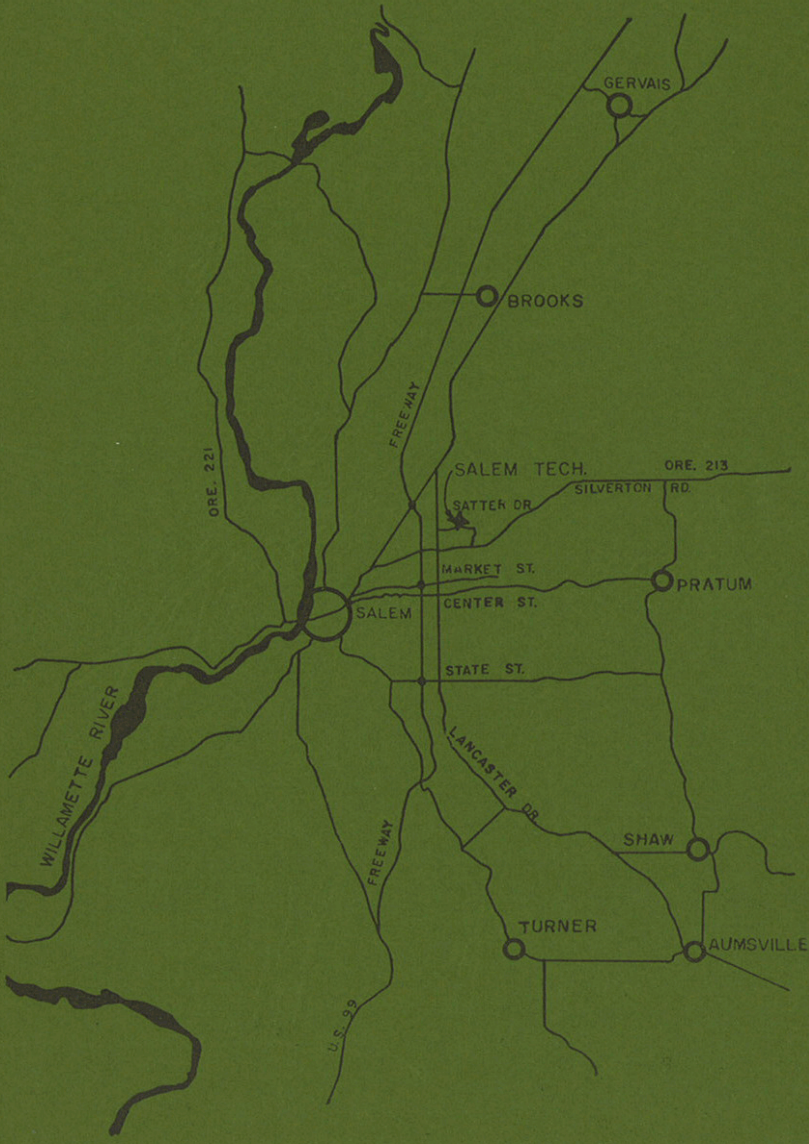
Salem TECHNICAL VOCATIONAL *Community College*

SALEM PUBLIC SCHOOLS

CATALOG
1967 • 1968

Highways leading to Salem Tech



SALEM TECHNICAL VOCATIONAL COMMUNITY COLLEGE

4389 Satter Drive N.E.

Salem, Oregon

CATALOG 1967 - 1968

A Public Area Education Center Serving
MARION, LINN and POLK COUNTIES

OPERATED BY SCHOOL DISTRICT No. 24J
SALEM PUBLIC SCHOOLS

School District 24J

BOARD OF EDUCATION

A. T. King, Chairman
James B. Daniels
Thomas C. Enright
Myron M. Hall
Henry Hohwiesner, Jr.
Sherrilyn Maltby (Mrs.)
Maynard C. Shiffer

Connell C. Ward, Clerk

CHARLES D. SCHMIDT, Superintendant
Salem Public Schools

PAUL F. WILMETH, Director
Technical Vocational Education

Table of Contents

Curricula (2 Year Programs)

(1 Year Programs)

(Special and Extension Programs)

Course Descriptions

Academic Calendar

Fall Term—1967-68

Sept. 13-14	(Wed.-Thur.)	New Student Orientation
Sept. 13-14	(Wed.-Thur.)	Registration
Sept. 18	(Mon.)	Classes in regular session
Sept. 19	(Tue.)	Last day to register without penalty
Sept. 26	(Tue.)	Last day to register for fall term
Oct. 9	(Mon.)	Last day to make program changes
Oct. 23-27	(Mon.-Fri.)	Midterm Evaluation
Nov. 3	(Fri.)	Last day to withdraw from classes (See grading system)
Nov. 23-24	(Thur.-Fri.)	Thanksgiving vacation
Dec. 11-15	(Mon.-Fri.)	Schedule planning for winter term
Dec. 18-19	(Mon.-Tue.)	Final examinations
Dec. 21	(Thur.)	Fall term ends

Winter Term—1967-68

Jan. 2	(Tue.)	Registration
Jan. 2	(Tue.)	Classes in regular session
Jan. 3	(Wed.)	Last day to register without penalty
Jan. 10	(Wed.)	Last day to register for winter term
Feb. 5-9	(Mon.-Fri.)	Midterm Evaluation
Feb. 16	(Fri.)	Last day to withdraw from classes (See grading system)
Feb. 26-29	(Mon.-Thur.)	Schedule planning for spring term
Mar. 5-6	(Tue.-Wed.)	Final examinations
Mar. 8	(Fri.)	Winter term ends

Spring Term—1967-68

Mar. 18	(Mon.)	Registration
Mar. 18	(Mon.)	Classes in regular session
Mar. 19	(Tue.)	Last day to register without penalty
Mar. 26	(Tue.)	Last day to register for spring term
Apr. 22-26	(Mon.-Fri.)	Midterm Evaluation
May 3	(Fri.)	Last day to withdraw from classes (See grading system)
May 27-28	(Mon.-Tue.)	Final examinations
May 30	(Thur.)	Memorial Day Holiday
May 31	(Fri.)	Spring term ends
May 31	(Fri.)	Graduation Exercises

Fall Term—1968-69

Sept. 11-12	(Wed.-Thur.)	New Student Orientation
Sept. 11-12	(Wed.-Thur.)	Registration
Sept. 16	(Mon.)	Classes in regular session

Faculty

AISSEN, Phillip (1966)
B.S. University of Oregon (1959). Six years experience in real estate field.

ARNOLD, Gail (1965)
B.S. Home Economics Education, Oregon State University. Experience in teaching vocational homemaking in secondary schools; cooperating teacher for student teachers; special home economics project consultant, State Department of Education, Oregon.

BERG, Betty M. (1963)
A.A. South Dakota State College. Ten years experience in business field.

BLAKNEY, Clement D. (1965)
B.S. Oregon State University (1949). Industrial experience in wood industries and production.

BLANK, Franklin W., Jr. (1961)
B.A. Business Administration, Willamette University (1953). Nine years experience Business and Personnel Management.

BORGEN, Arlen L. (1965)
B.S.C.E. Oregon State University, (1956). M.S.C.E. Oregon State University, (1961). Three years with U.S.N. Civil Engineering Corps, four years with Consulting Engineering Firm, professional engineer in Oregon.

CHADWICK, Patricia (1960)
Diploma, Providence Hospital School of Nursing, Portland, Oregon, (1956). Two years nursing experience, five years hospital teaching. (On leave, 1967-68).

CIRCLE, Melvin W. (1957)
Sacramento Junior College, Capitol Radio Engineering Institute, Oregon State University. Ten years experience in radio-TV service, eight years experience in electronics.

COLE, Henry T. (1963)
B.S. Oregon State University (1959). M.Ed. Oregon State University (1961). Twelve years industrial experience, mechanical and manufacturing. Five years teaching, Oregon State University.

COOK, Conrad (1964)
Oregon State University. Ten years Electronic Data Processing.

DAVEY, Stanley H. (1965)
Oregon State University, Lower Columbia Junior College. Eleven years business and industrial experience.

DEISCHER, Mildred E. (1964)
B.S. and M.S. Home Economics Education, Iowa State University. Advanced graduate study at Columbia University and Oregon State University. Experience in high school, college teaching, and in State Home Economics Education Supervision.

DODGE, Thomas I. (1964)
Lewis & Clark College. Nine years sheet metal fabrication and installation experience.

DUBY, Mary (1967)
B.S., Nursing Education, Lewis and Clark College (1953). M.S., Teaching and Supervision in Nursing Education, University of Oregon (1962).

ELLING, Kay C. (1967)
B.A. Willamette University (1960). M.Ed. Willamette University (1964).

EMERSON, Willard B. (1966)
B.S. Oregon State University (1963). Seven years firefighting and fire training experience.

FOSTER, Selma A. (1963)
Tabor College, Hillsboro, Kansas. Ten years dental assisting experience, Certified Dental Assistant.

GUSTAFSON, Jean (1962)
B.S. Oregon State University. M.S. Oregon State University (1940). M.L., Librarianship, University of Washington (1967).

HADLEY, Marlyn M. (1966)
Seventeen years experience in mechanical field. Twenty-two years foreman and supervisor in industrial fields.

HATFIELD, Gladys E. (1963)
B.S. Nursing Education, University of Oregon (1947). M.Ed. Oregon State University (1967). Six years teaching, five years experience in nursing.

HESSMAN, Robert D. (1967)
Selected Navy schools. (U.S. Navy Retired).

JEPSEN, Leland R. (1965)
B.S. Mechanical Engineering, Oregon State University (1950). Three years testing experience, U.S. Navy. Four years experience in construction.

KASSELL, Richard M. (1965)
A.S. Salem Technical Vocational Community College, Data Processing (1965) University of Oregon. Fourteen years industrial experience, printing and allied trades.

LATHAM, Robert S. (1964)
B.A. Colorado State College at Greeley (1950). M.Ed. Oregon State University (1963). Five years business experience, five years drafting and design experience.

LEACH, Alvin M. (1966)
M.S. Oregon State University (1959).

LOYD, A. Leon (1965)
B.S. Oregon College of Education (1964). Eight years experience in Data Processing.

MAGUREN, Janet D. (1967)
Diploma, Emanuel Hospital School of Nursing (1953). B.S. University of Oregon (1962). Twelve years nursing experience.

MEFFORD, Harrison W. (1964)
Northern Idaho College of Education, Vanport Extension Center, Oregon State University. Twenty years experience in civil engineering and construction fields.

NICHOLS, Victor (1962)
University of Washington. Seven years experience in machinist field, thirteen years boat building foreman, purchasing agent, and engineering.

POHL, Leslie (1965)
Technical School of Budapest (1941). Los Angeles Valley College. Twenty-eight years experience as a tool and diemaker.

RICE, Leonard (1960)
B.S. Industrial Arts Education, Oregon State University, (1959). Four years industrial experience, three years as Senior Draftsman.

RICHARDSON, James A. (1965)
B.A. Chico State College (1959). Six years work experience in electronic engineering and mathematics.

RONER, Bennie D. (1966)
Twelve years television sales and repair.

