY DUTY MECHANICS

The first three quarters of this course provide theory and practical training in the operation, maintenance and repair of Electrical Systems, and 2 cycles and 4 cycle diesel engines. During the second three quarters, the student chooses between the construction equipment course and the highway equipment course.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 132 H.D. Elec. Sys. Lab.	—	20	7
HDM 133 H.D. Elec. Sys.	5	—	5
MTH 50 Voc. Math.	5	—	5
	10	20	17

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 110 Dsl. Eng. Lab. 2C	—	20	7
HDM 111 Dsl. Eng. 2C	5	—	5
PHY 55 Applied Phys.	5	—	5
	10	20	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 120 Dsl. Eng. Lab. 4C	—	20	7
HDM 121 Dsl. Eng. 4C	5	—	5
CIV 55 Voc. Civics	3	—	3
	11	20	18

The student must take the program on 2 cycle engines before 4 cycle.

SECOND YEAR
Construction Equipment

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 205 C.E. Drive Syst. Lab.	—	20	7
HDM 206 C.E. Drive Systems	5	—	5
WLD 105 Welding	2	3	3
	7	23	15

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 225 C.E. Mob. Hyd. Lab	—	20	7
HDM 226 C.E. Mob. Hyd.	5	—	5
PSY 55 Human Relations	3	—	3
	8	20	15

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 235 C.E. Supp. Syst. Lab.	—	20	7
HDM 236 C.E. Suppt. Syst.	5	—	5
COM 55 Communications	5	—	5
	10	20	17

SECOND YEAR
Highway Equipment

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 200 H.E. Eng. Lab.	—	20	7
HDM 201 H.E. Equip.	5	—	5
WLD 105 Welding	2	3	3
	7	23	15

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 220 H.E. Dr. Sys. Lab.	—	20	7
HDM 221 H.E. Dr. Sys.	5	—	5
PSY 55 Human Relations	3	—	3
	8	20	15

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
HDM 230 H.E. Sp. Sys. Lab.	—	20	7
HDM 231 H.E. Sp. Sys.	5	—	5
COM 55 Communications	5	—	5
	10	20	17

Approximate cost of books, tools and supplies = $357.00

HOSPITAL NURSE AIDE

This 120 hour program is designed to develop the knowledge, skills, and attitudes needed to function as a hospital nurse aide. Emphasis is placed on supervised application of classroom-acquired knowledge. Observation of patient care in a clinical facility is provided.

Applicants are recruited and referred to the college by the hospitals. Cost of registration on a non-credit basis is $27.00.

May be offered any month during the year based on community need.

Approximate cost of books, tools and supplies = $20.00

HOSPITAL WARD CLERK

This 120 hour 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.

Applicants are recruited and referred to the college by the hospitals. Cost of registration on a non-credit basis is $27.00.

May be offered any month during the year based on community need.

Approximate cost of books, tools and supplies = $10.00

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	Hrs./wk. Lec.	Lab.	Cr.
MS 110 M. Shop Lab.	—	15	5
MS 111 B. Mach. Theory	5	—	5
BPR 100 Basic BPR.	2	3	3
MTH 50 Voc. Math.	5	—	5
	12	18	18

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
MS 120 M. Shop Lab.	—	15	5
MS 121 Basic Mach. Th.	5	—	5
MS 56 App. M.S. Mth.	5	—	5
MS 101 M.S. BPR.	2	3	3
	12	18	18

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
MS 130 Adv. M.S. Lab.	—	15	5
MS 131 Adv. Mach. Theory	5	—	5
COM 55 Communications	5	—	5
PHY 55 App. Physics	5	—	5
	15	15	20

Fourth Quarter*	Hrs./wk. Lec.	Lab.	Cr.
MS 140 Adv. M.S. Lab.	—	15	5
MS 141 Adv. Mach. Theory	5	—	5
MS 57 Applied N.C. Math	5	—	5
WLD 105 Wld. Rel.	2	2	3
	12	17	18

*This quarter is optional; it will be offered if there is enough demand.

Approximate cost of books, tools and supplies = $200.00

MARKETING

Marketing prepares students for careers in retailing, wholesaling, and service occupations. The program combines classroom study of the principles of marketing with supervised occupational training in selected businesses in the Salt Lake area. The student will receive a Certificate in Marketing at the completion of the one-year program.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
MKT 102 Princ. of Mkt.	3	2	4
MKT 104 Intro. to Bus.	4	—	4
MTH 80 Business Math	3	2	3
ENG 80 Bus. Eng. OR	3	—	3
* MKT 115 Work Exp.	—	15	3

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
MKT 120 Salesmanship	5	—	5
MKT 128 Advertising	3	2	4
BUS 156 Bus. Law I	5	—	5
* MKT 116 Work Exp. or Elective	—	15	3
	13	17	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
MKT 126 Retailing	5	—	5
* MKT 117 Work Exp.	—	15	3
PSY 101 Gen. Psychology	3	—	3
BUS 160 Elem. Acctg. I	5	—	5
BUS 170 Accounting Lab.	—	5	2
	13	20	18

Elective: MKT 109 Hotel-Motel Management.

*Only two quarters work experience required for graduation.

Approximate cost of books, tools and supplies = $90.00

NURSING HOME ATTENDANT

This 120 hour program is designed to develop the knowledge, skills, and attitudes needed to function as an attendant in a nursing home. Emphasis is placed on supervised application of class-room acquired knowledge.

Applicants are recruited and referred to the college by the nursing homes. Cost of registration on a non-credit basis is $27.00.

This course is offered at any time during the year based on community need.

Approximate cost of books, tools and supplies = $20.00

OPERATING ROOM TECHNICIAN

This evening program is designed to prepare qualified men and women to handle sterile instruments and supplies while assisting the surgeon during surgery in the hospital operating room.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.	Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
ORT 110 (O.R. Scrub Nurs L)	—	6	2	ORT 120 (O.R. Scrub Nurs. L)	—	9	3
ORT 111 (O.R. Scrub Nurse)	6	—	6				
	6	6	8		—	9	3

Approximate cost of books, tools and supplies = $10.00

POWER SEWING

IPS 50 Power Sewing

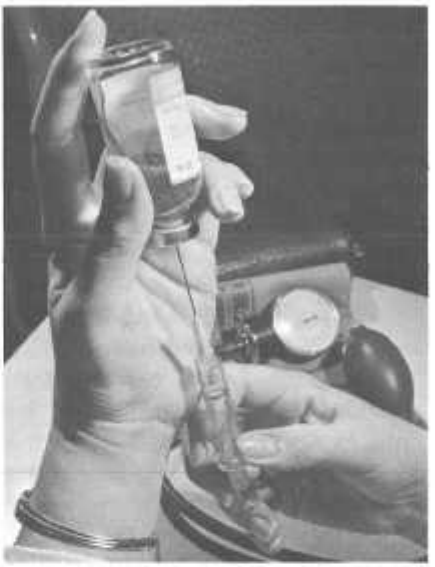
The Power Sewing Program is a special short term course requiring one hundred twenty (120) clock hours of instruction. Classes are held six hours per day for a four week period. Course offers training on the operation of power sewing machines and related information associated with the needle trades. Students develop skill, speed and confidence that will enable them to enter into, progress and earn a living as an Industrial Power Sewing Machine Operator. The tuition fee is $27.00.

The Utah State Employment Service located at 383 South 6th East screens the applicants for the course and cooperating industries offer employment opportunities for those who successfully complete the training. Those interested should make initial contact with the Employment Service Office.

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.

(In general, PN courses must be taken in numbered sequence with lecture and related lab. classes being taken concurrently. Failure in any of the following courses will prevent registration in subsequent courses: PN 111, PN 115, PN 116, PN 120, PN 121, PN 126.)



First Quarter	Hrs./wk. Lec.	Lab.	Cr.
PN 110 (Nurs. Fund L)	—	12	4
PN 111 (Nurs. Fund)	6	—	4
PN 113 (Soc. Sc. for Nurs.)	3	—	3
PN 115 (Health Science)	7	—	5
PN 116 (Pharm for Nurs.)	2	—	2
	18	12	18

Second Quarter	Hrs./wk. Lec.	Lab.	Cr
PN 120 (Nurs. Fund L)	—	9	3
PN 121 (Nurs. Fund)	2	—	2
PN 123 (Mental Health)	3	—	3
PN 126 (Pharm for Nurs.)	2	—	2
PN 127 (Med-Surg. Nurs. L)	—	12	4
PN 128 (Med-Surg. Nurs.)	4	—	4
	11	21	18

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
PN 130 (Med-Surg. Nurs. L)	—	24	8
PN 131 (Med-Surg. Nurs.)	12	—	10
	12	24	18

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
PN 140 (Mat-Cld Health L)	—	24	8
PN 141 (Mat-Cld Health)	10	—	8
PN 143 (Econ Sec. for Nurs.)	2	—	2
	12	24	18

Approximate cost of books, tools and supplies = $210.00
Special Lab. Fee Second Quarter = $15.00

PRE-TECHNICAL

A non-credit program for students lacking necessary entry skills in mathematics, reading, Human relations and Communications. It is designed to upgrade the skills of students desiring entry into trade-technical programs. Additional classes in personal development and exploration of the world of work are also offered.

Pre-Technical programs will generally consist of 25 to 30 clock hours per week.

Students may enter this program at any time and progress at their own rate on an individual basis. They may enter a trade-technical program when attaining entry level requirements for that program.

Students enrolled in a trade-technical program may enroll in a pre-technical class to upgrade their skill in a particular area such as mathematics, reading, etc.

Approximate cost of books, tools and supplies = $60.00

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.

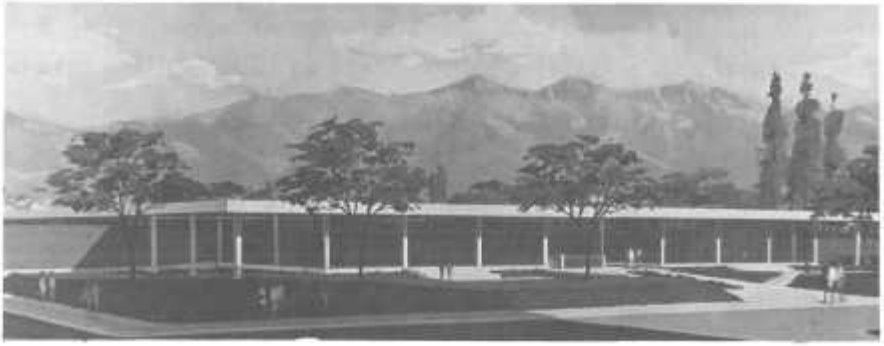
First Quarter	Hrs./wk. Lec.	Lab.	Cr.
PRT 110 Copy Preparation	—	5	2
PRT 114 Cam. Platemaking	—	5	2
PRT 115 Printing Theory	5	—	5
PRT 118 Presswork	—	10	3
BUS 70 Typewriting	—	5	2
	5	24	14

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
PRT 120 Copy Preparation	—	5	2
PRT 124 Cam. Platemaking	—	5	2
PRT 125 Printing Theory	5	—	5
PRT 128 Presswork	—	10	3
MTH 50 Voc. Math	5	—	5
	10	20	17

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
PRT 130 Copy Preparation	—	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

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
PRT 217 Print. Econ.	5	—	5
PRT 219 Occupational Trng.	—	20	7
COM 55 Communications	5	—	5
	10	20	17

Approximate cost of books, tools and supplies = $115.00



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 graduates to enter installation and service areas of employment.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
REF 110 Basic Refrig. Sys.	—	15	5
REF 111 Fund. of Refrig.	5	—	5
MTH 60 Applied Math	5	—	5
ELC 104 AC-DC Fund.	5	—	5
	15	15	20

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
REF 120 Refrig. Sys.	—	15	5
REF 121 Applied Ref. Dom.	5	—	5
ELC 106 Solid State	5	—	5
ELC 105 AC-DC Circuits	5	—	5
	15	15	20

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
REF 130 Service Commerc	—	15	5
REF 131 Auto-Controls	5	—	5
REF 105 Piping Practice	5	—	5
Elective (approved)	3	—	3
	13	15	18

Approximate cost of books, tools and supplies = $210.00

STENO I

Students are instructed in Gregg Diamond Jubilee Shorthand, the typewriter, office machines, basic communications, business math, and other related subjects. At the completion of the course, the student has the skills to secure employment as a Secretary.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 101 Typewriting I OR BUS 102 Intermed. Typing	5	5	4
BUS 105 Beg. Shorthand	5	—	5
BUS 165 Bus. of Beauty	1	1	1
ENG 80 Bus. English	3	—	3
MTH 80 Business Math	3	2	3
	17	8	16

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 102 Intermed. Typing OR BUS 103 Advanced Typing	5	5	4
BUS 106 Shorthand	5	—	5
BUS 107 Transcription	2	3	3
BUS 166 Bus. of Beauty	1	1	1
BUS 136 Sec. Training	3	—	3
BUS 131 Office Machines	—	5	3
	16	14	19

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 103 Advanced Typing OR BUS 104 Adv. Prod. Typing	5	5	4
BUS 108 Shorthand	5	—	5
BUS 109 Transcription	2	3	3
BUS 167 Bus. of Beauty	1	1	1
BUS 155 Filing	3	2	3
Elective	3	—	3
	19	11	19

Approximate cost of books, tools and supplies = $132.00

STENO II

Consists of an intensive review of shorthand theory, transcription techniques and production typewriting. Special vocational training is provided by simulated office practice classes and work experience in the final quarter.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 102 Intermed. Typing	5	5	4
BUS 110 Shorthand Review	5	—	5
BUS 109 Transcription	2	3	3
BUS 165 Bus. of Beauty	1	1	1
MTH 80 Bus. Math	3	2	3
Elective	3	—	3
	19	11	19

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 103 Advanced Typing	5	5	4
BUS 111 Shorthand Review	5	—	5
BUS 112 Transcription	2	3	3
BUS 166 Bus. of Beauty	1	1	1
BUS 131 Office Machines	—	5	3
BUS 136 Sec. Training	3	—	3
	16	14	19

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
BUS 113 Shorthand Review	5	—	5
BUS 114 Transcription	2	3	3
BUS 125 Office Practice	5	5	5
BUS 142 Work Experience	—	15	3
	12	23	16

Approximate cost of books, tools and supplies = 132.00

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.

First Quarter	Hrs./wk. Lec.	Lab.	Cr.
WLD 110 Weld. Pr. Arc. and Acetylene	—	15	5
WLD 111 Fund. of Welding	5	—	5
MTH 50 Voc. Math.	5	—	5
CIV 55 Voc. Civics	3	—	3
	13	15	18

Second Quarter	Hrs./wk. Lec.	Lab.	Cr.
WLD 120 Weld. Pr. Arc. and Acetylene	—	15	5
WLD 121 Fund. of Welding	5	—	5
ECN 55 Applied Econ.	3	—	3
BPR 100 Basic Blueprint	2	3	3
	10	18	16

Third Quarter	Hrs./wk. Lec.	Lab.	Cr.
WLD 130 Weld. Pr. Arc. and Acetylene	—	20	7
WLD 131 Fund. of Welding	5	—	5
WLD 102 Wld. BPR.	2	3	3
MS 227 Machine Shop	2	2	3
	9	25	18

Fourth Quarter	Hrs./wk. Lec.	Lab.	Cr.
WLD 210 Adv. Weld. Pr.	—	15	5
WLD 211 Pipe Weld. and Testing	10	—	8
PHY 55 Applied Physics	5	—	5
	15	15	18

Fifth Quarter	Hrs./wk. Lec.	Lab.	Cr.
WLD 220 Adv. Weld. Pr.	—	15	5
WLD 221 Spec. Welds.	10	—	8
PSY 55 Dev. of Hum. Rel.	3	—	3
	13	15	16

Sixth Quarter	Hrs./wk. Lec.	Lab.	Cr.
WLD 230 Adv. Weld. Pr.	—	15	5
WLD 231 Metal Fabr.	10	—	8
COM 55 Communications	5	—	5
	15	15	18

Approximate cost of books, tools and supplies = $115.00

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 six hours per week, two quarters per year.

Carpentry
CPA 50 (Introd., Math. & BPR)
CPA 51 (BPR, Plot Plan, Found. & Floors)
CPA 60 (Framing)
CPA 61 (Roof Framing)
CPA 70 (Interior Finish)
CPA 71 (Stairbuilding)
CPA 80 (Rein. Concrete Constr.)
CPA 81 (Heavy Timber & Log Constr.)

Electricity
ELA 50 (Electricity I)
ELA 51 (Electricity II)
ELA 60 (Electricity III)
ELA 61 (Electricity IV)
ELA 70 (Electricity V)
ELA 71 (Electricity VI)
ELA 80 (Electricity VII)
ELA 81 (Electricity VIII)

Ironworkers Layout
ILA 50 (Geom. Drawings, Ele. & Par. Line Lay.)
ILA 51 (Short Mthds., Prac. Proj. & Tr. Math.)
ILA 60 (Geom. Drgs., Par. & Rad. Line Lay.)
ILA 61 (Prac. Proj. & Tr. Mathematics)
ILA 70 (Geom. Drgs. & Pattern Drft.)
ILA 71 (Prac. Prog. & Tr. Math.)
ILA 80 (Pattern Drafting)
ILA 81 (Trade Mathematics)

Ironworking & Structural
ISA 50 (Stuctural Ironworking I)
ISA 51 (Stuctural Ironworking II)
ISA 60 (Structural Ironworking III)
ISA 61 (Structural Ironworking IV)
ISA 70 (Structural Ironworking V)
ISA 71 (Structural Ironworking VI)

Painting and Decorating

PDA 50 (Tools, Eq., Safety & Prep. Proc.)
PDA 51 (App. of Materials & Color)
PDA 60 (Mat. Used & Wood Finishes)
PDA 61 (Spec. Finishes & Paper Hanging)
PDA 70 (Sur. Prep., App. of Pts. & Sp. Ptg.)
PDA 71 (Wood, Wall & Spec. Fin.)

Plumbing

PLA 50 (Basic Fundamentals I)
PLA 51 (Basic Fundamentals II)
PLA 60 (Cast Iron Pipe I)
PLA 61 (Cast Iron Pipe II)
PLA 70 (Drainage)
PLA 71 (Bldg. House Sewers & Supp. Topics)
PLA 80 (Water Supply)
PLA 81 (Miscellaneous Topics)
PLA 90 (Sheet Lead, Rigging & Copper Pipe)
PLA 91 (Cast Iron, 4" and 1½" Lead Joints)

Pipe Fitting and Refrigeration

PRA 50 (Basic Refrigeration I)
PRA 51 (Fundamentals of Refrig. I)
PRA 60 (Basic Refrigeration II)
PRA 61 (Fundamentals of Refrig. II)
PRA 70 (Basic Science & Supp. Topics)
PRA 71 (Basic Heating & Supp. Topics)
PRA 80 (Basic Electricity)
PRA 81 (Systematic Trouble Shooting)
PRA 90 (Air Conditioning)
PRA 91 (Refrigeration)

Sheet Metal

SMA 50 (Orient., Geom., Constr., Mech. Drawing and BPR)
SMA 51 (Layout, Math, Parrallel Line Develop, and Triangulation)
SMA 60 (Math. and Adv. Parallel Line)
SMA 61 (Radial Line and Shop Problems)
SMA 71 (Mathematics)
SMA 71 (Air Conditioning Pattern Drafting)
SMA 80 (Math. and Welding Processes)
SMA 81 (Pattern Drafting)

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

KENNECOTT COPPER CORPORATION
- Auto-Diesel
- Brickmasonry
- Boilermaker
- Carpentry
- Electricity
- Electronic Control Systems
- Machinist
- Repair Gang Machinist
- Machinist 'T'
- 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 54, 55, 56, 57, 60, 61	2-5 hrs/wk
Architectural Drafting	ADT 50, 51, 52, 60, 61	6 hrs/wk
Auto Mechanics	AM 50, 51, 52	24 clock hours
Business	BUS 51, 52, 53, 71, 72, 73 74, 75, 76, 77, 78, 79, 80 81, 82, 83	2-4 hrs/wk
Blueprint Reading	BC 60, MS 60	5-6 hrs/wk
Cabinet & Furniture Making	BC 50	6 hrs/wk
Checkstand Training	MKT 54	6 hrs/wk
Commercial Art	CA 50, 51, 52, 53, 60, 61, 62, 63	6 hrs/wk
Construction Estimating	BC 55	6 hrs/wk
Drafting	DDT 50, 51, 52, 60, 61, 62	6 hrs/wk
FCC Study	ELT 52, 53	6 hrs/wk
Hair Styling	BR 90, 91, 92	6 hrs/wk
Machine Shop	MS 50, 51, 52, 53, 55	6 hrs/wk
Photography	PRT 70	6 hrs/wk
Printing	PRT 50, 51, 52, 53, 60, 61	6 hrs/wk
Refrigeration & Air Conditioning	REF 55, 56	6 hrs/wk
Sprinkler and Irrigation	PL 50	6 hrs/wk
Upholstering	UPH 50	6 hrs/wk
Welding	WEL 50, 51, 52, 53, 54	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.

Middle Management Development

This course is designed for leadership in business and industry. It includes goal setting, value of records, decision making, delegating authority, human relations, motivating individuals, inducting employees, training appraisal, and supervisory development. Pre-requisites are "Strategy" and "Executive Training," (or equivalent), and supervisory responsibilities. This course consists of 10 sessions of two and one half hours each.

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 co-operation and developing desirable attitudes are discussed in these conferences. This course consists of eight sessions of two and one half hours each.

Supervisors as 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.

Business English 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.

Systems Management

This course surveys inter-relationships and functions as an industrial organization. Included are topics in survey initiation and fact gathering, systems analysis, the office layout, forms analysis and design, data processing, operations research, information retrieval, systems planning and control.

Transportation Management

A study of types of transportation and special features of each: Carrier rules and regulations, bills of lading and other shipping documents, storage in transit, packaging, import and export costs, relation of traffic department and functions with other departments.

Inventory Control

Introduction to inventory control, forecasts and budgets, data processing approach, records and storage, clerical and communication services, ABC classification, order point, stock room and receiving, inspection and implementation.

Value Engineering

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 industrial 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, 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

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 tolerance.

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 nonmeasureable damage.

AB 132—Alignment
2 hrs./wk. 2 cr.
Suspension systems and steering geometry.

AB 134-144—Auto Body Reconstuction*
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 job.

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 50—Architectural Drafting 1*
6 hrs./wk.
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 51—Architectural Presentation 1*
6 hrs./wk.
The techniques of representing an architectural project in transparent and opaque watercolor in perspective.

ADT 52—Architectural Specifications 1*
4 hrs./wk.
The process of preparing complete specification documents for an architectural project.

ADT 60—Architectural Drafting 2*
6 hrs./wk.
A continuation of ADT 50 with emphasis on detailing stairs, windows, doors and other structural and architectural elements. Plans are developed on a small residence. Prerequisite—ADT 50.

ADT 61—Architectural Presentation 2*
6 hrs./wk.
A continuation of ADT 51 with emphasis on advanced techniques and style. Prerequisite—ADT 51.

ADT 70—Strength of Materials*
4 hrs./wk.
Basic theory of forces, section modulus, shear, tension, compression, deflection, and other forces in static structures.

ADT 71—Structures—Wood & Steel*
4 hrs./wk.
Introduction to structural systems and sizing members within these systems in wood and steel.

ADT 72—Structures—Concrete*
4 hrs./wk.
Introduction to concrete structural systems and sizing members within these systems.

ADT 80—Architectural Drafting 3*
6 hrs./wk.
Continuation of ADT 60 with emphasis on light commercial detailing. Plans are developed on a small commercial building. Prerequisite: ADT 60.

ADT 110—Architectural Drafting 1
15 hrs./wk. 5 cr.
The basic techniques of drafting including tools, sketching, lettering, plans, elevations, and sections.

ADT 112—Materials
5 hrs./wk. 4 cr.
A comprehensive analysis of wood, concrete, steel and other construction materials.

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 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 132—Strength of Materials
5 hrs./wk. 4 cr.
Basic theory of forces, section modulus, shear, tension, compression, deflection and other forces in static structures.

ADT 133—Architectural History
2 hrs./wk. 2 cr.
General Survey of the history of Architecture from ancient through modern and the effects of history on modern design.

ADT 135—Perspective & Delineation
5 hrs./wk. 3 cr.
Theory of one, two and three point perspective as well as the basic techniques of shades and shadows as they apply to buildings in pencil media.

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 215—Structures—Wood and Steel
5 hrs./wk. 4 cr.
Introduction to structural systems and sizing members within these systems in wood and steel. Prerequisite ADT 132.

ADT 216—Specifications
5 hrs./wk. 4 cr.
Introduction to the basic CSI format and specification writing.

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 226—Structures—Concrete
5 hrs./wk. 4 cr.
Introduction to concrete structural systems and sizing members within these systems. Prerequisite ADT 132.

ADT 227—Codes and Professional Practice
5 hrs./wk. 3 cr.
The study of the Uniform Building Code, City and County Codes, zoning and the legal practice of an architect.

ADT 228—Arch. Model Making
5 hrs./wk. 3 cr.
The application of three dimensional theory to building block and presentation models for study and display in the architectural field.

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.

ADT 234—Construction Layout
5 hrs./wk. 4 cr.
Introduction to basic surveying techniques with special emphasis on construction layout and site work. Prerequisite MTH 52.

ADT 235—Occupational Orientation
3 hrs./wk. 3 cr.
The study of architectural, engineering, consulting firms including field trips, seminars, techniques and deportment in job interview.

AM 50—Automatic Transmissions*
24 clock hours
Review of principles of operations covering diagnosis, service and maintenance of late model automatic transmissions.