ROSS, Gertrude L. (1965)
B.S. Southern Oregon College (1965). Southern California College. Ten years experience in cartographic drafting and photogrammetry.

RUBY, George R. (1965)
B.B.A. Business Administration, University of Minnesota (1950) M.Ed. University of Oregon (1963). Ten years experience in distributive business and management.

SALTER, Merlin E. (1966)
B.S. Oregon College of Education (1965). Elementary and secondary teaching, extensive automobile repair and maintenance experience.

SCHEELE, Paul C. (1967)
B.S. Oregon College of Education (1960).

SHOWERS, Keith M. (1965)
B.S. Oregon College of Education (1963).

SHOWERS, Lloyd D. (1966)
B.S. Oregon College of Education (1958).

SLONECKER, William (1963)
A.A. University of Washington. Ten years experience as electronics technician working on microwaves and telemetering installations.

SMITH, Joseph W. (1963)
B.S. Forest Management, University of Washington (1951). Field Assistant, Rehabilitation Assistant, Oregon State Board of Forestry, Management Forester. Ten years forestry experience.

SODERSTROM, Duayne M. (1966)
B.S. Forest Products, Oregon State University (1951).

TOMPKINS, Sidney H. (1965)
Thirteen years radio-TV broadcasting engineer.

VOLK, Shirley N. (1966)
B.S. University of Oregon School of Nursing (1957). Eight years nursing experience.

WADE, DeVon D. (1967)
A.B. Asbury College (1952). M.A. University of Kentucky (1960).

WILBRECHT, Lloyd C. (1952)
A.A. North Dakota State School of Science. Purdue University, Mississippi Southern University, selected Air Force schools (U.S. Air Force, retired).

WILMETH, Paul F. (1952)
B.E. Oregon State University (1957). M.Ed. Oregon State University (1960).

PART TIME INSTRUCTORS

PREPARATORY

Duffield, Donald E.
Foster, Margaret
Listella, Guido
Loewen, Earl L.
Love, Cal
Neuberger, Wayne
Stoinich, Al
Tebeau, William
White, Roger

APPRENTICE

Bell, Charles	Inside Wire
Berns, Robert	Industrial Maintenance Electrician
Brickel, Don	Sheet Metal
Brown, Larry	Linoleum Layers
Davis, Lorne	Inside Wire
Henning, John	Mill man, Cabinet Maker
Jain, Lester	Carpentry
McConnell, David	Plumbers
Maude, Ralph	Carpentry
Meade, Elmer	Auto Mechanics
Meier, Frank	Plumbers
Munnings, William	Inside Wire
Nichols, Victor	Machinist
Nickerson, Ralph	Painters
Phillips, Elwin	Sheet Metal

SUPERVISORY, TECHNICAL

Heater, Gerald
Hughes, William C.
Johnson, Kerby
Loynes, Ernest
Shattuck, Gordon
Stevens, R. E.

HOME ECONOMICS EDUCATION FOR ADULTS

Bothman, Jackie
Chrisman, Keith
Ericksen, Dorothy
Ficklin, Alice
Lulay, Zelma
Manock, Betty
Morrow, Judith
Redeye, Norma
Swinkles, Betty
Witteman, Floyd

FIREMAN TRAINING

Cary, LaVern H.
DeRoss, Ronald
Ditter, Delbert
Lee, O. W.
Miller, W. C.
Myers, James C.
Norton, Robert
Pflughaupt, Walter
Reinke, Donald
Reynolds, Franklin G.
Snook, Bernard
Stettler, John D., Jr.

Advisory Committees Of Salem Technical Vocational Community College

CIVIL-STRUCTURAL AND DRAFTING TECHNOLOGY

Anderson, John A.
Baker, George P.
Morrow, Robert D.
Richardson, Donald W.

DATA PROCESSING TECHNOLOGY COMMITTEE

Giroux, Joseph
LeTourneaux, George
Noegel, Joe
Peer, Donald F.
Price, Donald E.
Rice, Roy J.

DENTAL ASSISTANTS PROGRAM COMMITTEE

Adams, Kenard W., D.M.D.
Brutsch, James B., D.M.D.
Humphrey, Irene E.
Schultz, Mabel P.

DRILL OPERATORS PROGRAM COMMITTEE

Anderson, Ronald
Bartholomew, William S.
Berry, Howard E.
Huffman, Harlan M.
Mackaness, Frank G.
Robinson, Harry A.
Strasser, Robert L.

ELECTRONICS ENGINEERING TECHNOLOGY COMMITTEE

Berg, Norman
Christenson, Robert W.
Fields, Gene A.
Johnson, M. G.
Van Meter, Joseph C.

FIRE PROTECTION TECHNOLOGY COMMITTEE

Brady, Paul J.
Carpenter, Larry
Harvey, Peter C.
Milligan, Donald
Shedeck, Glen H.
Stender, Leonard
Wood, Howard E.

FOREST INDUSTRIES TECHNOLOGY COMMITTEE

Alley, Tom
Bergman, Morris
Ellicott, Ross
Gray, William S.
Hughes, William G.
Jones, Wendell
Krueger, Otto C. F.
Walch, John

HEALTH OCCUPATIONS PROGRAM COMMITTEE

Bodine, Donald P., Pharm.
Bray, Don, M.D.
Dormkowski, Jane
Emerson, June O.
Flesher, Gurnee A.
Gilson, Layton J., RPT
Harris, Arlene, RPT
Herzog, Jerome A.
Hiatt, Barbara G., RN
Horner, Jack
Jetmalani, Naraindas B., M.D.
Krieg, Helen, R.N.
Myers, Helen E., RRL
Nelson, James, OTR
O'Brien, John R., M.D.
Pierce, George, RN
Pomeroy, James M., M.D.
Shangle, Verne G.
Shiffer, Maynard C., M.D.
Singleton, Estelle, RN
Sister M. Antoinette, OSB
Skirvin, Nancy H., Pharm.
Stoddard, Joan E., RN
Swanson, Marie, RN
Wedel, Irwin F.

HIGHWAY ENGINEERING TECHNOLOGY COMMITTEE

Hill, Frank
Huntley, Gene
Merchant, Ivan D.

HOME ECONOMICS COMMITTEE

Belton, Mrs. Howard C. (Mae C.)
Bunnell, Mrs. Ruby E.
Cohen, Mrs. Aaron (Helen)
Elliott, Mrs. Vincent W. (Judith W.)
Flesher, Gurnee A.
Fratzke, Mrs. Clifford (Fern)
Granato, Sam J.
Hardwick, Mrs. Jack (Dorothy F.)
Heringer, Miss Maxine M.
Hillstrom, Mrs. Edward W. (Irene)
Hoerauf, Alvin W.
Leth, Mrs. Walter C. (Doris M.)
Lusted, Mrs. Keith (Eunice)
Powell, Alden
Siddoway, Mrs. Robert R. (Mary A.)
Springer, Mrs. Cathryn
Van Cleave, Mrs. Howard

INDUSTRIAL SUPERVISORS PROGRAM COMMITTEE

Butler, Roger
Hall, George A.
Henken, George P.
Hibbard, William
Lind, Genevieve
Walker, William
White, Douglas C.

MECHANICAL-MACHINE TECHNOLOGY COMMITTEE

Butler, Roger
Cummings, Truman
Day, L. B.
Gerlinger, Carl A.
Henken, George P.
Lyman, Ronald G.
Walker, William

MEDICAL ASSISTANT PROGRAM COMMITTEE

Clarke, Beulah
Hann, Delores V.
Lidbeck, William L., M.D.
Lusted, Keith, M.D.
Much, Joseph C., M.D.
Prudente, Lucille
Shangle, Verne G.

OFFICE OCCUPATIONS PROGRAM COMMITTEE

Bauman, Wilson A.
Currie, Deryl E.
Dyer, Lois
Fast, Abraham A.
Jaeger, Donavon P.
Koeplin, Mercel
Stile, Everett B.
Vernon, Alvin H.

PRACTICAL NURSE PROGRAM COMMITTEE

Best, Marguerite, LPN
Corley, Julia, RN
Earls, Emmett S.
Edwards, Thomas A., MD.
Hansen, Blossom, LPN
Hiatt, Barbara G., RN
Krieg, Helen, RN
LeFor, Fae D., RN
Renner, Betty, RN
Ringstad, Carolyn, RN
Sullivan, Mary, RN
Wedel, Irwin F.

REAL ESTATE PROGRAM COMMITTEE

Black, John E.
Brownell, Mary
Crawford, Gordon
Gardner, Arne H.
Reimann, Leo
Sherman, Kenneth
Stewart, Wesley E., Jr.

TECHNICAL NURSING COMMITTEE

Detering, Etta Mae, RN
Earls, Emmett S.
Kahn, Alan
Murray, Helen R., RN
Myers, Gladys, RN
Shangle, Verne G.
Shiffer, Maynard C., M.D.
Springer, Carol, RN
Wedel, Irwin F.

TELEVISION-RADIO SERVICE PROGRAM COMMITTEE

Becker, Edwin J.
Heidt, Stan
Lamer, Al F.
Payton, John J.
Smith, Clinton F.

General Information

History

In 1955, the Salem Technical Vocational Community College was established as a post high school institution to meet the increasing technical and vocational needs of Marion, Polk and parts of Linn counties. The school's first curriculum, February 1955, was in Machine Shop Practices.

Since 1955 programs have been added and expanded to cover many of the technologies, business and health occupations. A complete listing of the present offerings can be found in the table of contents of this catalog.

In 1963 the college was moved from an old site in West Salem to the present facilities on Satter Drive N.E. There is a continuing planning effort to design and develop additional space as the needs increase and the funds are available.

Through legislative and school board action, the name was changed, effective July 1, 1965, from Salem Technical Vocational School to Salem Technical Vocational Community College.

Salem Technical Vocational Community College is financially supported by funds from the State Department of Education, local School District and student tuition.

Definition and Philosophy

One of today's most rapidly growing demands on education is for technical and vocational training to support business and industry and its required skilled manpower needs. The Salem Technical Vocational Community College's purpose is to meet these demands through its one and two year post high school programs. The college anticipates and provides for local needs with well planned and well organized occupational centered curricula in the field of technical and vocational education.

Instructors at Salem Tech are selected primarily for their proven competency in the occupational or subject area in which they will teach, educational background, and ability to impart this knowledge to others. The Technical-Vocational instructors retain contact with their occupational areas through close cooperation with advisory committees and summer employment in the field or area in which they teach.

The underlying philosophy of Salem Technical Vocational Community College is to develop and instruct youth and adults for useful employment as skilled and/or highly skilled individuals in recognized occupations. The development of skills,

abilities, attitudes, working habits and appreciations are all coordinated so that the graduate will enter and advance in his chosen occupation, and participate in the social and civil life of the community.

Academic Regulations

Admission

Admittance to Salem Technical Vocational Community College will be granted to any person 16 years of age or older, who has completed high school requirements for a diploma or its equivalent (equivalency may be established by evaluation of experience and/or training, or by testing); and those who are able to benefit from specific courses.