AM 51—Automotive Tune-up*
24 clock hours
Diagnosis, service and repair of carburetion and ignition system components and use of electronic tune-up equipment.

AM 52—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
20 hrs./wk. 7 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—Auto Electrical Components Lab.
20 hrs./wk. 7 cr.
Diagnosis, service, and repair on Auto Electrical Components and systems. Auto emissions control systems service. Engine Tune-Up procedures. Use of testing equipment and devices.

AM 211—Auto Electrical Components
5 hrs./wk. 5 cr.
Theory and function of Auto Electrical Systems and Components and of emissions control devices. Theory, in the use of testing equipment and devices. Application of advanced servicing techniques.

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.

BC 50—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 53—Bldg. Construction Math
5 hrs./wk. 5 cr.
Includes the review of rules and formulas, determining areas and volumes, ratios and proportions; and the use of math in the building industry.

BC 55—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 60—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.

BC 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.

BC 104—Blueprint Reading II—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.

BC 112 Tools of Construction
15 hrs./wk. 5 cr.
Practical experience in the care and use of hand and power tools used by the carpenter and cabinet maker in the building construction industry. General safety practices are stressed.

BC 113 Tools of Construction
5 hrs./wk. 5 cr.
A study of the kinds, care, and use of hand and power tools used in the Building Construction Industry.

BC 122 Millwork & Cabinets
15 hrs./wk. 5 cr.
Practical experience in layout and construction of cabinets and millwork. General safety practices are stressed.

BC 123 Millwork & Cabinets
5 hrs./wk. 5 cr.
Theory involved with the principles and methods used in design and layout of cabinets and millwork.

BC 132 Forming & Framing
15 hrs./wk. 5 cr.
Actual experience utilizing the principles and methods of construction work as taught in BC 133.

BC 133 Forming & Framing
5 hrs./wk. 5 cr.
Basic principles and methods of forming, placing, finishing and curing of concrete in walls, slabs, bents, pre-stressed beams, etc. Introduction to framing principles as they apply to residential and commercial buildings.

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 224 Fundamentals of Plumbing & Electricity
5 hrs./wk. 5 cr.
A familiarization course for the carpenter to aid him in coordinating his work with that of the mechanical work performed by the plumber and electrician.

BC 232 Construction Specialities
15 hrs./wk. 5 cr.
A practical application of the materials covered in BC 233. Several field trips and/or cooperative on the job training are included in this course.

BC 233 Construction Specialities
5 hrs./wk. 5 cr.
Speciality areas covering the many methods or techniques of the building industry where the carpentry student may find employment.

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.

BR 90, 91, 92—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. Open to all licensed barbers. 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.
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 51—Beginning Type*
4 hrs./wk.
Introduction to keyboard, correct typing techniques, speed and accuracy building.

BUS 52—Intermediate Type*
4 hrs./wk.
Prerequisite—Completion of BUS 51 or equivalent—30 WPM. Keyboard drills. Speed and accuracy building. Improving techniques. Introduction to production typing.

BUS 53—Advanced Typing*
4 hrs./wk.
Prerequisite—completion of BUS 52 or equivalent—45 WPM. Refining of techniques, building higher speeds and accuracy. Production typing. Duplicating machines.

BUS 54—Accounting*
4 hrs./wk.
Basic fundamentals of the accounting cycle. The balance sheet and income statement accounts are studied; how they increase, decrease, and affect the proprietorship.

BUS 55—Accounting Lab*
2 hrs./wk
Accounting lab held for special attention to problems dealt with in BUS 54. (Accounting Part I).

BUS 56—Accounting*
4 hrs./wk
Adjusting and closing 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 57—Accounting Lab*
2 hrs./wk.
Accounting lab to help students with problems pertaining to BUS 56. (Accounting Part II).

BUS 58—Federal Income Tax*
6 hrs./wk.
Basic Federal Tax Legislation and regulation for the individual or for the company.

BUS 60—Accounting*
4 hrs./wk.
Emphasis on corporate accounting; formation of corporation, kind of stock, dividends, bonds, branch operations, financial statement analysis and cost accounting.

BUS 61—Accounting Lab*
2 hrs./wk.
Accounting Lab to give students assistance with problems covered in BUS 60. (Accounting Part III).

BUS 70—Typewriting
5 hrs./wk. 2 cr.
Introduction to keyboard and correct typing techniques.

BUS 71—Beginning Shorthand*
4 hrs./wk.
Introduction of theory. Dictation of practiced material. Preview of new material for dictation.

BUS 72—Beginning Shorthand*
4 hrs./wk.
Review of theory—Dictation and speed building. Continuation of BUS 71.

BUS 73—Transcription*
2 hrs./wk.
Introduction to transcription of letters from shorthand notes.

BUS 74—Beginning Shorthand*
4 hrs./wk.
Speed building to achieve an acceptable speed for employment. Continuation of BUS 72.

BUS 75—Transcription*
2 hrs./wk.
Transcription of more advanced materials. Continuation of BUS 73.

BUS 76—Brush-up Shorthand*
4 hrs./wk.
Prerequisite—Completion of BUS 74 or equivalent—60 WPM. Review of theory. Building speed and ability to read shorthand rapidly. Some transcription. Goal—80 WPM.

BUS 77—Brush-up Shorthand*
4 hrs./wk.
Prerequisite—Completion of BUS 76 or equivalent, approximately 80 WPM. Continuation of BUS 76 with emphasis on shortcuts. Goal—100 WPM.

BUS 78—Transcription*
2 hrs./wk.
Prerequisite—BUS 77. Office style dictation, transcription of letters, manuscripts, and composition of letters.

BUS 79—Brush-up Shorthand*
4 hrs./wk.
Prerequisite—Completion of BUS 77 and

BUS 78. Continuation of BUS 71 with emphasis on speed and vocabulary building. Dictation will cover the full spectrum of business usage. Goal—120WPM.

BUS 80—Transcription*
2 hrs./wk.
Prerequisite—Enrolled in BUS 79. Continuation of BUS 78. Emphasis on speed, accuracy, ability to use good judgment, and mailable transcripts first time.

BUS 81—Machine Transcriptions*
4 hrs./wk.
Instruction in operating IBM, Stenocord, and dictaphone transcribing equipment. It is designed to develop production skill in setting up letters, memos, and other documents from material on magnetic and grooved belts.

BUS 82—Office Machines*
2 to 4 hrs./wk.
Introduction to rotary calculator, ten key adding machine, full keyboard adding-listing machine, key-driven calculator, with emphasis on business application.

BUS 83—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 and payroll.

BUS 101—Typewriting I
10 hrs./wk. 4 cr.
Introduction to keyboard, correct typing techniques, speed and accuracy building.

BUS 102—Intermediate Typing
10 hrs./wk. 4 cr.
Keyboard drills; Speed and accuracy building; Improving techniques; and Introduction to production typing. Prerequisite: Completion of BUS 101 or equivalent—30 WPM.

BUS 103—Advanced Typing
10 hrs./wk. 4 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. 4 cr.
An advanced program to develop competent typists. Medical and legal typing are stressed. Correspondence, records, indexing, filing, manuscripts, reports, and dictaphone. Prerequisite: Completion of BUS 103 or equivalent—55 WPM.

BUS 105—Beginning Shorthand
5 hrs./wk. 5 cr.
Introduction of theory. Dictation from practiced material. Preview of new material for dictation and transcription practice.

BUS 106—Shorthand
5 hrs./wk. 5 cr.
Review of theory. Dictation and speed building. Continuation of BUS 105. Specialized dictation and new material.

BUS 107—Transcription
5 hrs./wk. 3 cr.
Introduction to transcription of letters on the typewriter. Review English fundamentals necessary for mailable letters.

BUS 108—Shorthand
5 hrs./wk. 5 cr.
Speed building to achieve an acceptable speed for employment. Continuation of BUS 106. New material, specialized dictation and theory reinforcement.

BUS 109—Transcription
5 hrs./wk. 3 cr.
New material dictation and transcription with more advanced materials and specialized vocabulary. Continuation of BUS 107.

BUS 110—Shorthand Review
5 hrs./wk. 5 cr.
Review, with emphasis on proportions. Building of speed and ability to read shorthand rapidly. Some transcription. Goal—80 WPM. Prerequisite: Completion of BUS 108 or equivalent.

BUS 111—Shorthand Review
5 hrs./wk. 5 cr.
Building of speed, vocabulary building, and ability to read shorthand rapidly. Dictation will cover full spectrum of business usuage. Goal 100 WPM.

BUS 112—Transcription
5 hrs./wk. 3 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 Review
5 hrs./wk. 5 cr.
Speed building, shortcuts, advanced material covering broad business usage. Prerequisite: BUS 111 or equivalent. Goal 120 WPM.

BUS 114—Transcription
5 hrs./wk. 3 cr.
Prerequisite: Enrollment in BUS 113. Advanced production methods for high speed transcription. Goal: vocational skills for job entry.

BUS 119—Vocabulary Building
3 hrs./wk. 3 cr.
Course in vocabulary building and spelling improvement.

BUS 125—Office Practice
10 hrs./wk. 5 cr.
Simulated office practice five weeks and filing five weeks. Processing of office documents, invoicing, and correspondence.

BUS 127—Data Processing
5 hrs./wk. 3 cr.
Introduction to Data Processing. Automation in industry; use of terminology, card punch, sorter, binary number system.

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, measurements, and contracting problems for drafting students. Includes 5 weeks typewriting.

BUS 129—Clerical Record Keeping
5 hrs./wk. 3 cr.
Practice on business forms, cashier's records, checks and bank statements, petty cash records, puchase records and payroll.

BUS 131—Office Machines
5 hrs./wk. 3 cr.
Introduction to rotary calculator, ten-key adding machine, full keyboard adding machine, key-driven calculator, with emphasis on business application.

BUS 132—Office Machines
5 hrs./wk. 3 cr.
Practice on rotary calculators, ten-key adding machines, key-driven calculator and full keyboard adding machines, working on business forms. Continuation of BUS 131.

BUS 134—Machine Transcription
5 hrs./wk. 3 cr.
Instruction in opertaing IBM, Stenocord, and Dictaphone transcribing equipment. Designed to develop typewriter production skill in setting up letters, memos, and other documents from belts or tapes. Prerequisite: BUS 102 or 45 WPM.

BUS 136—Secretarial Training
3 hrs./wk. 3 cr.
Preparing for the office job. Application and interview training, office procedures, duties of the receptionist, clerk, and secretary. Emphasis on attitudes.

BUS 142—Work Experience
15 hrs./wk. 3 cr.
Student works in a cooperating office for on-the-job experience for 15 to 20 hours a week. Must have prior approval by sponsoring agency (if student is sponsored). Student must be qualified and recommended by her major instructor.

BUS 155—Filing
5 hrs./wk. 3 cr.
Filing equipment and supplies. Practice in card and correspondence, filing in alphabetical, numerical, geographic, and subject systems. Retention of records.

BUS 156—Business Law I
5 hrs./wk. 5 cr.
Introduction to business law, contracts, agency and employment, commercial paper, bailments, sales, security devices, and truth in lending.

BUS 158—Business Law II
3 hrs./wk. 3 cr.
Partnerships, corporations, real property, estates and bankruptcy. A continuation of BUS 156.

BUS 160—Elementary Acctg. Part I
5 hrs./wk. 5 cr.
Basic fundamentals of the accounting cycle The balance sheet and income statement accounts are studied. How they increase or decrease and affect the proprietorship.

BUS 161—Elementary Acctg. Part II
5 hrs./wk. 5 cr.
Adjusting and closing 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—Elementary Acctg. Part 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 165—Business of Beauty
2 hrs./wk. 1 cr.
Course in visual poise to help the student become a more attractive person. Figure control, diet, posture, correct walking, standing, and sitting is stressed.

BUS 166—Business of Beauty
2 hrs./wk. 1 cr.
Course in grooming to assist the student to become a more attractive person by proper dress, hairstyling, skin and nail care.

BUS 167 — Business of Beauty
2 hrs./wk. 1 cr.
Course in proper business and social graces. Involves voice culture, etiquette and personality development — designed to create a more charming secretary.

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 to help students with problems pertaining to BUS 161. (Accounting Part II).

BUS 172—Accounting Lab*
5 hrs./wk. 2 cr.
Accounting lab to help students with problems covered in BUS 162. (Accounting Part III).

BUS 200—Secretarial Procedures
5 hrs./wk. 5 cr.
Practice in communications, services, and mechanized office operations.

BUS 201 — Advanced Typing
5 hrs./wk. 2 cr.
A review for the Executive Typist on letter-placement, arrangement, business forms, legal forms, manuscripts and tables.

BUS 202—Executive Typing
3 hrs./wk. 2 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 203—Executive Typing
2 hrs./wk. 1 cr.
A special executive program to develop competent typists who are capable of handling advanced production. Speed and accuracy development.

BUS 204—Banking & Finance
5 hrs./wk. 5 cr.
Introduction to the elements of financial management from the viewpoint of leading institutions and business managers.

BUS 210—Investments
3 hrs./wk. 3 cr.
Operation of the security market with development of ability to analyze corporate securities. Introduces investment objectives and design of portfolios for the individual.

BUS 221—Specialized Secretarial Procedures
13 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
13 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. Prerequisite: BUS 221.

BUS 247—Dictation
5 hrs./wk. 5 cr.
Theory review, special shorthand shortcuts, speed and transcription development.

BUS 248—Transcription
2 hrs./wk. 1 cr.
Designed to prepare students with transcription techniques to work efficiently under office conditions.

BUS 250—Intermediate Accounting I
5 hrs./wk. 5 cr.
Financial Statement Analysis, transaction flow, understanding the accounting process, working capital.

BUS 251—Intermediate Accounting II
5 hrs./wk. 5 cr.
Non current assets and liabilities and corporate paid-in capital. Retained earnings, analytical process and specialized accounting problems.

BUS 252—Advanced Accounting I
5 hrs./wk. 5 cr.
The student will study in detail: Partnerships—formation, operation, ownership changes, liquidation; special sales procedures—installment sales, consignments, home and branch operations; introduction to consolidations.

BUS 253—Advanced Accounting II
5 hrs./wk. 5 cr.
The student will study in detail: Special problems and statements relating to consolidations; fiduciaries—receiverships, estates and trusts; compound interest—present values and special problems.

BUS 254—CPA Review
5 hrs./wk. 5 cr.
The student will study in detail: Special problems relating to the CPA exam together with techniques related to preparation for the five areas tested—problems, theory, auditing, business law, ethics.

BUS 256—Transcription
2 hrs./wk. 1 cr.
Designed to prepare students with transcription techniques to work efficiently under office conditions.

BUS 257—Executive Dictation
5 hrs./wk. 5 cr.
Advanced dictation and effective transcription procedures. Development of systematic procedures in handling office style dictation. Students gain a realistic comprehension of business activities.

BUS 258—Executive Dictation
5 hrs./wk. 5 cr.
Advanced dictation and effective transcription procedures. Development of systematic dictation. Students gain a realistic comprehension of business activities.

BUS 259—Executive Accounting Practice
3 hrs./wk. 3 cr.
Medical or legal practice sets, in preparation for general record keeping in the professional office.

BUS 263—Cost Accounting
5 hrs./wk. 3 cr.
Materials, labor, overhead job cost, process cost and standard cost.

BUS 264—Advanced Cost Accounting
5 hrs./wk. 5 cr.
The student will study in detail: Job cost, standard cost, and process cost accounting as related to preparation for the CPA exam.

BUS 267—Transcription
3 hrs./wk. 2 cr.
Designed to prepare students in transcription techniques and office efficiency.

BUS 270—Federal Income Tax Accounting
5 hrs./wk. 3 cr.
Basic Federal Tax Legislation and regulation for the individual or for the company.

BUS 271—Accounting Lab
5 hrs./wk. 2 cr.
The accounting lab for BUS 250.

BUS 272—Accounting Lab
5 hrs./wk. 2 cr.
The accounting lab for BUS 251.

BUS 273—Accounting Lab
5 hrs./wk. 2 cr.
The accounting lab for BUS 252.

BUS 274—Advanced Income Taxes
3 hrs./wk. 3 cr.
The student will study in detail: Tax problems as related to businesses—single proprietorships, partnerships, corporations.

BUS 275—Auditing
5 hrs./wk. 3 cr.
Introduction to principles of auditing, audit working papers, cash audit and auditor's report.

BUS 284—Small Business Management
5 hrs./wk. 5 cr.
Introduction to problems of the small business man borrowing, taxes, purchasing, and personnel.

BUS 286—Personnel & Labor Relations
5 hrs./wk. 5 cr.
Introduction to problems associated with employees individually, and complex problems associated with organized labor.

BUS 287—Office Systems and Production
5 hrs./wk. 5 cr.
Introduction to organization, planning, and decision making related to office systems and production.

BUS 288—Budgeting
5 hrs./wk. 5 cr.
Budgeting in relation to inventories, salaries and credit management.

CA 50 (CA 10)—General Art*
6 hrs./wk.
An introductory course in basic elements of commercial art including lettering, composition, perspective, design and shading.

CA 51 (CA 11)—Water Color and Still Life Oil Painting
6 hrs./wk.
Designed to give students painting experience in water colors, acrylics or oils. Students will have the option of following either a prescribed course outlined for beginners or will be given advanced training in the media of their choice.

CA 52 (CA 12)—Photo Retouching*
6 hrs./wk.
Basic retouching of photos for course and fine screen reproduction, cropping of photos, handling of negatives.

CA 53 (CA 13)—Layout & Design 1*
6 hrs./wk.
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 60—Beginning Drawing*
6 hrs./wk.
This class teaches the student to see things as they are and to transfer this information to paper. Students will be drawing from three dimensional objects. This develops them in the area of length, size and direction.

CA 61 (CA 21)—Water Color and Still Life Oil Painting 2*
6 hrs./wk.
A continuation of CA 51 with emphasis on more advanced techniques. Prerequisite CA 51.

CA 62 (CA 14)—Figure Drawing*
6 hrs./wk.
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 60.

CA 63 (CA 23)—Layout & Design 2*
6 hrs./wk.
An advanced course designed to allow students to solve problems from advertising orders going from research, thumbnails, roughs, comprehensives to finished art. Prerequisite—CA 53.

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 115—Drawing I
8 hrs./wk. 3 cr.
Beginning drawing with emphasis on observation and execution. Taught first half of quarter only.

CA 116—Principles and Elements of Art
4 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
10 hrs./wk. 3 cr.
Introduction to basic commercial art media: pencil, pen and ink, tempera, wash, and brush with ink. Taught second half of quarter only.

CA 118—Lettering I
8 hrs./wk. 3 cr.
Introduction to brush and pen lettering, including use and care of instruments.

CA 123—Perspective
4 hrs./wk. 2 cr.
Theory and practice in basic perspective. Taught second half of quarter only.

CA 125—Lettering II
8 hrs./wk. 2 cr.
Development of skill in brush and pen lettering and application to commercial art. Prerequisite CA 118. Taught first half of quarter only.

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
4 hrs./wk 3 cr.
Theory and practice in pigment color. Taught first half of quarter only.

CA 128 — Media and Techniques II
5 hrs./wk. 3 cr.
Introduction to basic media and techniques including tempera and wash. Taught second half of quarter only.

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
8 hrs./wk. 2 cr.
Drawing from the model, including use of the figure in fashion drawings. Prerequisite CA 126. Taught first half of quarter only.

CA 137—Design I
4 hrs./wk 3 cr.
Introduction to principles of advertising design, including creative processes.

CA 139—Drawing II
10 hrs./wk. 2 cr.
Advanced drawing, including drawing from nature. Prerequisite CA 115. Taught second half of quarter only.

CA 140—Layout I
5 hrs./wk 3 cr.
Introduction to advertising layout, including thumbnails and roughs.

CA 215—Art Preparation I
10 hrs./wk. 3 cr.
Introduction to camera ready art preparation. Taught second half of quarter only.

CA 216—Illustration
10 hrs./wk. 3 cr.
Introduction to advanced illustrating techniques including book illustrating. Taught first half of quarter only.

CA 217—Cartooning (Optional)
4 hrs./wk. 3 cr.
Introduction to cartooning principles and techniques.

CA 220—Art Preparation II
4 hrs./wk. 3 cr.
Advanced techniques in camera ready art, including color separation and mechanics of reproduction. Prerequisite CA 215.

CA 227—Typography II
4 hrs./wk. 2 cr.
Intensive study of various type faces and their application in commercial art. Prerequisite CA 135.

CA 229—Retail Illustration
5 hrs./wk. 3 cr.
An introduction to materials and techniques involved in fashion and product illustration for department store advertising.

CA 230—Layout II
5 hrs./wk. 3 cr.
Advanced layout with emphasis on comprehensives. Prerequisite CA 140.

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
6 hrs./wk. 3 cr.
Study of art studios, advertising agencies, sign shops, engraving and printing plants and field trips. Techniques and deportment in job interviews. Taught second half of quarter only.

CA 237—Portfolio
10 hrs./wk. 3 cr.
Building an art portfolio for use in employment interviews. Taught first half of quarter only.

CA 239—Design II
5 hrs./wk. 3 cr.
Advanced design with emphasis on corporate logos and advertising design applications. Prerequisite CA 137.

CA 241—Studio Production
9 hrs./wk. 5 cr.
On the job simulated work. Actual advertising problems presented under working conditions.

CA 242—Elective Art I
8 hrs./wk. 3 cr.
Student will choose between Advanced Illustration and Advanced Cartooning. Taught first half of quarter only.

CA 243—Elective Art II
8 hrs./wk. 3 cr.
Student will choose between Layout & Design and Photo Retouch. Taught second half of quarter only.

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 wiglets, 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.

COS 150—Haircutting Lab
35 hrs./wk. 12 cr.
Emphasis on proper cut for individual facial features. Also practice with different cuts, such as basic, A-line, pixie, sasoon, etc. COS 150 and COS 151 meet the 500 clock hour requirement for a license in haircutting.

COS 151—Haircutting Theory
5 hrs./wk. 5 cr.
Instruction and demonstration on personalized haircutting. Detail on method and technique for special cuts. COS 150 and COS 151 meet the 500 clock hour requirement for a license in haircutting.

CPA 50—Introduction, Math & Blueprint Reading*
6 hrs./wk.
Introduction to carpentry, the apprenticeship system, mathematics, job planning, and blueprint reading.

CPA 51—Blueprint Reading, Plot Plans, Foundations and Floors*
6 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 60—Framing*
6 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 61—Roof Framing*
6 hrs./wk.
Roof framing types and styles, mathematics, tool blueprints, gable roof, layout of different types of rafters.

CPA 70—Interior Finish*
6 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 71—Stairbuilding*
6 hrs./wk.
Methods and procedure of stairbuilding. Includes design, types and layout, mathematics, problems and material listing.

CPA 80—Reinforced Concrete Construction*
6 hrs./wk.
History, materials, methods, forms, layout construction, types and problems of reinforced concrete construction.

CPA 81—Heavy Timber & Long Construction*
6 hrs./wk.
Development of timber construction, characteristics, types, uses and cost. Also, selection, handling and layout of log construction.

DDT 50 (DDT 10)—Mechanical Drafting 1*
6 hrs./wk.
Fundamentals of drafting including sketching, lettering, orthographic projection, auxiliary views and sectioning.

DDT 51 (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 52 (DDT 12)—Layout for Fabricators I*
6 hrs./wk.
The fundamentals of graphic layout of complex objects in flat pattern.

DDT 60 (DDT 20)—Mechanical Drafting 2*
6 hrs./wk.
Advanced techniques including assembly production, dimensions, tolerances, surface quality, specifications and basic descriptive geometry. Prerequisite DDT 50.

DDT 61 (DDT 21)—Structural Drafting I*
6 hrs./wk.
The basic fundamentals of drawing structural steel and steel connections for fabrication, Smoley's tables, estimating.

DDT 62 (DDT 22)—Layout for Fabricators 2*
6 hrs./wk.
A continuation of DDT 52. Prerequisite DDT 52.

DDT 63—Structural Drafting 2*
6 hrs./wk.
Design of simple beams and columns, reactions and stresses in connection, bolted, welded, and riveted. Prerequisite—DDT 61.

DDT 64—Structural Drafting 3*
6 hrs./wk.
Design and detail of trusses, design drawings for framed and seated connections, skewed, sloped and canted beam connections. Prerequisite—DDT 63.

DDT 65—Layout for Fabricators 3*
6 hrs./wk.
A continuation of DDT 62. Prerequisite—DDT 62.

DDT 70—Mechanical Drafting 3*
6 hrs./wk.
Continued descriptive geometry, shop processes, materials and basic working drawings. Prerequisite—DDT 60.

DDT 71—Technical Illustrating*
6 hrs./wk.
Review of multiview drawing and basic projection systems. Includes parallel and perspective projection in oblique and orthographic. Prerequisite—DDT 70 or Equivalent.

DDT 75—Layout for Fabricators 5
6 hrs./wk.
A continuation of DDT 65. Prerequisite—DDT 65.

DDT 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.

DDT 110—Drafting Fundamentals
20 hrs./wk. 5 cr.
Laboratory practice with drafting tools, media, lettering, sketching and basic drafting techniques. Taught first half of quarter only (days).

DDT 112—Plane Descriptive Geometry
20 hrs./wk. 5 cr.
Geometric construction, orthographic projection, auxiliary views and sectional views. Taught second half of quarter only (days).

DDT 115—Mechnical Drafting 1*
16 hrs./wk. 8 cr.
Fundamentals of basic drawing including tools, lettering, orthographic projec-

tion, auxiliary views and descriptive geometry.

DDT 123—Descriptive Geometry*
12 hrs./wk. 5 cr.
Study of points, lines, planes, and polyhedrons and their manipulation in space. Auxiliary views, intersections and developments. Taught first half of quarter (days).