APPLICATIONS

To be admitted to a program a student must submit an application for admittance accompanied by a $10.00 registration fee which is applied to the student's tuition.

TRANSCRIPTS

An official transcript of all high school and college records must be forwarded for evaluation.

APPLICATION FOR HEALTH OCCUPATIONS

Applications for enrollment in one of the Health Occupation programs (Practical Nursing, Medical Assistant, Dental Assistant) must be made as early as possible. Selection of students for enrollment in the Health Occupations is made in the spring preceeding the fall in which the classes will start.

ENTRANCE EXAMINATIONS

All persons applying for entrance are required to take the entrance exam which will be scheduled at the earliest possible date after the application is submitted. These examinations indicate ability to do the work required and form a basis for counseling and guidance. Remedial programs may be required to overcome deficiencies, before entrance into certain programs will be permitted.

Tuition and Fees

Tuition and fees are payable in full at time of registration. Fees and tuitions are established and maintained as low as possible in keeping with the type and scope of the program. All fees and tuitions are collected and deposited with the Clerk of District 24J.

TUITION

Full time students
(includes $10.00 registration fee) ..... ~~$90.00~~ per term
Part time students ..... ~~$8.00~~ per term unit
Out of State tuition ..... $650.00 per year

LATE REGISTRATION

A late registration fee will be charged in accordance with the schedule shown below:

Day of Term	Late Registration Fee
1st and 2nd	No charge
3rd	$1.00
4th and 5th	3.00
6th to closing date	5.00

Registration will be closed after the day indicated in the Academic Calendar. The college will not accept student registration for the current term after this day, except part time extension courses or special program.

OTHER FEES

Locker ..... $2.50 per term
Transcript ..... $.25
Each student is entitled to his first three copies free. Additional copies will be furnished at the rate of $.25 ea.
Laboratory Fee ..... Varied
Laboratory fees will be assessed as necessary. A schedule of lab fees will be made available at the time of registration.

BOOKS and SUPPLIES

Books and supplies may be purchased at the college book store. The cost of books and needed supplies will vary, depending on the program. For example, in the Electronics program, a full time student can expect to purchase, during the first year, approximately $60.00 worth of texts and roughly a like amount for necessary supplies.

TUITION REFUND

Students who withdraw from the college and who have complied with the regulations governing withdrawals are entitled to a partial refund of tuition paid, depending on the time of withdrawal. The refund schedule is obtainable at the time of registration. All refunds are subject to the following regulations. Any claims for refund must be submitted on a withdrawal form at the time of withdrawal. Refunds in all cases are calculated from the date of application for refund and not from the date when the student ceased to attend classes. The following is the refund schedule adopted by the School District and is followed by the college. The registration fee will be

deducted before applying the below refund schedule in all cases of withdrawal from school, both in day and evening, part and full time.

During the first week	90% of tuition
During the second week	70% of tuition
During the third week	50% of tuition
During the fourth week	40% of tuition

Grading Systems

Grades will be issued at the close of each term as indicated by the calendar. The letters A,B,C,D,F,W, and Inc., will be used to designate relative standing in the class; A denotes outstanding performance; B of lesser excellence, but above average; C as average work; D as below average, but still passing; F as failure; W indicates withdrawal; and Inc. as incomplete.

All work that is graded is assigned a numerical point value as follows: A, 4 points per term unit; B, 3 points per term unit; C, 2 points per term unit; D, 1 point per term unit; F, 0 points per term unit. The grade-point average (GPA) is the quotient of total points divided by total term units for which grades are issued. Incompletes and withdrawals are disregarded in the computation of grade-point averages.

INCOMPLETES

When a student has been in regular attendance in a class, but in the judgment of the instructor has failed to complete a minor portion of the required course work, an incomplete may be awarded. The incomplete must be made up within the following term and the grade recorded in the college office or the incomplete becomes an F. It is the student's responsibility to take care of incompletes.

WITHDRAWAL

Students may withdraw from a course on or prior to the date indicated in the Academic Calendar by filing an official withdrawal form with the college office. A student who registers for a course is considered in attendance unless an official withdrawal has been made.

Students are expected to process withdrawals in person. Proper withdrawal is reflected on the student's transcript and protects his academic record.

Graduation Requirements

Upon satisfactory completion of all program and degree requirements, students in two year programs are awarded an Associate in Science Degree. Students who are enrolled in one year programs are, upon satisfactory completion of program and certificate requirements, awarded the Certificate of Completion.

Awarding of the degrees and certificates is made at a formal graduation exercise which is conducted the evening of the date for graduation indicated in the Academic Calendar.

Approval for awarding the Associate in Science Degree was given to the Salem Technical Vocational Community College by the Oregon State Board of Education.

REQUIREMENTS FOR ASSOCIATE IN SCIENCE DEGREE

The Associate in Science Degree is awarded after the following requirements are met:

1. Satisfactory completion of all planned course work within a two year program.
2. Cumulative grade point average (GPA) of 2.00 or above.
3. A minimum of 18 term hours of selected general education courses or an approved equivalent.

REQUIREMENTS FOR CERTIFICATE OF COMPLETION

The Certificate of Completion is awarded after the following requirements are met:

1. Satisfactory completion of all planned course work within a one year program.
2. Cumulative grade point average (GPA) of 2.00 or above.

APPLICATION FOR GRADUATION

Students who are enrolled in two year programs working towards an Associate in Science Degree must submit written application for graduation and degree by the end of the first week of the winter term of the graduating year. Application forms will be made available to these students at registration for the winter term.

Students in one year programs for which the Certificate of Completion is awarded must submit written application for graduation and certificate before the end of the second week of spring term. Application forms will be made available to these students at registration for the spring term.

Credit

The specific subject matter areas in the technical programs carry weight designated in TERM UNITS of credit. A term unit represents one hour of the student's time each week for one term in a theory class or three hours in a lab. The number of class/laboratory hours per week for any course may be found in the sequence of courses for each program of studies and in the section of course descriptions.

Placement

An active placement policy is maintained by the school for the benefit of the graduates of our programs. Instructors in each program are in close touch with employers and job

opportunities in the area. Every possible assistance will be given students completing programs and who are seeking jobs in the occupations for which they have been training.

The college coordinates and plans employer recruitment visitations to the school for the convenience of its graduates each spring.

Evaluation

Certain courses within the curriculum may be waived if, upon evaluation of student's past experience by the Faculty Committee, it is felt that he has covered this area. When formal credit is desired after such evaluation, an examination over content of the waived courses would be required by complying with procedures already established for such. It is the student's responsibility to petition for examination for formal credit.

Petitions for examination for formal credit must be submitted to the college office within the first week of the term in which the course is offered.

No student may take a special examination for credit in the term in which he completes his requirements for graduation.

Transcripts from other post high school institutions showing subject matter completed that compares with our offerings will be honored and credit automatically given, upon evaluation of such courses by the Faculty Committee.

Counseling and Guidance

A counseling and testing service is available to each interested individual in the community, without obligation. The service is offered to assist individuals with selecting and planning their educational futures in areas commensurate with their abilities and interests.

This service is especially helpful to young people who experience difficulty in choosing an occupation or an area of training.

Veterans

All courses listed are approved by the Veterans' Administration and the State Department of Veterans' Affairs for the payment of educational benefits to eligible veterans. Twenty-five hours per week of class (inc. lab. time) in some programs and thirty hours per week of class (inc. lab. time) in others is considered a full load for a veteran. The veteran is responsible for paying the cost of the tuition, fees, books, etc., directly to the college regardless of whether subsistence checks have been received or not.

Dates for payments of costs cannot be waived because of delay in receiving benefits. Prospective veteran students may obtain applications for educational benefits from the Bookkeeper's Office at the College.

Financial Aid

Financial aid at Salem Technical Vocational Community College is available in a variety of forms and scholarships.

SCHOOL DISTRICT 24J SCHOLARSHIP

The School District has authorized a scholarship for graduates of the district high schools. The scholarship is awarded on the basis of scholastic ability, financial need, and citizenship. Information can be obtained at the college general office.

CLARK & GROFF ENGINEERS, INC., STUDENT LOAN PROGRAM

A loan of up to $100 per month will be made available to students while maintaining satisfactory grades in their second year of Civil-Highway Engineering Technology program. Candidates for this loan are selected by a committee of three members on the basis of need, and probabilty of achievement in the field of Civil or Highway Engineering Technology. Requirements for application are that the student has an accumulative grade point average of at least 2.5 for the first year and a G.P.A. of at least 2.5 in the third term. Parents or guardians of minors will be required to co-sign any note.

Evening Program

The evening classes at Salem Tech consist of both full and part time students, persons just out of high school and employed workers who have been out of school for some time. The evening student may elect to take up an entirely new occupation, for example, study for his Electronic Engineering Technician degree, or enroll in a Math or Science class for refresher purposes.

The requirements for entrance into the evening program are that the individual be 16 years of age or over and be capable of profiting from the instruction. Tuition for the classes will vary depending on the number and type of courses. Generally the cost is $8.00 per term unit.

The classes normally are held between the hours of 6 p.m. and 11 p.m.

Further information on the evening program such as cost, time, and availability of various classes can be obtained by calling or writing Salem Tech, 4389 Satter Drive N.E., Salem, Oregon 97303. Phone 363-4171, Extension 341. Evenings 363-4176.

OCCUPATIONAL EXTENSION

The Occupational Extension classes are offered by Salem Tech to interested persons who are already experienced in a trade or craft. The classes are planned so that the participants may increase their performance skills and related technical information in order that they may become more valuable employees.

Classes may be arranged for any interested group of 10 or more individuals in most industrial occupations, skilled or semi-skilled trade or craft, and in any service or business occupation. Some examples of classes which have been conducted in the past are: Firemen Training; Oil Burner Service; Welding; Inside and Outside Wiring; Supervisory training; and specialized courses for the food processing industry.

The cost of these classes will vary depending on the circumstances; however, in general the fee will range from $8.00 to $15.00 per course.

HOME ECONOMICS ADULT EDUCATION COURSES

Home Economics Courses for adults are planned for men and women of all ages who are living in Salem and the surrounding area. An attempt is made to meet the needs of those who are combining wage earning with homemaking activities as well as those of retired persons and those recently married.

High school students beyond 16 years of age may enroll in the Home Economics Adult program and earn high school credit when authorized by their high school principal. All work must be satisfactorily completed according to the requirements of the instructor. A Homemaking Certificate of Achievement may be earned by an adult who completes at least one course in each of the five areas of Home Economics. Courses completed over a period of years may be applied toward this recognition.

Home Economics adult courses are grouped in the following areas:

(1) Management
(2) Home Planning, Furnishings and Landscaping
(3) Child Development and Relationship
(4) Foods and Nutrition
(5) Clothing and Textiles

FIREMEN TRAINING

This program consists of a series of courses designed to fill the need for technical instruction of volunteer and full-time firemen. The courses may be offered in the local fire station or the college. Instructors are selected on the basis

of their experience and special competence in the subjects being taught. The interested individual or group may elect to follow several courses of action depending upon their needs, with an ultimate goal of an Associate Degree in Fire Protection Technology.