DDT 124—Advanced Descriptive Geometry
10 hrs./wk. 5 cr.
Continuation of DDT 123. The study of intersection and developments. Prerequisite—DDT 123.

DDT 126—Pipeline Drafting
10 hrs./wk. 5 cr.
Plumbing, heating and pipe drafting. Completion of finished drawings involving their installation.

DDT 127—Shape Description
12 hrs./wk. 5 cr.
Application of projection and dimensioning techniques to describe objects. Prerequisite—DDT 112 or equivalent.

DDT 133—Engineering Drawing 1*
24 hrs./wk. 5 cr.
Fundamentals of tolerancing, true position and limits, pictorial drawing and basic work drawing detailing. Prerequisite—DDT 123. Taught first half of quarter only (days).

DDT 134—Engineering Drawing 2*
20 hrs./wk. 5 cr.
Continuation of DDT 133 with more study in the same subject areas. Prerequisite—DDT 133. Taught second half of quarter only (days).

DDT 205—Technical Illustration
5 hrs./wk. 3 cr.
For commercial art students—designed to introduce the student to drafting techniques such as lines, lettering, orthographic projection dimensioning, pictoral, dimetric and trimetric drawings.

DDT 213—Topographic Drafting
10 hrs./wk. 5 cr.
Surface features of the earth are drawn and depicted by conventional symbols.

DDT 214—Topographic Drawing
20 hrs./wk. 10 cr.
Surface features of the earth are drawn and depicted by conventional symbols. Also includes sub-divisions, curves and intersections, contours, natural and manmade features. Prerequisite—DDT 124.

DDT 216—Mechanics & 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 217—Technical Illustration
20 hrs./wk. 10 cr.
Review of orthographics will be taught. Continued study including isometric, ditrimetric, perspective, Anderson board, grid, media, color and presentation.

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 223—Structural Drafting
15 hrs./wk. 5 cr.
A general course covering ALSC standard detailing, welding symbols, connections details, shapes and plates and Smoley's tables. Prerequisite—DDT 133 & DDT 134.

DDT 224—Steel Design
4 hrs./wk. 4 cr.
Design of bolted and welded connections, simple beams and columns, trusses and builtup sections, rectangular and skewed framing. Prerequisites DDT 216.

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.
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
20 hrs./wk. 10 cr.
A board coverage of components, materials, symbols, standards, industrial, diagrams, wiring harnesses and printed circuits and military standards.

DDT 231—Photo Drafting
5 hrs./wk. 3 cr.
Study in the combination of photographs and technical drawings.

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*
5 hrs./wk. 3 cr.
A specialized course in electrical schematics, component design, P.C. and terminal boards and assemblies.

DDT 270—Basic Design
5 hrs./wk. 3 cr.
A study of design fundamentals and aesthetics as they apply to mechanical component design covering form, texture and color.

DP 50—Keypunch
6 hrs./wk.
Instruction in keypunch machines and punch card systems.

DP 101—Basic Computer Concepts*
5 hrs./wk. 3 cr.
Terminology, syntax, and basic concepts pertaining to computers. Introduction to programming languages. Prerequisite: Satisfactory score on Programming Aptitude Test Battery, and Basic Math Test. BUS 70 taken concurrently or type skill for satisfactory key punch performance.

DP 102—Elem. Computer Concepts
3 hrs./wk. 2 cr.
Terminology, syntax, and basic concepts pertaining to computers with actual case problems in flow-charting.

DP 112—Basic Computer Programming I*
10 hrs./wk. 7 cr.
Basic assembly language programming and concepts. Familiarization with actual operation of computer. Prerequisite: Satisfactory score on Programming Aptitude Test Battery, and Basic Math Test.

DP 113—Elem. Computer Programming 2
6 hrs./wk. 4 cr.
Basic computer programming concepts. RPG language used to teach input and output layouts and basic processing logic. Hands on training on Univac 9300 Disc.

DP 114—Computer Programming 2
6 hrs./wk. 4 cr.
Basic Assembly language concepts and fundamental programming. BAL used to teach fundamental concepts of coding, flow-charting, program logic. Hands on training on Univac 9300 Disc.

DP 115—Basic Computer Programming II*
15 hrs./wk. 7 cr.
Continuing basic assembly language programming problems. Familiarization with all instructions and their use. Prerequisite: A grade of "C" or better in DP 112 and a passing grade in MTH 51.

DP 116 — Fundamental Computer Programming 3
6 hrs./wk. 4 cr.
Familiarization with all assembly language instruction and their use. Instruction in handling loops, I/O control, subroutines, error routines, basic data manipulation. Hands on training on Univac 9300 Disc.

DP 117—Fundamental Computer Programming 4
6 hrs./wk. 4 cr.
Use of all assembly language instructions in complex programs with multifile input, error handling, basic introduction to Disc job control language. Hands on training on Univac 9300 Disc.

DP 118—Advanced RPG Programming
6 hrs./wk. 4 cr.
Advanced RPG concepts including handling of Disc processing of random, sequential and indexed-sequential data, use of tables. Application problems on training on Univac 9300 Disc system.

DP 120—Basic COBOL Programming*
15 hrs./wk. 7 cr.
Training and instruction in COBOL language and emphasis on solution of problems. Prerequisite: A grade of "C" or better in DP 115 and a passing grade in MTH 142 and BUS 160.

DP 121—Introduction COBOL Programming
6 hrs./wk. 4 cr.
Introduction to COBOL programming and instruction in data formats and program writing. Emphasis on solution of practical business problems. Hands on training on Univac 9300 Disc.

DP 122—Intermediate COBOL Programming
6 hrs./wk. 4 cr.
Intermediate COBOL applications including Disc operations, subscripting and multifile handling. Hands on training on Univac 9300 Disc.

DP 211—Fortran & Applied Math
10 hrs./wk. 7 cr.
Basic principles and fundamentals of Fortran programming, basic statistical concepts and application of Fortran language in solving mathematical problems and use of statistics in business programs. Prerequisite: Grade of "C" or better in DP 230 and a passing grade in MTH 144.

DP 220—Applied COBOL Programming
10 hrs./wk. 5 cr.
Advanced programming technique used in COBOL with emphasis on case studies and problem solution. Prerequisite: A grade of "C" or better in DP 120, passing grade in MTH 143 and BUS 161.

DP 231—Applied BAL Programming
10 hrs./wk. 5 cr.
Advanced assembly language programming principles with emphasis on macros, subroutines, indexing, instruction modification, software techniques, multi-processing and error handling. Prerequisite: Grade of "C" or better in DP 115 and DP 120 and passing grade in BUS 161 and MTH 143.

DP 280—Business Systems Design
10 hrs./wk. 7 cr.
Techniques of analyzing, designing and implementing business systems using computers. Prerequisite: A grade of "C" or better in DP 220 and a passing grade in BUS 162.

DP 290—Advanced Programming Techniques
10 hrs./wk. 7 cr.
Advanced techniques in programming using Assembly language, Fortran or COBOL. Software writing stressed. Prerequisite: A grade of "C" in DP 220.

DP 295—Individual Case Studies
10 hrs./wk. 5 cr.
Selected practical business problems for actual production situations in Assembly language, Fortran of COBOL. Includes use of tape, and disk storage and use of job control language in programs. Job interviews & resumes discussed. Prerequisite: A grade of "C" or better in DP 280.

DP 298—Case Study Seminar
1 hr./wk. 1 cr.
Individual case study and student problem solution under instructor supervision. Prerequisite: A grade of "C" or better in DP 230 or DP 280.

ELA 50—Electricity I*
6 hrs./wk.
Orientation, job information, mathematics, electrical theory and electrical code.

ELA 51—Electricity II*
6 hrs./wk.
Job information, mathematics code, electrical theory, introduction to blue-print reading.

ELA 60—Electricity III*
6 hrs./wk.
Safety, job information, electrical theory, electrical code, and mathematics.

ELA 61—Electricity IV*
6 hrs./wk.
Blueprint reading, mathematics, electrical code, electrical theory, and job information.

ELA 70—Electricity V*
6 hrs./wk.
Introduction to motor controls and continuation of blueprint reading, mathematics, electrical theory, and electrical code.

ELA 71—Electricity VI*
6 hrs./wk.
Motor controls, blueprint reading, and the electrical code.

ELA 80—Electricity VII*
6 hrs./wk.
Introduction to basic electronics and atomic safety. Continuation of blueprint reading and electrical code.

ELA 81—Electricity VIII*
6 hrs./wk.
Electronics, static motor control, blueprint reading and the electrical code.

ELC 50—Basic Electricity
6 hrs./wk.
Basic overview of the fields of electricity and electronics. Includes sample problems, demonstrations, exploratory work and lab.

ELC 51—Basic Electricity
6 hrs./wk.
Continuation of ELC 50.

ELC 52—Basic Electricity*
6 hrs./wk.
Continuation of ELC 51 with emphasis on electronics.

ELC 53—Powder Puff Electronics*
3 hrs./wk.
A course to familiarize the consumer and housewife with principles involved in the more common electrical circuits and appliances. Testing, repairing or replacing light fixtures, plugs, switches, small appliance extension cords, etc.

ELC 102—Electrical Code*
5 hrs./wk. 5 cr.
National Electrical Code covering residential, commercial, industrial, and hazardous wiring requirements. Also includes work with electrical blueprints.

ELC 104—AC-DC Fundamentals*
5 hrs./wk. 3 cr.
Electron theory, Ohms Law, Watt's Law, Kirchoff's Law, circuits, and National Electrical Code.

ELC 105—AC-DC Circuits
5 hrs./wk. 3 cr.
Electrical circuits as related to the appliance field. Includes motors and transormers, operation, maintenance and overhaul. Introduction to controls.

ELC 110—Electrical Wiring
15 hrs./wk. 5 cr.
Laboratory application of principles covered in ELC 102 and ELC 111 including wiring of the home constructed by the college.

ELC 111—Basic Electricity
5 hrs./wk. 5 cr.
Electron theory, Ohm's Law, Watt's Law,

Thevenin's Theorem, Kirchhoff'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 including motor rewinding.

ELC 121—Electrical Devices
5 hrs./wk. 5 cr.
Study of electric motors, their construction, operation, maintenance, selection application, repair, conversion, overhaul, and maintenance including generators and transformers.

ELC 130—Industrial Controls
15 hrs./wk. 5 cr.
Laboratory application of principles covered in ELC 131 including work on industrial voltages.

ELC 131—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 and trouble shooting with emphasis on electromagnetics with basic introduction to static control.

ELT 52—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 backgroud in electronics, either through some school or work experience.

ELT 53 (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 52 or equivalent.

ELT 109—Electronics
5 hrs./wk. 3 cr.
An introduction to basic concepts of electronics and electronic equipment for drafting students.

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 woldering 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 123—Solid State and Vacuum Tube Fundamentals*
10 hrs./wk. 8 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 133—Principles of Electonic Communication Devices*
10 hrs./wk. 8 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 empasized.

ELT 213—Advanced Communications and Television*
10 hrs./wk. 8 cr.
Application of electronics communications theory to circuits involved in transmission and reception of black and white TV systems.

ELT 220—Operation of Advanced Test and Microwave Equipment*
10 hrs./wk. 8 cr.
Instruction in operation of advanced test equipment—calibration and alignment. Study of integrated radar and microwave circuits.

ELT 223—Microwave Systems Analysis*
10 hrs./wk. 8 cr.
Principles of microwave theory, microwave oscillators, wave guides, antenna theory, Smith Chart and related circuits—Application to radar and communications. Advanced solid state work with integrated circuits and their application.

ELT 230—Laboratory Analysis of Digital and Analog Concept*
10 hrs./wk. 3 cr.
Constructions and analysis of logic circuits used in computers. Practice in programming and familiarization of computer systems.

ELT 233—Computer Technology*
10 hrs./wk. 8 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 243 Alignment, adjustment and trouble shooting and supervised repair work is emphasized. Field trips to various medical centers are emphasized. Prerequisite ELT 243 or concurrent.

ELT 243—Medical Electronics*
10 hrs./wk. 8 cr.
Design and operation of Medical Electronic Equipment including: X-Ray and related instrumentation. Coronary care instrumentation including: EKG, Rate Meters, Defibrillators, Syncronizers, Pacemakers, Strain Gauges and Amplifiers. Nuclear Medicine Instrumentation including: Radiation detection devices, counting devices scalers and scanning devices. Biological potentials are considered. Computer applications as used in medicine are considered. Prerequisite ELT 233.

ELT 250—Instrumentation Lab*
10 hrs./wk. 3 cr.
The lab section deals with the processes of calibration and standardization of test equipment. Prerequisite ELT 253 or concurrent.

ELT 253—Instrumentation*
10 hrs./wk. 8 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 133.

ELT 260—Color Lab*
10 hrs./wk. 3 cr.
Application of trouble-shooting techniques and testing circuitry of color television receivers.

ELT 263—Color TV*
10 hrs./wk. 8 cr.
Study of application of TV principles as they pertain to the color television system. Prerequisite ELT 213.

ELT 264—Application of Broadcast Techniques for CCTV
Application of principles of closed circuit television and broadcast techniques. Actual video taping, editing, use of film and camera chains will be stressed.

ELT 265—Broadcast and Closed Circuit Television
Concepts and operation of closed circuit television and broadcast television will be taught. Broadcast standards will be stressed. Prerequisite ELT 260 and ELT 263.

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 preventive maintenance on Highway Truck Diesel engines and supporting systems.

HDM 205—C.E. Drive Sys. Lab.
20 hrs./wk. 7 cr.
Practical experience on clutches, torque converters, power shift transmission, torque brakes and retarders, drive lines, differentials.

HDM 206—C. E. Drive Systems
5 hrs./wk. 5 cr.
Instruction on operation and overhaul procedures of torque converters, power shift transmissions, clutches, drive lines, differentials.

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—Const. Equip. Mobile Hydraulics Lab.
20 hrs./wk. 7 cr.
Practical experience on maintenance and overhaul procedures on hudraulic systems, power steering, blades, buckets, bodies and rippers.

HDM 226—Const. Equip. Mobile Hydraulics
5 hrs./wk. 5 cr.
Instruction on operation and overhaul procedures on hydraulic systems, power steering, blades, buckets, bodies and rippers.

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 preventive maintenance of the support systems; air brakes, electrical, steering, suspension, lubrication, and frame assembly.

HDM 235—Const. Equipment Support Systems Lab.
20 hrs./wk. 7 cr.
Practical experience in trouble diagnosis and maintenance of air systems, steering, crawler under carriage and final drives.

HDM 236—Const. Equipment Support Systems
5 hrs./wk. 5 cr.
Instruction on operation, overhaul procedures and trouble diagnosis of air systems, steering, crawler undercarriage and final drive.

ILA 50—Geometric Drawings, Elementary & Parallel Line Layout*
6 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 51—Short Methods, Practical Projection & Trade Mathematics*
6 hrs./wk.
Developing patterns by short methods and principles of rapid layout. Introduction to Orthographic Projection, principles of projection and mathematics.

ILA 60—Geometric Drawings, Parallel and Radial Line Layout*
6 hrs./wk.
Construction of geometric drawings and developing patterns for parallel and radial line layout.

ILA 61—Practical Projection and Trade Mathematics*
6 hrs./wk.
Practical projection of plane figures, cylinders and cones. Mathematics involving proportion, ratio, percentages, and shop methods for finding circumference.

ILA 70—Geometric Drawing and Pattern Drafting*
6 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 71—Practical Projection and Trade Mathematics*
6 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 80—Pattern Drafting*
6 hrs./wk.
Additional principles and practices for developing and drafting a variety of patterns.

ILA 81—Trade Mathematics*
6 hrs./wk.
Areas of circles, triangles, squares, trapezoids, and semicircular-sided figure. Volume of cubes, square prisms, rectangular solids, cylindrical and semi-circular-sided solids.

IPS 50—Power Sewing
120 clock hours
Basic power sewing machine operation to develop skill, speed, confidence and minor maintenance of the machine.

ISA 50—Structural Ironworking I*
6 hrs./wk.
Mechanical drawing and blueprint reading, mathematics, rigging and safety, trade terms, welding, social science and structural.

ISA 51—Structural Ironworking II*
6 hrs./wk.
Mechanical drawing and blueprint reading, mathematics, rigging and safety, welding and cutting, social science, trade terms and safety.

ISA 60—Structural Ironworking III*
6 hrs./wk.
Mechanical drawing and blueprint reading, mathematics, rigging and safety, trade terms, welding and cutting, social science and safety.

ISA 61—Structural Ironworking IV*
6 hrs./wk.
Ornamental work and continuation of ISA 60.

ISA 70—Structural Ironworking V*
6 hrs./wk.
Blueprint reading, mathematics, safety, rigging, welding and cutting, social science and ornamental work.

ISA 71—Structural Ironworking VI*
6 hrs./wk.
Blueprint reading, mathematics, structural, ornamental, reinforcing, and welding and cutting.

MKT 51—Introduction to Real Estate
6 hrs./wk.
Basic principles and practices of real estate, preparation for licensing examination and work as real estate salesman.

MKT 52—Real Estate Review*
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 54—Checkstand Training*
6 hrs./wk.
Fundamentals of cash register operation, scales and automatic checkstands. Procedures in making change, cashing checks, issuing trading stamps, bagging merchandise. Grooming and public relations.

MKT 99—Cashier Training*
10 hrs./wk.
Fundamentals of cash register operation, scales, and automatic checkstands. Procedures in making change, cashing checks, issuing trading stamps, bagging merchandise. Grooming and public relations. A single program (certificate at end of first quarter).

MKT 102—Principles of Marketing
5 hrs./wk. 4 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 104—Introduction to Business
4 hrs./wk. 4 cr.
Designed to give students an overview of the business world and to assist the student in making an occupational choice.

MKT 109—Hotel-Motel Management
5 hrs./wk. 5 cr.
Course covering management of hotel and motel establishments. Food services, customer services, purchasing of goods and services, personnel, and fiscal operations are all covered.

MKT 115, 116, 117—Work Experience I
15 hrs./wk. 3 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, approach, determining wants and needs, product information and organization.

MKT 126—Retailing
5 hrs./wk. 5 cr.
Fundamentals of merchandising, store location, organization, and layout; problems in the various branches of retailing; store service, and personnel; buying, selling and stock control.

MKT 128—Advertising
5 hrs./wk. 4 cr.
Introduction to the field of advertising and its role in marketing today.

MS 50—Basic Machine Tool A*
6 hrs./wk.
Basic machine shop theory including mathematics, blueprint reading, introduction to the engine lathe, care and maintenance.

MS 51—Basic Machine Tool B*
6 hrs./wk.
Continuation of MS 50 including additional mathematics, blueprint reading and machine shop lab practice.

MS 52—Advanced Machine Tool A*
6 hrs./wk.
Advanced applied math and blueprints. Use of drilling machines and sawing machines. Advanced lathe operation.

MS 53—Advanced Machine Tool B*
6 hrs./wk.
Practical geometry, advanced blueprints, safe practices and operation of milling machines.

MS 55—N.C. Programming Operation
This class includes machine set up and operation of 2 axis point to point machining, programming for point to point drill mill tap and boring, and tape preparation on the Frieden Flexowriter.

MS 56—Applied Machine Shop Math
5 hrs./wk. 5 cr.
Includes geometry, solution of triangles by trigonometry, with applications to tapers, indexing, and gear trains. Prerequisite: MTH 50.

MS 57—Applied N. C. Math
5 hrs./wk. 5 cr.
The study of the binary numbering system and analytical geometry with vectors as applied to N. C. machines.

MS 60—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.

MS 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.

MS 110—Machine Shop Lab.
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 Theory
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 Lab.
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—Basic Machine Theory
5 hrs./wk. 5 cr.
Theory and operation of more complex machine tools including shapers, mills and planers. Emphasis is places 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 Shop Lab.
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 Theory
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 140—Advanced Machine Shop Lab.
15 hrs./wk. 5 cr.
Lab application of principles covered in MS 141 including advanced work with Numerical Control Programming, use of Flexowriter, Metallurgy, and Tool and Cutter Grinding.

MS 141—Advanced Machine Theory
5 hrs./wk. 5 cr.
Advanced quality control, numerical control, precision grinding and metallurgy.

MS 227—Machine Shop*
4 hrs./wk. 3 cr.
An introduction to actual machine processes demonstrated in the machine shop including numerical control.

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 50—Tools, Equipment, Safety & Preparatory Procedure*
6 hrs./wk.
Care and cleaning of brushes and rollers. Spray equipment techniques and failures. Preparation of various surfaces, and application of paints. Safety.

PDA 51—Application of Materials and Color*
6 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 60—Materials Used and Wood Finishes*
6 hrs./wk.
Nature of component parts and purpose of paint. Types of wood and wood finishes and their application of floors and interior woodwork.

PDA 61—Specialty Finishes and Paper Hanging*
6 hrs./wk.
Specialty finishes including glazing, antique, stipple, gild, stencil, marble, and grain. Materials, tools and preparation for hanging paper and special materials.

PDA 70—Surface Preparation, Application of Paints and Spray Painting*
6 hrs./wk.
Mechanical and chemical surface preparation. Uses and application of paints. Spray painting principles, application and equipment.

PDA 71—Wood Finishes, Wall Covering & Specialty Finishes*
6 hrs./wk.
Types of wood and their preservation. Surface preparation, tools and equipment. Color mixing and matching, and specialty finishes.

PL 50—Sprinkler and Irrigation
6 hrs./wk.
Basic principles of design and assembly of sprinkler and irrigation systems are considered. This course is a desirable addition to a plumbing apprenticeship.

PLA 50—Basic Fundamentals I*
6 hrs./wk.
Mathematical review including addition, subtraction, multiplication, division, fractions, percentages, and square root. Also, instruction on screw pipe and fittings.

PLA 51—Basic Fundamentals II*
6 hrs./wk.
Mathematics, pipe classification and measuring, 45-degree offsets, screw pipe fittings, and connections.

PLA 60—Cast Iron Pipe I*
6 hrs./wk.
Cast iron pipe weights, measuring and cutting, preparation and completing vertical and horizontal joints, and related trade mathematics.

PLA 61—Cast Iron Pipe II*
6 hrs./wk.
Soil pipe fittings and their uses, C.I. soil pipe offset bends, pipe hangers, clamps and supports.

PLA 70—Drainage*
6 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 71—Building House Sewers and Supplemental Topics*
6 hrs./wk.
Building sewers as they apply to housing. Blueprint reading, labor laws, plumbing repairs, steam and hot water fittings, mathematics, and isometric drawings.

PLA 80—Water Supply*
6 hrs./wk.
Building water systems, hot water supply system and the cold water supply system.

PLA 81—Miscellaneous Topics*
6 hrs./wk.
Cross-connections, installing supports and fixtures, gas piping, and cutting large screw pipe.

PLA 90—Sheet Lead, Rigging & Copper Pipe*
6 hrs./wk.
Theory, demonstrations and practical assignments using sheet lead, rigging techniques and copper pipe.

PLA 91—Cast Iron 4" and 1½" Lead Joints*
6 hrs./wk.
Information demonstrations and practical exercises on cast iron, 4" lead joints and 1½" lead joints.

PN 20—Personal Health
5 hrs./wk.
An elementary health course dealing with personal health problems of the young adult.

PN 110—Nursing Fundamentals Lab
12 hrs./wk. 4 cr.
Supervised laboratory and hospital

practice in effective application of fundamental nursing principles.

PN 111—Nursing Fundamentals
6 hrs./wk. 4 cr.
Fundamental principles guiding nursing care.

PN 113—Social Science for Nurses
3 hrs./wk. 3 cr.
Psychological and sociological human behavior. Orientation to personal needs in becoming a qualified practitioner on the nursing health team.

PN 115—Health Science
7 hrs./wk. 5 cr.
Structure and function of the human body, nutritive elements and dietary methods, general types of organisms and how they affect the human body and its surroundings.

PN 116—Pharmacology for Nurses
2 hrs./wk. 2 cr.
Fundamental principles in administration of medicines. Student must enter class with a working knowledge of mathematics including ratio, percentage, and decimals.

PN 120—Nursing Fundamentals Lab
9 hrs./wk. 3 cr.
Continuation of supervised laboratory and hospital practice in effective application of fundamental nursing principles.

PN 121—Nursing Fundamentals
2 hrs./wk. 2 cr.
Continuation of fundamental principles guiding nursing care.

PN 123—Mental Health
3 hrs./wk. 3 cr.
Abnormal human behavior problems with emphasis on principles of nursing care in mental illness.

PN 126—Pharmacology for Nurses
2 hrs./wk. 2 cr.
Continuation of fundamental principles in administration of medicines including supervised application.

PN 127—Med-Surg Nursing Lab.
12 hrs./wk. 4 cr.
Supervised hospital application of principles of medical-surgical nursing.

PN 128—Med-Surg Nursing
4 hrs./wk. 4 cr.
Rehabilitation and care of the elderly. Human illness affecting the circulatory and genito-urinary systems. Emphasis on principles of nursing care.

PN 130—Med-Surg Nursing Lab.
24 hrs./wk. 8 cr.
Continuation in supervised hospital application of medical-surgical nursing principles with emphasis on recognizing and coping with behavior problems.

PN 131—Med-Surg Nursing
12 hrs./wk. 10 cr.
Human illness affecting the special sensory organs, digestive, endocrine, respiratory, muscular-skeletal, and nervous systems with emphasis on nursing care principles.

PN 140—Maternal-Child Health Lab.
24 hrs./wk. 8 cr.
Supervised hospital application of principles of obstetrical and pediatric nursing.

PN 141—Maternal-Child Health
10 hrs./wk. 8 cr.
Principles of nursing care in both normal and abnormal pregnancy before, during, and after the birth of a baby.
Normal human growth and development from birth through adolescence with emphasis on principals of nursing care during illness.