INDUSTRIAL SUPERVISORY PROGRAM

This program is a planned series of courses in Supervisory Methods and Techniques. The courses are available to individuals who are currently involved in supervisory duties or personnel who will assume supervisory duties eventually.

CONTEMPORARY CORRECTIONS PROGRAM

A program designed to serve the needs of those persons who are employed in the corrections field, and as a preparation for those wishing to enter corrections work.

REAL ESTATE PROGRAM

An evening program designed to serve the needs of persons who are already employed in the field of real estate and who wish to increase their effectiveness in the profession.

Special Programs

On occasion, agencies on the federal, state or local level will have cooperative training or retraining programs in session at the college.

FEDERAL MANPOWER DEVELOPMENT AND TRAINING ACT PROGRAMS

Certain programs are offered in conjunction with the Employment Service of Oregon through the Federal Manpower Training Act. Under the Act, the Employment Service makes the initial selection of the individuals for training in the programs.

For additional information concerning the college, the programs or the courses offered, Telephone, Write or Visit

SALEM TECHNICAL VOCATIONAL
COMMUNITY COLLEGE
4389 Satter Drive NE, Salem, Oregon
Telephone 363-4171, Ext. 341; Evenings 363-4176

Data Processing Technology

The objective of the Data Processing Program is to provide training for individuals preparing for positions in the various fields of business data processing and for those persons already engaged in the field who desire further training.

This is a two year program providing for specialization in the second year. The first year of the program provides for common business data processing training. The second year has two options: Electric Accounting Machines and Electronic Data Processing. The second year options provide for concentrated study and skill development in these specific fields. Selection of the second year option is based on testing and individual counseling of each student.

Students receive a thorough grounding in accounting, business data processing, computer programming, and management procedures. Comprehensive instruction in logic principles and actual operation of tabulating machines, collators, sorters, interpreters, key punch, reproducing punch and electronic computer is provided.

Upon satisfactory completion of the requirements in the Data Processing Program, an Associate in Science degree will be awarded, signifying that the student is prepared to effectively function and advance in the many job areas of the Data Processing Field.

Examples of opportunities are listed here:

Coders
EDPM Programmer Trainee (CS)
Machine Operator—Peripheral
Tabulating Machine Operator 1 (CS)
Systems and Procedures Trainee
EDP Clerk and Librarian
EDPM Programmer 1 (CS)
Machine Operators—Computer
Procedures Writer

Associate in Science Degree:

Electronic Accounting Machine: Required 98 Term Units

Electronic Data Processing: Required 103 Term Units

Data Processing Curriculum

First Year

Term 1

Hours Work Class	Lab.	Course Title	Course No.	Term Units
3	3	Accounting	6.920	4
3		Communication Skills	1.101	3
3		Introduction to Business and Public Administration	2.502	3
3	3	Introduction to Electric Accounting Machines	6.913	4
2	2	Mathematics	4.202	3

Term 2

3	3	Accounting	6.921	4
3		Communication Skills	1.104	3
3		American Institutions	1.600	3
2	6	Electric Accounting Machines, Logic Principles	6.940	4
2	2	Mathematics	4.204	3

Term 3

3	3	Accounting	6.922	4
3		Technical Report Writing	6.126	3
3		Business Statistics	6.912	3
3		Data Processing Mathematics	6.925	3
3	3	Programming	6.935	4

Data Processing Curriculum

Second Year Options
Electric Accounting Machines Curriculum

Term 4

Hours Class	Work Lab.	Course Title	Course No.	Term Units
3	2	Introduction to Electronic Accounting Machine Applications	6.944	4
3		Introduction to Systems and Procedures	6.902	3
2	6	Introduction to Electric Accounting Machine Operations	6.941	4
3		Cost Accounting	2.576	3
3		Introduction to Psychology	1.606	3

Term 5

3	3	Intermediate Electric Accounting Machine Applications	6.945	4
3		Automated Systems and Procedures	6.904	3
2	6	Intermediate Electric Accounting Machine Operations	6.942	4
3		Business Economics	1.524	3

Term 6

3	3	Advanced Electronic Accounting Machine Applications	6.946	4
3		Business Management	6.908	3
2	6	Advanced Electric Accounting Machine Operations	6.943	4
2		Electric Systems Management	6.947	2
3		Psychology of Human Relations	1.608	3

Electronic Data Processing Curriculum

Term 4

2	3	Electronic Data Processing Machine Operations	6.909	3
3		Introduction to Systems and Procedures	6.902	3
3	6	Programming	6.936	4
3		Cost Accounting	2.576	3
3		Data Processing Mathematics	6.926	3
3		Introduction to Psychology	1.606	3

Term 5

3	3	Electronic Data Processing Applications	6.949	4
3		Automated Systems and Procedures	6.904	3
3	6	Programming	6.937	4
3		Business Economics	1.524	3
3		Data Processing Mathematics	6.927	3

Term 6

3	3	Electronic Data Processing Applications	6.950	4
3	6	Programming	6.938	4
3		Business Management	6.908	3
2		Electronic Systems Management	6.948	2
3		Psychology of Human Relations	1.608	3

Real Estate Technology

This curriculum is designed to provide depth of understanding in the requirements of the occupations in and associated with the real estate industry.

Real Estate Appraisal, Property Management, Real Estate Finance, Title and Escrow, Sales and Brokerage are among the many various fields of interest considered in this curriculum.

The two year program in Real Estate will present, in broad scope, the information essential for satisfactory performance in these occupational areas.

An evening program is also provided, presenting courses which will be of value to persons presently employed in real estate occupations and who wish to enhance their professional ability by continued study. The instructors for these courses are selected for their prominence in the various specialized areas of real estate.

Upon satisfactory completion of the requirements of the Real Estate Technology Program, an Associate in Science Degree will be awarded.

Associate in Science Degree: Required 103 Term Units

Real Estate Curriculum

First Year

Term 1

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
3		Introduction to Psychology	1.606	3
3	3	Accounting	6.920	4
1	4	Typing	2.606	2
3		Business Mathematics	6.918	3
3		Communication Skills	1.101	3
1	3	Business Machines	2.660	2

Term 2

3		Business Mathematics	6.923	3
3		Communication Skills	1.104	3
3		American Institutions	1.600	3
3		Real Estate Principles	2.400	3
3		Business Law	2.320	3
3	3	Accounting	6.921	4

Term 3

3		Real Estate Principles	2.410	3
3		Real Estate Finance	2.406	3
3		Real Estate Law	2.402	3
2	2	Public Speaking	1.610	3
3		Business Economics	1.524	3
3	3	Accounting	6.921	4

Second Year

Term 4

1	4	Real Estate Salesmanship	2.415	3
2	3	Real Estate Practices	2.404	3
3		Real Estate Trends and Developments	2.412	3
1	4	Elements of Design and Construction	2.418	3
3		Fundamentals of Real Estate Taxation	2.416	3

Term 5

2		Subdividing and Community Planning	2.438	2
2	3	Real Estate Appraisal	2.408	3
2	3	Real Estate Sales Promotion	2.420	3
1	3	Property Management	2.422	2
3		Fundamentals of Exchanging	2.417	3

Term 6

2	3	Real Estate Appraisal	2.409	3
3	2	Commercial and Investment Properties	2.419	4
2	8	Real Estate Work Experience	2.431	6
5		Real Estate Counseling	2.440	5
2		Construction Estimating	6.110	2

Civil and Structural Engineering Technology

The first year (initial three terms) of the following curricula are common:

- Civil and Structural Engineering Technology
- Highway Engineering Technology
- Civil-Structural Drafting Technology
- Surveyor Technician Program

The student will make a choice of a major technology at the end of the first year.

The objective of the Civil and Structural Program is to prepare students to meet the requirements for entrance into various branches of employment in Civil and Structural Engineering fields and for advancement in the chosen field. Graduates will find excellent opportunities for careers in the wide areas of highway, bridge, dam, and factory development and construction. Comprehensive practical training in areas of surveying, strength of materials and construction activities provide application of the theoretical and mathematical courses which are taken concurrently.

The training is sufficiently broad so that the student can use the program as a base for further study in general Civil Engineering and related work. Together with further study and sufficient experience, the graduate would have opportunity to advance to a Civil Engineering Rating while in the employ of certain federal, state, or city organizations.

On a construction project that is being planned, Civil and Structural Technicians may help in estimating costs, preparing specifications for materials, or participating in surveying, drafting, or designing work. Once the actual construction work has begun, they may assist the contractors or engineers in scheduling construction activities and inspecting the work for conformance with blueprints and specifications.

Upon satisfactory completion of the requirements in the Civil and Structural Program an Associate in Science Degree will be awarded, signifying that the student is prepared to effectively function and advance in the many job areas of Civil and Structural Engineering.

Examples of opportunities are listed here:

Construction Foreman
Assistant Engineer
Senior Draftsman
Surveyor
Civil Engineering Technician
Structural Designer
Supt. of Construction
Inspector
Construction Estimator
Cost Estimator
Contractor's Assistant
Technical Writer
Computor
Engineering Aide
Instrument Man, Survey

Associate in Science Degree: Required 101 Term Units.

Civil and Structural Engineering Technician Curriculum

First Year

Term 1

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
3	2	Applied Physics	6.370	4
1	6	Plane Surveying	6.101	3
	4	Drafting	4.101	2
3		Technical Mathematics	6.261	3
	2	Slide Rule Operations	6.137	1
3		Communication Skills	1.101	3

Term 2

	2	Engineering Problems	6.138	1
3	2	Applied Physics	6.371	4
3		Communication Skills	1.104	3
	4	Drafting	4.105	2
1	6	Plane Surveying	6.103	3
3		Technical Mathematics	6.262	3

Term 3

1	2	Practical Descriptive Geometry	6.127	2
2	3	Applied Mechanics	6.109	3
1	6	Surveying Computations	6.500	3
2	3	Strength of Materials	6.105	3
3		Technical Mathematics	6.266	3
3		Technical Report Writing	6.126	3
* 2	3	Properties of Materials	6.341	3

Second Year

Term 4

1	5	Land Division and Mapping	6.355	3
2	3	Strength of Materials	6.128	3
2	3	Applied Mechanics	6.111	3
1	3	Earthwork Computations and Estimates	6.528	2
1	6	Route Surveying	6.507	3
3		Introduction to Psychology	1.606	3

Term 5

2	2	Hydraulics	6.112	3
2	3	Soil Mechanics	6.124	3
1	3	Structural Analysis and Design	6.130	2
3	3	Timber and Steel Construction	6.125	4
3		American Institutions	1.600	3
3	3	Fortran Computer Programming	6.931	4

Term 6

2	5	Concrete Construction and Design	6.123	4
	4	Structural Drafting	4.111	2
2	2	Hydraulics	6.114	3
3		Contracts and Specifications	6.118	3
2		Construction Estimating	6.110	2
3		Psychology of Human Relations	1.608	3

*Taken by surveyor majors in lieu of Strength of Materials.