PN 143—Economic Security for Nurses
2 hrs./wk. 2 cr.
Employment orientation and nursing in civil defense.

PRA 50—Basic Refrigeration I*
6 hrs./wk.
Basic principles of refrigerants, the vapor compression cycle, evaporators and compressors.

PRA 51—Fundamentals of Refrigeration I*
6 hrs./wk.
Definitions, the refrigeration cycle, compressors, condensers and receivers, and evaporators.

PRA 60—Basic Refrigeration II*
6 hrs./wk.
Mechanical components, refrigerant controls, electricity and service analysis.

PRA 61—Fundamentals of Refrigeration II*
6 hrs./wk.
Metering devices, basic cycle controls, refrigerant characteristics and refrigerant oils.

PRA 70—Basic Science & Supplemental Topics*
6 hrs./wk.
Basi science, blueprint reading, labor laws and plumbing repairs.

PRA 71—Basic Heating and Supplemental Topics*
6 hrs./wk.
Basic heating, steam and hot water fitting, mathematics and isometric drawings.

PRA 80—Basic Electricity*
6 hrs./wk.
Introduction to servicing of electrical mechanical equipment.

PRA 81—Systematic Trouble Shooting*
6 hrs./wk.
Discussion of troubles and solutions. Analyzation of most frequently encountered problems from the obvious to complex inspection points.

PRA 90—Air Conditioning*
6 hrs./wk.
Fundamentals of air conditioning including heat, humidity, the psychrometric chart, ventilation, air requirements, refrigeration and refrigerants, fans and air distribution.

PRA 91—Refrigeration*
6 hrs./wk.
Review of refrigeration principles and controls.

PRT 50 (PRT 10)—Offset Printing & Duplicating 1*
6 hrs./
Introduction to offset presswork, feeders and delivery systems, pressure adjustments, ink and water balance, printing of line and halftones, paper and inks.

PRT 51 (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 52 (PRT 12)—Linotype & Copy Preparation*
6 hrs./wk.
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 53 (PRT 13)—Printing Management*
4 hrs./wk.
Printing plant operation, utilization of equipment, work flow, plant layout, and design. Emphasis on pricing and estimating jobs utilizing Franklin Catalog.

PRT 60 (PRT 20)—Offset Printing & Duplicating 2*
6 hrs./wk.
Continuation in depth of the subjects taught in PRT 50 including register printing of line and halftones. Prerequisite: PRT 50.

PRT 61 (PRT 21)—Offset Camera—Color*
6 hrs./wk.
Color separation of art from transparencies and reflective copy. Also masking and plate processing for four color process printing.

PRT 70 (PRT 30)—Photography*
6 hrs./wk.
Basic course in the understanding and use of cameras, lighting and darkroom procedures. Camera aperature 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 71—Offset Printing and Duplicating 3*
6 hrs./wk.
Continuation of PRT 61 with emphasis on the fundamentals of 4 color printing. Prerequisites PRT 61.

PRT 72—Offset Camera—Color*
6 hrs./wk.
Continuation of PRT 21 with more emphasis on color separation. Prerequisite: PRT 21.

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. 5 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.
Introdution 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 plate-

making. Introduction to screen photography.

PRT 125, 135—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—Copy Preparation
5 hrs./wk. 2 cr.
Advanced linotype operation and type composition.

PRT 134—Camera and Platemaking
5 hrs./wk. 2 cr.
Advanced screen photography and screen platemaking.

PRT 138—Presswork
10 hrs./wk. 3 cr.
Advanced offset and letterpress pressmanship, with emphasis on screen presswork.

PRT 217—Printing Economics
5 hrs./wk. 5 cr.
Study of printing plant operation, utilization of equipment, work flow, plant layout and design with emphsis on pricing and estimating printing jobs.

PRT 219—Occupational Training
20 hrs./wk. 7 cr.
Work training held on the job features placement of students with printers for experience in their specialty.

REF 55-56—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 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.

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 50—Orientation, Geometric Construction Mechanical Drawing, and BPR*
6 hrs./wk.
Orientation, the appreticeship system, safety, hand and powered machine operations, principles and exercises in geometric construction, mechanical drawing and blueprint reading.

SMA 51—Layout Mathematics, Parallel Line Development and Triangulation*
6 hrs./wk.
Mathematics, elementary layout, parallel line development, and triangulation.

SMA 60—Mathematics and Advanced Parallel Line*
6 hrs./wk.
Sheet metal mathematics and advanced parallel line development.

SMA 61—Radial Line and Shop Problems*
6 hrs./wk.
Radial line development and shop problems.

SMA 70—Mathematics*
6 hrs./wk.
Applied sheet metal mathematics.

SMA 71—Air Conditioning Pattern Drafting*
6 hrs./wk.
Air conditioning metal layout.

SMA 80—Mathematics and Welding Processes*
6 hrs./wk.
Advanced mathematics and theory of welding as it applies to sheet metal.

SMA 81—Pattern Drafting*
6 hrs./wk.
Developing and drafting a variety of patterns.

UPH 50—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 50—Fundamentals of Welding*
6 hrs./wk.
Arc welding equipment and electrodes. Lap and tee joints in all positions.

WLD 51—Fundamentals of Welding*
6 hrs./wk.
Oxygen and acetylene welding and cutting equipment. Safety. Lap, tee, and butt joints.

WLD 52—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 53—Fundamentals of Welding*
6 hrs./wk.
Testing and inspecting welds. A.S.M.E. test procedures. Bevel butt joints in all positions.

WLD 54—Inert Gas Arc Welding*
6 hrs./wk.
Theory and practice of inert gas processes on steel, copper, aluminum and stainless steels.

WLD 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.

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.

GENERAL EDUCATION

General Education Classes are offered to meet the following needs:

1. Related instruction for trade and technical programs to supplement the theory and lab classes.
2. Transfer credit to fill lower division General Education Requirements for Baccalaureate Degrees at another institution.
3. Pre-Tech Courses in Math, Reading, Communication and personal development are designed to help students qualify to enter into trade programs.
4. Remedial classes for students to review and strengthen their background in General Education subjects.

General Education, Pre-Tech and Remedial Classes may be taken in an integrated program.

Pre-Tech and remedial classes taught on an individualized basis are conducted on an open entry-open exit basis. Maximum flexibility is stressed to provide the greatest assistance possible to the student.

GENERAL EDUCATION TRANSFER CREDIT. The following General education classes are acceptable for filling of General Education requirements at schools in the Utah System of Higher Education:

Humanities: ENG 101, 102 & 251
Physical Sciences: PHY 101, 111, 112, & 113
CEM 101
MTH 101, 105, 106
Social Sciences: ECN 101
PSY 101
PS 110
SOC 101
HIS 120

(PS) CEM 101—Introduction to Chemistry*
5 hrs./wk. 5 cr.
A one quarter survey of general Chemistry, covering structure, compositions and properties of substances and of their transformations.

CIV 55—Vocational Civics*
3 hrs./wk. 3 cr.
Includes citizenship, functions of government, history, economics, and philosophy of the democratic ideal.

COM 10—Reading Pre-technical*
5 hrs./wk. 0 cr.
Basic reading program employing a linguistic approach and presented in a pro-

a junior high school level or less. Individual instruction is emphasized.

COM 15—Basic English—Pre-Technical*
5 hrs./wk. 0 cr.
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 55—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.

ECN 55—Applied Economics*
3 hrs./wk. 3 cr.
General business principles including profit, loss, income, taxes, interest rates, loans and personal budget management.

(SS) ECN 101—General Economics*
3 hrs./wk. 3 cr.
Personal, consumer, and national economics. Production and use of goods and services, money and credit, income and taxes.

ENG 80 (ENG 134)—Business English*
3 hrs./wk. 3 cr.
Review of grammar, punctuation, sentence structure, paragraphing, and the effective use of words. Some short compositions will be required in the application of principles taught.

ENG 115 (ENG 135)—Business Report Writing*
3 hrs./wk. 3 cr.
Application of effective use of words, proper language structure, and mechanics of style in a variety of written assignments. Includes creative business writing, business letters, and other formal and informal reports and communications, to include job applications, resumes and oral communications. Prerequisite: ENG 80 or equivalent.

(HU) ENG 101 — English Composition*
3 hrs./wk. 3 cr.
Basic principles of effective composition, and necessary practice in expressing ideas.

(HU) ENG 102 — English Composition*
3 hrs./wk. 3 cr.
Continuation of ENG 101 with special and extensive study on the art of persuasion, research papers, critical reviews, business letters, and resumes. Reading of novels, short stories, plays and poems required. Prerequisite: ENG 101.

ENG 130—Technical Writing*
3 hrs./wk. 3 cr.
Introduction to technical writing includes study of practical work in the style, language, and mechanics of technical reports.

ENG 140 — Effective Reading*
3 hrs./wk. 3 cr.
Designed to increase vocabulary, comprehension, and reading speed. Prerequisite: 11th Grade reading level.

ENG 160—Effective Speaking*
3 hrs./wk. 3 cr.
Emphasis on the dual role of speech as both a speaking and listening skill. Practice is provided through individual speeches and group discussions with emphasis on organization and delivery.

(HU) ENG 251 — American Literature*
3 hrs./wk. 3 cr.
Survey of American Literature from beginning to the present with readings selected from all periods.

(SS) HIS 120—Early U.S. History*
3 hrs./wk. 3 cr.
General survey of American History from discovery and colonization through the American Revolution. The establishment of the Constitution and westward expansion.

MTH 20 — Math Pre-Vocational*
10 hrs./wk.
Basic operations with whole numbers—addition, subtraction, multiplication and division, fractions and decimals.

MTH 50 — Vocational Math*
5 hrs./wk. 5 cr.
Review of fractions and decimals with a coverage of percentage, ratio and proportion, powers and roots, areas and volumes and rules and formulas. Prerequisite: MTH 20 or equivalent.

MTH 51—Elementary Algebra*
5 hrs./wk. 5 cr.
Fundamentals of Algebra. Prerequisite: MTH 50 or equivalent. This class may be applied toward A.A.S. Degree.

MTH 52—Elementary Trigonometry*
2 hrs./wk. 2 cr.
Solution of right triangles. Elementary exposure to use of sine, cosine, and tangent in solving right triangles and logarithms. Prerequisite: MTH 51 or equivalent. This class may be applied toward A.A.S. Degree.

MTH 60 — Applied Math*
5 hrs./wk. 5 cr.
A short review of arithmetic with emphasis on fractions, decimals, and applied algebra.

MTH 75 — Mathematics — Industrial*
6 hrs./wk. 0 cr.
Intensive study of whole numbers, decimals, fractions, square roots and percentages.

MTH 76 — Smoley's Tables*
6 hrs./wk. 5 cr
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.

MTH 80 — Business Math*
5 hrs./wk. 3 cr.
A review of the fundamentals of math including decimals, fractions, percentages and interest. Prerequisite: MTH 50.

(PS) MTH 101 — Intro. to College Algebra*
5 hrs./wk. 5 cr.
Basic equations, special products, factoring, fractions, fractional equations, simultaneous equations, exponents, radicals, quadratic equations, and logarithms. Prerequisite: MTH 51 or equivalent with C grade or better.

(PS) MTH 105 — College Algebra*
5 hrs./wk. 5 cr.
Review of intermediate algebra, functions, graphs, complex numbers, quardratic functions and equations, logarithms. Prerequisite: MTH 101 with C grade or better.

(PS) MTH 106 — Plane Trigonometry*
5 hrs./wk. 5 cr.
Solution of right triangles, oblique triangles, solution of trigonometric formulas, using identities, permutations and combinations. Properties of circles parabolas, hyperbolas, ellipsis and straight lines. Prerequisite: MTH 105 with C grade or better.

MTH 138 — Business Math*
5 hrs./wk. 3 cr.
Emphasis on interest mortgages, loans, annuities and discounts. Prerequisite: MTH 80 with "C" grade or better.

MTH 141 — Slide Rule*
1 hrs./wk. 1 cr.
Familiarization and use of C & D scales, the log scales, square root scales, cube root scales and folded scales. Prerequisite: MTH 51, or equivalent with C grade or better.

MTH 145 — Differential Calculus*
5 hrs./wk. 5 cr.
Average rates, limits, derivatives, differentials, higher derivatives, maxima and minima. Prerequisite: MTH 106.

MTH 146 — Integral Calculus*
5 hrs./wk. 5 cr.
Integrals, definite integrals, trigonometric functions, logarithmic and exponential functions. Prerequisite: MTH 145.

MTH 147 — Probability & Statistics*
3 hrs./wk. 3 cr.
Probability of an event, expectation, tabulation of data, arithmetic mean, median and mode, standard deviation, normal curve, correlation of coeficient. Prerequisite: MTH 101 or equivalent.

PHY 55 — Applied Physics*
5 hrs./wk. 5 cr.
Lecture-demonstration including properties of solids, liquids, gases, forces, equilibrium, motion, simple machines, compound machines, mechanics of solids, and pressures as it applies to industry.