Highway Engineering Technician

*(Optional upon the completion of the first year Civil Program)

The graduates of this area become surveyors, design draftsmen or specialists in other well established technical jobs. Those working as surveyors determine the locations and measurements of land areas, buildings for construction and other purposes; using the transit, level and other surveying instruments. Those employed in other technical jobs include estimators who prepare estimates of costs, materials, and terms necessary in the construction or repair of various highways and structures; highway inspectors who usually supervise the clearing rights of way and preparation of roads for surfacing.

Upon satisfactory completion of the requirements in the Highway Engineering Technology Program, an Associate in Science Degree will be awarded, signifying that the student is prepared to effectively function and advance in the many job areas of Civil and Structural Engineering.

Examples of opportunities are listed here:

Junior Construction Inspector	Construction Inspector
Map Draftsman	Soils Technician
Supervising Technician	Materials Lab Technician
Estimator	Land Surveyor
Instrumentman	Construction Surveyor
Engineering Office Technician	Highway Draftsman

Associate in Science Degree: Required 103 Term Units

Highway Engineering Technician Curriculum

Second Year

Term 4

Hours Class	Work Lab.	Course Title	Course No.	Term Units
1	5	Mapping and Computing	6.350	3
2	3	Strength of Materials	6.128	3
1	3	Earthwork Computation and Estimates	6.528	2
1	6	Route Surveying	6.507	3
3		Introduction to Psychology	1.606	3
2	3	Applied Mechanics	6.111	3

Term 5

2	2	Hydraulics	6.112	3
1	5	Mapping and Computing	6.351	3
2	3	Soil Mechanics	6.124	3
2	2	Concrete Practice	6.555	3
2	2	Data Processing Applications	6.930	3
3		American Institutions	1.600	3

Term 6

3		Traffic Engineering	6.553	3
3		Contracts and Specifications	6.118	3
2	2	Asphalt Paving	6.551	3
3		Psychology of Human Relations	1.608	3
3		Practical Hydrology	6.535	3
2	6	Highway Design	6.554	4

Civil and Structural Drafting Technician

*(Optional upon the completion of the first year Civil program)

The objective of this program is to provide proficiency and understanding in the technical requirements for a career as a design draftsman in the field of civil and structural engineering. The courses within the program were specifically selected to train technicians to qualify for the detailing and designing of the plans of construction and engineering in the civil-structural area. Practical elements of engineering, drafting, mathematics, physics, strength of materials, structural analysis, and design analysis serve to constitute a broad curriculum, without sacrificing depth of instruction. The curriculum is centered around occupational elements that normally cannot be obtained through experience alone, elements such as: Principles of Structural Design, Strength of Materials, and certain other specialized areas.

Upon satisfactory completion of the requirements in the Civil and Structural Drafting Program an Associate in Science Degree will be awarded, signifying that the student is prepared to effectively function and advance in the many job areas of Civil and Structural Drafting Technology.

Associate in Science Degree: Required 99 Term Units

Civil and Structural Drafting Technician Curriculum

Second Year

Term 4

Hours Work Class	Lab.	Course Title	Course No.	Term Units
3		Introduction to Psychology	1.606	3
3		Introduction to Specifications	4.102	3
	8	Architectural Drafting	4.226	3
1	5	Mapping and Computing	6.350	3
1	6	Route Surveying	6.507	3
1	3	Earthwork Computation and Estimates	6.528	2

Term 5

3		American Institutions	1.600	3
2	6	Industrial Construction Drafting	4.133	4
1	5	Mapping and Computing	6.351	3
3	3	Timber and Steel Construction	6.125	4
		Restricted Elective		3

Term 6

3		Psychology of Human Relations	1.608	3
2	6	Industrial Construction Drafting	4.137	4
	4	Structural Drafting	4.111	2
3	4	Photo Interpretation and Mapping	4.112	4
		Restricted Elective		3

Surveyor Technician Program

*(Optional upon the completion of the first year Civil program)

The objective of this program is to develop the capabilities of the student in the basic concepts and the rules associated with surveying and inspection. The student upon graduating from this sequence of courses will be sufficiently founded in technical material to start work as a surveyor technician doing location work for roads or highways, building location, property surveys, office computations, and map preparation. An affiliated field of work is the construction inspector who represents the engineer on the job site and inspects the construction work as it progresses to assure compliance with the plans and specifications.

The training is wide enough in scope so the student can use the program as a base for further study in Surveying and general Civil Engineering. Together with further study and sufficient experience, the student will have an opportunity to become a registered surveyor or to advance to a civil engineering rating if employed by certain federal, state or city organizations.

Upon satisfactory completion of the requirements in the Surveyor Technician Program an Associate in Science Degree will be awarded, signifying that the student is prepared to effectively function and advance in many job areas of Surveying and Civil Engineering.

Examples of opportunities are listed here:

Surveyor Aide
Surveyor
Inspector
Engineering Aide
Construction Accountant
Cartographer Technician
Construction Estimator
Contractor's Assistant
Computor

Associate in Science Degree: Required 101 Term Units

Surveyor Technician Curriculum

Second Year

Term 4

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
1	5	Mapping and Computing	6.350	3
1	3	Earthwork Computation and Estimates	6.528	2
1	6	Route Surveying	6.507	3
1	2	Blueprint Reading for Construction	4.859	2
1	2	Asphalt and Concrete Practice	6.556	2
3		Introduction to Psychology	1.606	3

Term 5

1	5	Mapping and Computing	6.351	3
2	2	Hydraulics	6.112	3
3		Industrial Safety	4.108	3
2	2	Data Processing Applications	6.930	3
2	3	Engineering Soil Testing	6.344	3
3		American Institutions	1.600	3

Term 6

1	5	Mapping and Computing	6.352	3
2	2	Geodetic Surveying	6.343	3
3	4	Photo Interpretation and Mapping	4.112	4
3		Contracts and Specifications	6.118	3
2	4	Construction and Special Surveys	6.342	3
3		Psychology of Human Relations	1.608	3

Electronic Engineering Technology

The first year (initial three terms) of the following curricula are common:

- Electronic Engineering Technician
- Industrial Electronic and Communication Technician
- Electronic-Electrical Drafting Technician

The student will make a choice of a major technology at the end of the first year.

The objective of the Electronic Technician Program is to prepare individuals for careers in the broad field of Electronics. The program was especially designed and planned to give the graduate a broad and comprehensive understanding and practical know-how, without sacrificing depth and some specialization for entrance into such areas of the electronic industry as: research and development; radio and television; micro-wave station operations and maintenance; and in commercial and domestic maintenance and many other areas using vacuum tubes and semi-conductor circuits.

The student is given a strong background in Electronics Theory, Mathematics, and Physics to enable him to handle complex technical work. The student spends the major portion of his school time gaining proficiency in the practical application of the theory; analyzing circuits; development of elementary electronic units; working with modern test and measuring equipment; trouble shooting, and evaluating operating characteristics of electronic equipment.

Graduate Electronic Technicians employed in research and development activities usually assist physical scientists or engineers in designing, testing, and modifying experimental electronic devices. They may be called upon to devise practical solutions of problems of design, select suitable materials, determine the best method of building a piece of equipment, and test and evaluate the operating characteristics of the electronic device. They also may be called upon to make necessary modifications in the experimental equipment.

Upon satisfactory completion of the requirements in the Electronic Technician Program an Associate in Science Degree will be awarded, signifying that the student is prepared to effectively function and advance in the many job areas of the Electronic Technology.

Examples of opportunities are listed here:

Radio Communications Technician (Aircraft, etc.)
Radio Operator and Dispatcher
Electronics Technician
Laboratory Technician (Electronic)
Electronic Instrument Technician (Mfg.)
Guided Missile Technician
Electronic Computor Technician
Microwave Radio Technician
Electronic Instrument Service Technician
Industrial Electronic Technician Supervisor
Electronic Equipment Designer
Electronic Engineering Technician

Associate in Science Degree: Required 104 Term Units

Electronic Engineering Technician Curriculum

First Year

Term 1

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
3	2	Electrical Theory DC	6.200	4
	2	Slide Rule Operations	6.137	1
3		Technical Mathematics	6.261	3
3	2	Applied Physics	6.370	4
	3	Drafting	4.101	2
3		Communication Skills	1.101	3

Term 2

3	2	Electrical Theory AC	6.202	4
	2	Engineering Problems	6.138	1
3		Technical Mathematics	6.262	3
3	2	Applied Physics	6.371	4
3	3	Vacuum Tube and Transistor Analysis	6.223	4
3		Communication Skills	1.104	3

Term 3

3	3	Electrical Circuits	6.206	4
3	6	Amplifier Circuits and Design	6.217	5
3		Technical Report Writing	6.126	3
1	2	Practical Descriptive Geometry	6.127	2
3		Technical Mathematics	6.266	3

Second Year

Term 4

3		Electrical Mathematics	6.115	3
2	6	Oscillators Circuits and Design	6.225	4
2	3	Wave Generation and Shaping	6.234	3
2	3	Semiconductors	6.237	3
2		Network Analysis	6.230	2

Term 5

	4	Electronic Drafting	4.103	2
3	3	Industrial Electronics	6.218	4
3	3	Industrial Television	6.228	4
3		Electronic Data Processing	6.240	3
3		American Institutions	1.600	3
2		Antennas and Transmission Lines	6.231	2

Term 6

2	3	Advanced Electronic Circuits	6.216	3
3		Electronic Instruments	6.220	3
3	6	Industrial Television	6.235	5
3	3	Industrial Electronics	6.248	4
2	3	Microwaves	6.242	3

Industrial Electronic and Communication Technician Program

*(Optional upon completion of the first year Electronic Engineering Technician Curriculum)

The objective of the Industrial Electronic and Communication Technician Program is to prepare individuals for entrance into the field of industrial instrument processes or into the field of mobile communication work. The courses are designed to build a background knowledge of these fields. A heavy emphasis is placed upon practical theory and application allowing the student to become familiar with the usage of the equipment for the purpose of testing and servicing. The technician in this field should have a good background in manual skill, also technical judgment based on mathematics and scientific principles with a proficiency of materials and processes in his specialized field and a knowledge of organization and communication skills.

For satisfactory completion of this program a minimum of a second class radio-telephone license is required. Upon satisfactory completion of the requirements in the Industrial Electronic and Communication Technician Program, an Associate in Science Degree will be awarded, signifying that the student is prepared to effectively function and advance in the many job areas of the industrial electronic and communication technician field.

Examples of job opportunities are listed below:

Mobile Radio Technician
Microwave Technician
Microwave Installer
Industrial Instrumentation Technician
Instrument Test and Calibration Technician
Laboratory Technician

Associate in Science Degree: Required 101 Term Units

Industrial Electronic and Communication Technician Curriculum

Second Year

Term 4

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
2	3	Wave Generation and Shaping	6.234	3
2	3	Semiconductors	6.237	3
2		Network Analysis	6.230	2
3	3	Radio Transmitters	6.250	4
3		Introduction to Psychology	1.606	3

Term 5

3	3	Industrial Electronics	6.218	4
2	3	Industrial Television	6.228	3
2		Antennas and Transmission Lines	6.231	2
2	3	Industrial Instrumentation	6.253	3
2	3	Communication Receivers	6.251	3
3		American Institutions	1.600	3

Term 6

2	3	Microwaves	6.242	3
2		Radio Law	6.252	2
2	3	Industrial Instrumentation	6.254	3
3		Business Management	2.202	3
3	3	Industrial Electronics	6.248	4

Electronic-Electrical Drafting Technician

*(Optional upon completion of first year Electronic Engineering Technician Curriculum)

The objective of the Electronic-Electrical Drafting Program is to prepare individuals to meet the requirements for entrance into electronic and electrical drafting fields. The courses within the curriculum were especially planned and selected to qualify the technician for detailing and drawing of electronic and electrical plans and layouts. Practical elements of the engineering, designing, drafting, mathematics, physics, electrical-electronic theory and design analysis serve to constitute a broad program, but at the same time depth is emphasized in special areas. The program of study is centered around occupational elements that normally cannot be obtained through experience alone, elements such as: principles of electronic-electrical design, electronic-electrical theory and other specialized areas.

Upon satisfactory completion of the requirements in the Electronic-Electrical Drafting Program, an Associate in Science Degree will be awarded signifying that the student is prepared to effectively function and advance in the many job areas of the Electronic-Electrical Drafting Field.

Examples of opportunities are listed below:

Electronic-Electrical Production Draftsman
Electronic Detail Draftsman
Electronic Research Draftsman
Electronic Statistical Draftsman
Production Layout Draftsman
Electro-Mechanical Draftsman

Associate in Science Degree: Required 101 Term Units

Electronic-Electrical Drafting Technician Curriculum

Second Year

Term 4

Hours Class	Work Lab.	Course Title	Course No.	Term Units
3		Introduction to Specifications	4.102	3
3		Introduction to Psychology	1.606	3
3		Industrial Safety	4.108	3
2	6	Introduction to Fabrication Practices	4.100	4
3		Electronic-Electrical Standards	4.114	3
	6	Scales and Graphs	4.139	2

Term 5

3		American Institutions	1.600	3
3	2	Production Planning and Practices	4.104	4
	4	Electronic Drafting	4.103	2
1	6	Control Layout Systems	4.143	3
2	6	Cost Computations	4.142	4
2		Health Education	1.605	2

Term 6

3		Psychology of Human Relations	1.608	3
	4	Technical Illustrations	4.127	2
1	8	Project Drafting	4.145	4
	6	Light Sheet Metal Drafting	4.147	2
	3	Pictorial Drafting	4.149	1

Mechanical Engineering Technology

This curriculum is designed to provide depths of understanding in the technical requirements of occupations in modern mechanical design and production. This program provides the educational background necessary for many functions in such jobs as: design draftsmen, tool designer, research assistant, or engineering assistant. The curriculum is designed to provide a broad technical competence needed for these jobs rather than the specific skills or techniques required for a single skill occupation. The instruction centers around occupational elements that normally cannot be obtained through experience alone; elements such as physical metallurgy, materials, and processes and principles of machine design. The program of study is designed and arranged to provide the student with an understanding of the materials and processes commonly used in the technology; and extensive knowledge of a field of specialization with an understanding of the engineering and scientific activities that distinguish the field; a facility with mathematics and proficiency in the application of physical science processes that are pertinent to the individual's field of technology.

The graduate may enter the field of manufacturing, experimental shops, and development labs, performing such tasks as re-designing tools for efficiency, making cutting tools, jigs, and special fixtures.

Graduating technicians trained in this technology may assist engineers in design and development work by making free hand sketches, rough layouts of machinery and other equipment, using engineering data and specifications. They help in determining whether a proposed design change is practical and how much it will cost to produce. They may be called upon to apply their knowledge of elementary mechanical engineering principles to solve particular design problems such as those involving tolerances, stresses, strain, friction, and vibration.

Upon satisfactory completion of the requirements in the Mechanical Engineering Technology Program, an Associate in Science Degree will be awarded, signifying that the student will be prepared to effectively function and advance in the many job areas of the technology.

Examples of opportunities are listed here:

Junior Mechanical Engineer
Production Technician (Planning-Control)
Metallurgy Technician
Technical Writer
Method Analyst
Process Technician
Junior Engineering (Drafting)
Safety Technician
Tool, Jig, and Fixture Technician
Instrumentation Technician
Production Inspector
Time Study Technician

Associate in Science Degree: Required 104 Term Units

Mechanical Engineering Technician Curriculum

First Year

Term 1

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
	2	Slide Rule Operations	6.137	1
3		Technical Mathematics	6.261	3
3	2	Applied Physics	6.370	4
	4	Drafting	4.101	2
3		Communication Skills	1.101	3
1	3	Welding	4.150	2
3	2	Introduction to Chemistry	6.275	4

Term 2

2	3	Metallurgy	6.602	3
2	3	Manufacturing Processes	6.606	3
	2	Engineering Problems	6.138	1
3		Technical Mathematics	6.262	3
3	2	Applied Physics	6.371	4
	4	Drafting	4.105	2
3		Communication Skills	1.104	3

Term 3

2	3	Manufacturing Processes	6.610	3
2	3	Strength of Materials	6.105	3
1	2	Practical Descriptive Geometry	6.127	2
3		Technical Mathematics	6.266	3
3		Technical Report Writing	6.126	3
2	3	Applied Mechanics	6.109	3

Second Year

Term 4

3	3	Mechanisms	6.612	4
3	2	Electricity	6.208	4
3		Introduction to Psychology	1.606	3
2	3	Applied Mechanics	6.111	3
2	3	Strength of Materials	6.128	3

Term 5

2	2	Hydraulics	6.112	3
3		American Institutions	1.600	3
2	3	Industrial Instrumentation	6.253	3
3	2	Machine Design	4.603	4
2	3	Applied Thermodynamics	6.615	3

Term 6

2	2	Hydraulics	6.114	3
3		Psychology of Human Relations	1.608	3
2	6	Design Problems	4.605	4
2	3	Industrial Instrumentation	6.254	3
2	3	Applied Heat Power	6.616	3

Industrial-Mechanical Technician Program

The courses in this program are designed to provide the basic knowledge, skills and information needed by persons preparing to enter the industrial mechanical field of employment.

This is a two-year program providing for specialization in the second year. The first year of the program provides for common industrial mechanical training which applies in several fields. After successful completion of the common first year the student may elect to continue in one of the options which will be offered.

Second year options provide for concentrated study and skill development in these specific fields.

Upon satisfactory completion of the requirements in the Industrial-Mechanical Technician Program, an Associate in Science Degree will be awarded.

Job opportunities for the graduate of this program are found in job shops, specialty shops, general machine or welding shops, production shops, and maintenance departments of large manufacturing plants such as the paper industry, or others of similar nature.

Associate in Science Degree: Required 92 Term Units
Drafting Option: 96 Term Units

First Year

Hours Class	Work Lab.	Course Title	Course No.	Term Units
Term 1				
2	2	Mathematics	4.200	3
3		Communication Skills	1.101	3
3		Introduction to Psychology	1.606	3
	4	Drafting	4.101	2
2	3	Bench and Layout Practices	4.810	3
2	3	Machine Tool Processes	4.802	3
Term 2				
2	2	Mathematics	4.202	3
3		Communication Skills	1.104	3
3		American Institutions	1.600	3
3	2	Practical Physics	4.300	4
	4	Drafting	4.105	2
2	3	Machine Tool Processes	4.804	3
Term 3				
2	2	Mathematics	4.204	3
3		Psychology of Human Relations	1.546	3
2	4	Industrial Material and Processes	4.170	3
1	3	Welding	4.150	2
2	3	Machine Tool Processes	4.806	3

Industrial-Mechanical Second Year Options

MACHINE SHOP

Term 4

Hours Class	Work Lab.	Course Title	Course No.	Term Units
3	3	Mechanical Systems	4.171	4
3	4	Power Systems	4.172	4
3		Machine Shop Problems	4.820	3
3	6	Machine Shop Practices	4.841	5
Term 5				
2		Health Education	1.605	2
2	3	Hydraulic and Pneumatic Systems	4.173	3
2	4	Metal Fabrication and Finishing	4.174	3
2	4	Advanced Lathe Practices	4.833	3
2	4	Advanced Milling Machine Practices	4.837	3
Term 6				
2		Machine Shop Automation	4.824	2
3	12	Job Machining Practices	4.845	7
2	4	Tool and Fixture Design and Application	4.847	3
2		Employer-Employee Relations	4.500	2

WELDING AND FABRICATION

Term 4

3	3	Mechanical Systems	4.171	4
3	4	Power Systems	4.172	4
2	2	Metallurgy	6.602	3
1	3	Electric-Arc Welding I	4.160	2
1	3	Oxygen-Acetylene Welding I	4.161	2
Term 5				
2		Health Education	1.605	2
2	3	Hydraulic and Pneumatic Systems	4.173	3
2	4	Metal Fabrication and Finishing	4.174	3
1	3	Inert Gas Welding I	4.163	2
1	3	Advanced Oxygen-Acetylene and Electric-Arc Welding	4.162	2
		Restricted Elective		2
Term 6				
2		Employer-Employee Relations	4.500	2
2	6	Advanced Inert Gas and Shielded Arc Welding	4.164	4
2	6	Welding for Certification	4.166	4
2	2	Welding for Production and Economy	4.165	3
		Restricted Elective		2

SMALL ENGINE REPAIR

Term 4

Hours Class	Work Lab.	Course Title	Course No.	Term Units
3	3	Mechanical Systems	4.171	4
3	4	Power Systems	4.172	4
3	6	Small Gas Engine Theory and Lab	4.180	5
3		Fuels and Lubricants	4.181	3
Term 5				
2		Health Education	1.605	2
2	4	Metal Fabrication and Finishing	4.174	3
2	3	Hydraulic and Pneumatic Systems	4.173	3
2	4	Small Engine Electrical Systems	4.182	3
2	4	Small Engine Reconditioning	4.183	3
Term 6				
2		Employer-Employee Relations	4.500	2
3	12	Engine Overhaul	4.184	6
2	4	Tuneup and Trouble Shooting	4.185	4
2		Service Records and Customer Relations	4.186	2

MECHANICAL DRAFTING

Term 3

1	2	Practical Descriptive Geometry	6.127	2
Term 4				
	2	Slide Rule Operations	6.137	1
3		Technical Mathematics	6.261	3
3	2	Applied Physics	6.370	4
	3	Sketching	4.118	1
1	1	Geometric Construction	4.120	1
	8	Cam and Gear Drafting	4.225	3
		Restricted Elective		2
Term 5				
	2	Engineering Problems	6.138	1
3		Technical Mathematics	6.262	3
1	9	Project Drafting	4.119	4
	8	Technical Illustrations	4.228	3
3		Business Economics	1.524	3
		Restricted Elective		2
Term 6				
3		Technical Report Writing	6.126	3
2		Machine Shop Automation	4.824	2
	8	Sheet Metal Drafting	4.230	3
	8	Jig and Fixture Drafting	4.231	3
		Restricted Elective		4

Drill Operator

The Drill Operator Program is an option from a modified first year of the Industrial-Mechanical Technician Program.