PHY 81 — General Physics*
5 hrs./wk. 3 cr.
A study of mechanics including force, motion, mechanical energy transformation, simple machines, fluids mechanics and concepts of work and power. One two-hour lab per week.

PHY 82 — General Physics*
5 hrs./wk. 3 cr.
Heat, light and sound. One two-hour lab per week. Prerequisite: PHY 81.

PHY 83 — General Physics*
5 hrs./wk. 3 cr.
Electricity and magnetism. One two-hour lab per week. Prerequisite: PHY 82.

(PS) PHY 101 — Introduction to Physics*
5 hrs./wk. 5 cr.
Survey of general physics covering mechanics, heat, light, sound, electricity and magnetism, and modern physics. Prerequisite: Math 51.

(PS) PHY 111 — Mechanics & Heat*
6 hrs./wk. 4 cr.
Fundamentals of mechanics and heat in classical physics. Prerequisite: phy 101 or equivalent. One two-hour lab per week.

(PS) PHY 112 — Electricity, Magnetism and Sound*
7 hrs./wk. 5 cr.
Continuation of PHY 111. Covering fundamentals of classical electricity, magnetics and sound. Prerequisite: PHY 111. One two-hour lab per week.

(PS) PHY 113 — Light & Mod. Physics*
7 hrs./wk. 5 cr.
Continuation of PHY 112. Covering concepts of light and nuclear and atomic physics. Prerequisite: PHY 112. One two-hour lab per week.

(SS) PS 110 — Political Science*
3 hrs./wk. 3 cr.
A study of the Constitution, and branches of the Federal and State Government. A history of the development of government in the United States.

PSY 55 — Human Relations*
3 hrs./wk. 3 cr.
Application of psychological principles to life problems. Includes theories of personality, personal and social adjustment,

principles of success, and human relations development.

PSY 57—Zoom*
5 hrs./wk. 3 cr.
A program to build success attitudes by developing goals in six facets of living: Financial, ethical, social, intellectual, physical, and family life by group discussion.

(SS) PSY 101—General Psychology*
3 hrs./wk. 3 cr.
Psychological concepts as applied to industry. Includes personnel procedures, testing, efficiency, motivation, work environment, supervision, personality, consumer psychology, and abnormal behavior.

(SS) SOC 101 — Introduction to Sociology*
3 hrs./wk. 3 cr.
A study of man's culture, mores, institutions, beliefs and values. Includes analysis of social organization, group interaction and human behavior, group standards and values, and forces in society that influence behavior.

SST 20—Occupational Exploration*
5 hrs./wk. 0 cr.
A class designed to help the student explore occupational possibilities and give him time to investigate and see the advantages and disadvantages of various jobs of interest to him.

FACULTY

T & I means the instructor holds the state Trade and Industrial Certificate.

ANDERSON, Richmond (1970) **Related Instruction**
Experience: Chemical Technician, U. Of U.; B.S.; M.Ed.

BAKER, Joseph J. (1964) **Electronics**
Experience: Electronics Technician, Sperry Utah; Instructor, B.Y.U., etc. Radio Institute Certificate; T & I.

BARTHOLOMEW, Earl R. (1961) **Business Division Chairman**
Experience: Office management positions, Consolidated Freight, Utah Power & Light Co., B. S. M. 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; B.S. T & I.

BELNAP, Vola C. (1969) **Related Instruction**
Experience: Instructor, S.L. City and Murray Schools. B.S.

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.

BOULTON, Franklin F. (1958) **Related Instruction**
Experience: Machinist, McGee & Hogan Machine Works, H. A. F. B.; Instructor, Calif. Poly. State College. Assoc. Degree, Weber State College; B. S.; M. S.; T & I.

BOWN, J. Ralph (1959) **Related Instruction**
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 Division Chairman**
Experience: Instructor, Granite Schools, Weltech College; electronic technician, Thiokol Chemical Corp., etc. B.S.; U.S.A.F. Certificate; T & I.

BROWN, Carol W. (1969) **Accounting**
Experience: Accountant, Elmer Fox C.P.A., K. N. Brown C.P.A.; Executive Secretary, S.L. County Civic Auditorium Board of Directors. A.S.; B.A.; C.P.A.

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, Alexandra 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 Hospital, etc. R.N. (Utah); T & I.

CHAFFIN, Evan John (1970) **Related Instruction**
Experience: Manager, local businesses. B.S.

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. A.S.; T & I.

CROSSEN, Manford Wayne (1970) **Electronics**
Experience: Principal Engineer, Univac; Supervising Service Engineer, Westinghouse Electric Corp.; Nuclear Design Engineer, Convair, B.S.E.E.

CULLIGAN, James J. (1956) **Electronics**
Experience: Senior Electronics Technician, Sperry Utah, Hill Air Force Base, etc. Delehanty Institute of Radio & TV Certificate; T & I.

DALY, Gladys (1970) **Health Occupations**
Experience: General duty nurse, Tooele Valley Hospital; R.N. duty, hospitals in various states. R.N. (Utah).

DAVIS, Sherwood L. (1969) **Drafting & Design**
Experience: Designer, Edo Western Corp. and Sperry Utah; Draftsman, Douglas Aircraft.

DAY, Clinton E. (1967) **Related Instruction**
Experience: Aircraft Engine Mechanic; Manager, Factory Engineering, Litton Industries. B.S.; M.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.

DERRICK, Rodney V. (1969) **Cosmetology**
Experience: Manager of Evening Program, Continental Beauty College; Hair Stylist, Michael's Hair Fashions. Excelsis Beauty College Certificate; Utah State Cosmetology Instructor's License.

DYE, Alfred G. (1968) **Data Processing**
Experience: Mgr. Tax Dept.; Ernst and Ernst, CPA's Staff Acct., Reed and Moran, CPAs; USAF Auditing Officer. B.S.; T & I., C.P.A.

EDMONDS, Horace B. (1963) **Electronics**
Experience: Supervisor, Hercules Inc.; Technician, Hill Air Force Base, etc. Radio Institute Certificate; T & I.

EGAN, W. Gerald (1969) **Data Processing**
Experience: Systems Engineer and Salesman, Heuristic Concepts Inc. and IBM Corp.; Systems Analyst, Recognition Equipment Inc.; Auditor, Utah Sand and Gravel. B.S.

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.

FULLMER, Jerry H. (1969) **Related Instruction**
Experience: Electronic Systems Repairman, Tooele Army Depot. UTC Certificate; B.S.

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.; M.S.; T & I.

GREGG, Mary Anne (1969) **Related Instruction**
Experience: Instructor, S.L. City and Granite Schools, B.A., M.A.

GROVER, Neal D. (1964) **Auto Body Repair**
Experience: Owner Operator, Grover's Body & Fender Shop, etc. UTC Certificate; T & I.

HALL, Ken (1968) **Architectural Drafting**
Experience: Chief Designer and Draftsman, various architectural firms; Registered Landscape Architect. 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) **Auto Body Repair**
Experience: Auto Body Repairman, Fisher Pontiac, etc. Weber State College Certificate; T & I.

HITE, Thamer S. (1962) **Barbering**
Experience: Barber and Cosmetologist; UTC Certificate; Carel's Inst. of Beauty Culture Certificate; Barber's License; Barber Teacher's License, Cosmetologist's License; Cosmetology Teacher's License; T & I.

HOLT, Rex B. (1969) **Accounting**
Experience: Instructor, Granite Schools; Vice President and Accountant, American Crane Inc.; Estimator and Office Manager, Jarman Steel Erectors. Bus. Admin. Certificate; B.S., M.S.

HULET, Grant M. (1968) **Commercial Art**
Experience: Art Director, Jarman and Skaggs Advertising, Ross Jurney and Associates. B.S.; T & I.

IVERSON, Ann K. (1969) **Health Occupations**
Experience: Staff Nurse, St. Mark's Hospital and Cottonwood Hospital; Assistant Nursing Supervisor of Surgery, S.L. County Hospital; Instructor, University of Utah School of Nursing and S.L. County Hospital. R.N. (Utah); B.S.

JOHNSON, W. Keith (1966) **Heavy Duty Mechanics**
Experience: Heavy Duty Mechanic, Sumsion Construction, Ford Construction, etc. B.S.; U.S.N. Training School Certificate: 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 Division Chairman**
Experience: Director, Nursing Services, Holy Cross Hospital, etc. B.S.; M.S.; R.N. (Utah); T & I.

LARSON, John A. (1969) **Heavy Duty Mechanics**
Experience: Heavy Duty Mechanic, Wheeler Machinery, Nevada Rock and Sand, Industrial Construction, and Cashman Equipment, B.S.; T & I.

LOWE, Max S. **Related Instruction**
Experience: Instructor, Granite Schools; Staff Training Officer, Utah National Guard; Field Supervisor, Travelers Insurance. B.S.

LUNT, Judith Lee (1969) **Related Instruction**
Experience: Instructor, Davis Schools and California; Secretary, Harrison and Johnson. A.A.; B.S.

MORRILL, Nina (1970) **Business**
Experience: Secretarial, various firms. B.S.

MOSS, N. Wayne (1970) **Business**
Experience: Walker Bank and Trust Co., J. C. Penney Company. UTC Certificate.

NELSON, Margaret Ann (1969) **Health Occupations**
Experience: Staff Nurse, Head Nurse and Supervisor, S.L. County General Hospital; Head Nurse, V.A. Hospital. A.S.; B.S.

NIELSEN, Donald Ray (1970) **Building Construction**
Experience: Jensen Construction, McDowell and Rapp, in American Samoa and Hawaii.

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: 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.

OLSEN, James R. (1970) **Printing**
Experience: Four color pressman, Paragon Press, Rocky Mountain Bank Note, Technical Trade School.

OSBORNE, Thomas G. (1968) **Related Instruction**
Experience: Instructor, S.L. City Schools; Tabulating Equip. and 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.

PAULSEN, Don Wayne (1971) **Building Construction**
Experience: Carpenter, Skyline Builders, Horseley Lumber, L.D.S. Church, Bach Construction, Hammon Cabinet and Fixture.

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.

REINHOLD, Allen K. (1969) **Commercial Art**
Experience: Instructor, BYU, Granite and Emery County Schools; Artist, BYU Audio Visual Department and Utah Division of Social Services; Freelance Artist. B.A.; M.A.

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.

ROBERTSON, Paul H. (1970) **Electricity**
Experience: Commercial wiring experience, Cablevision Const. Corp., General Inst. Corp., Eimac, Hughes Aircraft Co., Philco Corporation.

RODI, J. Rita (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 Division Chairman**
Experience: Draftsman, various architectural firms. B.S. U. of Oklahoma; Delhi Agr. and Technical Institute Certificate; T & I.

SEAMAN, Karl (1968) **Drafting & Design**
Experience: Draftsman and Designer, Structural and Mechanical, Thiokol Chemical, Hercules Inc., Eimco, etc. Idaho State University T. & T. 2 year Certificate; Certified Engineering Technician I.C.E.T.; T & I.

SHULTS, C. Smithey (1957) **Drafting and Design**
Experience: Instructor, Kansas, Wyoming, Utah. B.S.; M.S.; T & I.

SHUMAN, Genalee May (1969) **Industrial Power Sewing**
Experience: Training Supervisor, Beehive Clothing.

SORENSON, 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) **Auto Body 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 Division Chairman**
Carpenter, Project Director, Modern Home Builders, etc. B. S.; M. S.; U. S. Army Certificate; Contractor's License; T & I.

TINNIN, Claude Patrick (1969) **Printing**
Experience: Proofreader, S.L. Tribune; Press and Makeup Operator, Hamilton. B.S.

UDY, John A. (1968) **Welding**
Experience: Maintenance and Machine Shop Welder, Research and Production Foreman, Thiokol Chemical Corp. T & I.

VAN OS, Huibert (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. Calhourn 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.

WEIR, J. Harold (1971) **Electricity**
Experience: Commercial wiring experience, Memcor-Montek, Hercules, Inc., Western Mobile Depot NSD, Engine Rebuilders, Inc.

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.

YENCHIK, Joseph V. (1968) **Drafting and Design**
Experience: Chief designer, Edo Western Corp.; designer, Sperry.

ZITO, Verlaine S. (1969) **Related Instruction**
Experience: Instructor, S.L. City and Murray Schools. B.S.

Staff Assistants

BALLARD, Davis V ..... Financial Aids Counselor
BRUGGER, Geoffrey ..... Training Coordinator
CHRISTENSEN, Larry ..... Admissions Counselor
FERREL, Kent ..... Controller
HANSEN, Charles W. ..... Placement Counselor
JOHNSEN, Ferris ..... Instructional Media Director
McDONALD, Russell T. ..... Special Instruction Coordinator
MARTIN, Elaine ..... Assistant Librarian
MEANS, William W. ..... Bookstore Manager
OLLIS, Ron ..... Public Relations Director
PIACITELLI, Florence ..... Records and Reports Specialist
SARGENT, Dean ..... Purchasing Agent