The drill operator sets up and operates earth drilling machines. He hoists and positions tubular casing over the hole, lowers the drill stem into the casing, manipulates the drill, removes samples of subterrain, repairs and maintains the drilling and accessory equipment.

Upon satisfactory completion of the Drill Operator option an Associate in Science Degree will be awarded.

Job opportunities for the graduate of this option are found in the drilling industry in development for subterranean water resources, test holes and earth sampling.

Associate in Science Degree: Required 107 Term Units

Drill Operator Curriculum

First Year

Term 1

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
2	2	Mathematics	4.200	3
3		Communication Skills	1.101	3
	4	Drafting	4.101	2
2	3	Bench and Layout Practices	4.821	3
2	3	Machine Tool Processes	4.802	3
3	4	Power Systems	4.172	4

Term 2

2	2	Mathematics	4.202	3
3		Communication Skills	1.104	3
3	2	Practical Physics	4.300	4
2	3	Machine Tool Processes	4.804	3
2	3	Hydraulic and Pneumatic Systems	4.173	3
3		American Institutions	1.600	3

Term 3

2	4	Industrial Materials and Processes	4.170	3
1	3	Welding	4.150	2
2	3	Heat-Treatment of Steel	4.849	3
3	2	Drill Equipment, Tools and Terminology	4.290	4
2	4	Engine Theory and Maintenance	4.291	3

Second Year

Term 4

3		Introduction to Psychology	1.606	3
3	4	Mechanical Systems	4.171	4
3	4	Drilling Setups and Operations	4.292	4
3	2	Elementary Geology	4.305	4
3		State Drilling Standards and Record Keeping	4.293	3

Term 5

3		Industrial Safety	4.108	3
3		Business Economics	1.524	3
2	3	Intermediate Arc Welding	4.241	3
3	2	Hydraulics for Drillers	4.294	4
3		Finance, Contracts and the Law	2.340	3
2	2	Topographic Map Interpretation	4.130	3

Term 6

2	6	Welding for Certification	4.166	4
3	4	Small Pump Installation	4.295	4
3	4	Drilling Machine Maintenance and Repair	4.296	4
3		Special Drilling Problems	4.297	3
3		Psychology of Human Relations	1.603	3

Technical Drafting

The objective of the Technical Drafting Program is to prepare individuals for positions in engineering departments, in the areas of mechanical drafting, design, or technical illustration and design. The courses within the program are specifically selected and planned to train technicians to qualify for tasks such as drawing preliminary sketches, making layouts from technical information, rendering drawings in pencil and ink, making overlays and paste ups and detailed drawing of complete and final plans.

The curriculum is centered around occupational elements that normally cannot be obtained through experience alone, elements such as principles of design, materials and processes, mathematics, and physical science concepts as applied to the technical drafting area.

Upon the satisfactory completion of the requirements in the Technical Drafting Program, an Associate in Science Degree will be awarded, signifying that the student will be prepared to effectively function and advance in the many job areas of the technical drafting field.

Examples of opportunities are listed below:

Technical Illustrator
Sheetmetal Layout Draftsman
Machine Drafting Technician
Structural Drafting Technician
Aeronautical Draftsman
Electronics and Electrical Drafting Technician
Topographical and Mapping Draftsman
Engineering Graphics Drafting Technician

Associate in Science Degree: Required 95 Term Units

Drafting Technician Curriculum

First Year

Term 1

Hours Work Class	Lab.	Course Title	Course No.	Term Units
3		Communication Skills	1.101	3
3		Introduction to Psychology	1.606	3
3		Technical Mathematics	6.261	3
	2	Slide Rule Operations	6.137	1
1	6	Plane Surveying	6.101	3
	3	Sketching	4.118	1
1	1	Geometric Construction	4.120	1
	5	Machine Drafting	4.221	2

Term 2

3		Communication Skills	1.104	3
3		Technical Mathematics	6.262	3
1	6	Plane Surveying	6.103	3
2	3	Manufacturing Processes	6.606	3
	2	Engineering Problems	6.138	1
2		Dimensioning and Layout	4.224	2
	5	Machine Drafting	4.222	2

Term 3

3		Psychology of Human Relations	1.608	3
3		Technical Mathematics	6.266	3
2	3	Manufacturing Processes	6.610	3
1	7	Mapping and Platting	4.131	3
1	2	Practical Descriptive Geometry	6.127	2
	5	Machine Drafting	4.223	2

Second Year

Term 4

3	2	Applied Physics	6.370	4
	8	Architectural Drafting	4.226	3
	8	Cam and Gear Drafting	4.225	3
	4	Electrical Drafting	4.103	2
3		Introduction to Specifications	4.102	3

Term 5

3	2	Applied Physics	6.371	4
	8	Architectural Drafting	4.227	3
	8	Technical Illustrations	4.228	3
3		Business Economics	1.524	3
3		American Institutions	1.600	3

Term 6

3	2	Applied Physics	6.366	4
	8	Sheet Metal Drafting	4.230	3
	5	Technical Illustrations	4.229	2
	5	Structural Drafting	4.111	2
	8	Jig and Fixture Drafting	4.231	3

Forest Industries Technology

The Forest Industries Program is designed to provide the basic knowledge and skills needed by persons preparing to enter the forest products field of employment. Emphasis is placed upon both the technical skills and the related educational fields of communication, report writing, human relations, and the sciences. The student will spend ample time in laboratory experiments to enable him to become familiar with the standard testing procedures, machines and apparatus used in the industry. Time is provided in the second year of study for a cooperative work-study arrangement with local industry.

Upon satisfactory completion of the requirements of the Forest Industries Technician Program, an Associate in Science Degree will be awarded.

Examples of job opportunities are listed below:

Laboratory Technicians
Pulp and Paper Testing
Raw Materials Testing
Product Certification
Laboratory Assistants
Quality Control work in plywood, particle board and fiberboard plants, pulp and papermills.

Associate in Science Degree: Required 98 Term Units

Forest Products Technician Curriculum

First Year

Term 1

Hours Class	Work Lab.	Course Title	Course No.	Term Units
3		Communication Skills	1.101	3
3	2	Practical Physics	4.300	4
2	2	Mathematics	4.202	3
3		General Forestry	3.600	3
	3	Sketching	4.118	1
	2	Accident Prevention and First Aid	4.190	1
2	2	Introductory Chemistry	6.275	3
	2	Slide Rule Operations	6.137	1

Term 2

3		Communications Skills	1.104	3
3	2	Practical Physics	4.302	4
2	2	Analysis (Mathematics)	4.207	3
1	6	Wood Structure and Identification	6.280	3
3		Forest Products	4.280	3
2	2	Chemistry	6.276	3

Term 3

3		Technical Report Writing	6.126	3
2	6	Logging and Milling	4.282	4
3		Forest Products	4.281	3
2		Employer-Employee Relations	4.500	2
3		Consumer Economics	1.525	3
1	6	Quality Control in Wood Products	6.285	3

Second Year

Term 4

3		Introduction to Psychology	1.606	3
3	3	Wood Technology	6.281	4
		Production Practices	4.283	8

Term 5

3		Human Relations	9.506	3
3		Wood Preservation and Finishing	6.282	3
		Production Practices	4.284	8

Term 6

3		Wood Industry Economics	4.286	3
		Production Practices	4.285	8
2	3	Elective		3

Electives: 1. Theory and Practice of Seasoning and Kiln Drying.
2. Plywood and Board Grading.
3. Paper Products Development and Practices.

Log Scaler Technician

The courses in this curriculum are designed to provide the knowledge, skills and information needed by persons preparing to enter the log scaling field of employment. The opportunities for employment are found in scaling bureaus, logging industries, and governmental agencies.

The training will culminate with a term of Industry Internship, a period of time spent in the field with a qualified scaler. The student's employment in the industry will be evaluated for credit toward an Associate Degree.

Upon satisfactory completion of the requirements of the Log Scaler Technician Program, an Associate in Science Degree will be awarded.

Associate in Science Degree: Required 101 Term Units

Log Scaler Technician Curriculum

First Year

Term 1

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
3		Communication Skills	1.101	3
1	2	Tools and Equipment	3.605	2
2	2	Mathematics	4.200	3
	2	Slide Rule Operations	6.137	1
	3	Sketching	4.118	1
3		General Forestry	3.600	3
	2	Accident Prevention and First Aid	4.190	1

Term 2

3		Communication Skills	1.104	3
1	2	Tools and Equipment	3.606	2
3		Analysis (Mathematics)	4.207	3
3		Forest Products	4.280	3
1	2	Tree Identification	3.610	2
	2	Forest Pathology	3.607	1
1	6	Wood Structure and Identification	6.280	3

Term 3

3		Technical Report Writing	6.126	3
3		Consumer Economics	1.525	3
2	6	Scaling Practices	3.617	4
3		Employer-Employee Relations	4.500	3
1	2	Tree Identification	3.611	2
2	3	Lumber and Veneer Grading	3.615	3

Second Year

Term 4

3	2	Practical Physics	4.300	4
1	6	Plane Surveying	6.101	3
3	4	Forest Mensuration	6.300	4
3	2	Natural Cover Fire Protection	5.151	4
2	6	Logging and Milling	4.282	4

Term 5

3	2	Practical Physics	4.302	4
3		Psychology of Human Relations	1.608	3
3		Wood Industries Economics	4.286	3
1	6	Plane Surveying	6.103	3
3	2	Cruising and Scaling Records	3.619	4

Term 6

	40	Industry Internship	3.622	16

Fire Protection Technology

This curriculum will provide the student with a knowledge adequate to understand the significance and implications of those procedures to be performed at the entry level of the fire protection field he selects to pursue. He will gain sufficient skills to make a desirable employee for more than one field of fire protection.

The curriculum is designed to provide a broad base of technical and general subject matter. The instruction centers around elements that normally are not obtained through experience alone. Such background most certainly will enhance promotional and specialization opportunities.

Upon satisfactory completion of the requirements of the program, an Associate in Science Degree will be awarded, signifying that the student is prepared to effectively function and advance in an interesting, challenging and rewarding field offering a wide scope of employment opportunities. Employment opportunities for graduates are found in Municipal Fire Departments, Fire Equipment Sales Companies, Insurance Companies, Industrial Security Organizations and Forest Connected industries. The majority of opportunities are available in Municipal Fire Departments that have specific physical and social requirements. A prospective student interested in this field should check on these requirements before entrance into the program.

Certain core courses of the curriculum can be made available to presently employed Firefighters as In-Service Training to broaden their knowledge and increase their potential in the field.

Associate in Science Degree: Required 94 Term Units

Fire Protection Technician Curriculum

First Year

Term 1

Hours Class	Work Lab.	Course Title	Course No.	Term Units
3		Introduction to Psychology	1.606	3
2	2	Mathematics	4.200	3
3		Communication Skills	1.101	3
3	2	Elementary Science for Firefighters	5.103	4
3		Introduction to Fire Protection	5.100	3

Term 2

2	2	Mathematics	4.202	3
3		Communication Skills	1.104	3
3	2	Fire Science	6.995	4
2	2	Fire Apparatus and Equipment	5.102	3
3		Blueprint Reading for Firemen	5.119	3

Term 3

3		Psychology of Human Relations	1.608	3
3	2	Fire Science	6.996	4
3		Fundamentals of Fire Prevention	5.101	3
	9	Firefighting Skills	5.110	3
3		Hazardous Materials	5.108	3

Second Year

Term 4

	9	Firefighting Skills	5.111	3
3		Hazardous Materials	5.109	3
3	2	Rescue and Emergency Care	5.120	4
3	2	Fire Service Hydraulics	5.104	4
3		Fire Department Organization and Management	5.112	3

Term 5

3		American Institutions	1.600	3
2	2	Pump Operations and Practical Hydraulics	5.105	3
3	2	Natural Cover Fire Protection	5.121	4
3		Fire Protection Systems and Extinguishers	5.106	3
3		Firefighting Tactics and Strategy	5.113	3

Term 6

3		Technical Report Writing	6.126	3
3		Fire Department Communications and Alerting Systems	5.115	3
3		Water Distribution Systems	5.107	3
3	2	Fire Investigation	5.117	4
3		Building Construction for Fire Protection	5.116	3

Television-Radio Service Program

The objective of this course is to prepare the students for employment in the field of radio and television servicing. The program is designed to provide the basic principles, theory and laboratory work in the practical phases of radio and television service work. Basic mathematics and communication skills necessary to the serviceman are given as part of the theory materials as they are needed.

Upon completion of the course each trainee should be able to take an entry job in the field of radio and television servicing, have had a good background in radio and television theory and maintenance and be familiar with both vacuum tube and transistor circuits. The trainee will also have a proficient knowledge in the use and application of test equipment.

The applicants must have a high school diploma or equivalent and be in good physical condition.

A Certificate of Completion is awarded to those individuals who have satisfactorily completed the required courses within the curriculum.

Examples of opportunities are listed below:

Radio-TV Serviceman
HiFi Serviceman
Auto Radio Serviceman
Sound System Maintenance Man
Factory Service Representative
Electronic Parts Salesman

Television-Radio Service Curriculum

Term 1

Hours Work Class	Lab.	Course Title	Course No.	Term Units
12		DC Theory and AC Theory	4.255	9
	6	DC Theory and AC Theory Lab.	4.256	2
6		Vacuum Tube and Circuits Theory	4.257	5
	6	Vacuum Tube and Circuits Theory Lab.	4.258	2

Term 2

3	6	Transistors and Circuits Theory	4.259	5
2		Radio Principles	4.262	2
	6	Radio Principles Lab.	4.263	2
2		Use of Instruments I	4.260	2
3		Television Principles	4.266	3
	8	Television Principles Lab.	4.267	3

Term 3

2		Radio Servicing	4.264	2
	6	Radio Servicing Lab.	4.265	2
3		Television Servicing	4.268	3
	8	Television Servicing Lab.	4.269	3
2		Use of Instruments II	4.261	2
3		FM and HiFi Theory	4.270	3
	3	FM and HiFi Theory Lab.	4.271	1
3		Business Management	2.202	3

Welding Program

The courses in the Welding Program are designed to provide for skill development in the varied welding processes and to provide the necessary knowledge and information required in the welding occupations.

This is a one year program providing laboratory time for developing and practicing welding skills.

After satisfactory completion of the requirements of the Welding Program, the student will be awarded a certificate.

Job opportunities for the graduate of this program are found in job shops, specialty shops, production and maintenance shops.

Examples of job opportunities are listed below:

Oxygen Cutter
Resistance - Welding Operator
Arc Cutter
Welding Helper
Oxy-Acetylene Welder
Arc Welder

Welding Curriculum

Term 1

Hours Class	Work Lab.	Course Title	Course No.	Term Units
2	9	Basic Arc Welding	4.240	4
2	6	Basic Oxy-Acetylene Welding	4.242	4
2	3	Blueprint Reading and Sketching	4.244	3
2	2	Shop Arithmetic	4.246	3
	2	Shop Projects	4.250	1
Term 2				
2	12	Intermediate Arc Welding	4.241	5
	8	Intermediate Oxy-Acetylene Welding	4.243	2
2	3	Layout Practices	4.245	3
	1	Shop Safety	4.253	1
	2	Shop Projects	4.251	1
Term 3				
1	3	Tungsten Inert Gas Welding	4.247	2
1	3	Metallic Inert Gas Welding	4.248	2
2	6	Welding for Certification	4.166	4
3	9	Weld Shop Problems	4.249	5
	2	Shop Projects	4.252	1

General Drafting Program

The objective of the General Drafting Program is to prepare students for employment in drafting jobs that require a broad knowledge of the fundamental aspects of drafting and a minimum of specialization. The program is designed to give the student a supporting background in basic mathematics, physical sciences, and communication skills which, along with the drafting work, serve to prepare a proficient general draftsman.

After satisfactory completion of the requirements of General Drafting Program, the student will be awarded a certificate and will be prepared to effectively function and advance in many drafting areas.

Examples of opportunities are listed below:

General Drafting
Machine Draftsman
Tracer

General Drafting Curriculum

Term 1

Hours Work Class	Lab.	Course Title	Course No.	Term Units
	4	Drafting	4.101	2
1	1	Geometric Construction	4.120	1
	3	Sketching	4.118	1
2	6	Introduction to Fabrication Practices	4.100	4
2	2	Mathematics	4.200	3
3		Communication Skills	1.101	3
Term 2				
	4	Drafting	4.105	2
	4	Electrical Drafting	4.103	2
1	9	Project Drafting	4.119	4
2	2	Mathematics	4.202	3
3		Communication Skills	1.104	3
1	7	Introduction to Mapping	4.132	3
Term 3				
	4	Mechanical Drafting	4.109	2
	8	Project Drafting	4.121	3
2	2	Mathematics	4.204	3
3	2	Practical Physics	4.300	4
	7	Architectural Drawing	4.107	3

Office Occupations Program

The courses in this program are designed to develop the skills and understanding that are necessary for entry employment into one of the office occupations.

A person entering this program may elect to study the subject matter relating to the work of the secretary or the stenographer. These courses are contained within the structure of the Shorthand Option.

Students interested in office practices such as bookkeeping, typing, clerical, or other general office activities might elect the Accounting Option for studies relating to these general office positions.

The Certificate of Completion is awarded to those individuals who have satisfactorily completed the required courses within the curriculum.

Office Occupations Curriculum

Shorthand Option

Term 1

Hours Class	Hours Work Lab.	Course Title	Course No.	Term Units
1	4	Typing	2.606	2
3		Communication Skills	1.101	3
1	3	Business Machines	2.660	2
3		Introduction to Psychology	1.606	3
3		Business Mathematics	2.650	3
3	4	Shorthand and Transcription	2.620	4
1	1	Personal Development	2.518	1

Term 2

1	4	Typing	2.607	2
3		Communication Skills	1.104	3
1	3	Business Machines	2.661	2
2	2	Filing	2.642	3
3	4	Shorthand and Transcription	2.621	4
3		Introduction to Bookkeeping	2.651	3

Term 3

1	4	Typing	2.608	2
3		Business Correspondence	2.672	3
2	2	Services, Reports, and Records	2.641	3
3	4	Shorthand and Transcription	2.622	4
1	3	Applied Stenography	2.675	2
3		Psychology of Human Relations	2.608	3

Accounting Option

Term 1

1	4	Typing	2.606	2
3		Communication Skills	1.101	3
1	3	Business Machines	2.660	2
3		Introduction to Psychology	1.606	3
3		Business Mathematics	2.650	3
3	3	Accounting	6.920	4
1	1	Personal Development	2.518	1

Term 2

1	4	Typing	2.607	2
3		Communication Skills	1.104	3
1	3	Business Machines	2.661	2
2	2	Filing	2.642	3
3	3	Accounting	6.921	4
3		American Institutions	1.600	3

Term 3

1	4	Typing	2.608	2
3		Business Correspondence	2.672	3
2	2	Services, Reports and Records	2.641	3
3		Psychology of Human Relations	1.608	3
3	3	Accounting	6.922	4

Dental Assistant Program

The objective of this program is to prepare individuals for employment in dental offices, laboratories, and clinics, and also to provide opportunities to those already working in this field to further their knowledge and skill. The program is designed to provide training in the specialized skills necessary in dental chair assisting and in business practice ability.

The program is sufficiently comprehensive in nature so that the student acquires proficiency in assisting the dentist in a variety of capacities in the private office or in a dental health clinic. The program of study includes such activities as mixing of filling materials, instruments and their uses, preparation of patient, sterilization, and other general and specialized courses in dental science. Dental office management is an integral part of the program and includes instruction in areas such as reception of patients, office records, fees and other business practices.

Upon completion of the course of study, the graduate will be ably qualified to assist in a dental office or clinic with a minimum of familiarization and orientation from the dentist.

Typical duties will include preparation of the patients for treatment, mixing filling materials and dental cement, checking and sterilizing equipment, taking inventories and ordering supplies. Laboratory duties include studying models of teeth, casting inlays and taking and developing x-ray films. In the capacity of office manager she acts as receptionist, schedules appointments, keeps accounts and records, sends out bills and is responsible for the general appearance of the office.

Applicants for the dental assistant program must be a minimum of 16 years of age, and be a graduate of an accedited high school or the equivalent. The assistant should be neat, clean, and in good health. A pleasant personality is essential in dealing with dentist's patients. She should be able to meet people and put them at ease and be able to express herself clearly and pleasantly.

Dental Assistant Curriculum

Term 1

Hours Class	Work Lab.	Course Title	Course No.	Term Units
2	3	Introduction and Basic Procedures	5.411	3
	3	Dental Anatomy and Physiology	5.405	1
3		Communication Skills	1.101	3
3		Introduction to Psychology	1.606	3
1	4	Typing	2.633	3
3		Business Mathematics	2.650	3

Term 2

2	3	Chairside Assisting and Basic Laboratory Procedures	5.403	3
1	2	Roentgenology	5.406	2
	3	Dental Sciences	5.404	1
1	2	Nutrition for Health Occupations	5.430	2
3		Communication Skills	1.104	3
1	4	Typing	2.634	3
2	3	Dental Office Management	5.410	3

Term 3

2	3	Advanced Laboratory and Chairside Procedures	5.407	3
2	3	Roentgenology	5.408	3
3		Business Correspondence	2.672	3
3		Psychology of Human Relations	1.608	3
	12	Dental Office Practice	5.409	2

Medical Assistant Program

A Medical Assistant is a person trained to assist the licensed physician in his office. There is a steady demand for young women in this field performing in various types of medical offices. The range of duties will be from assisting with the physical examination, to receptionist and office responsibilities. Each office will differ in its requirements.

The objectives of the Medical Assistant Program are to develop understanding for the professional nature of the physician's practice and a respect for human dignity and rights of those who seek his service, and to develop the skills needed to function safely and effectively as a health team member in three principal areas of work assignment: the reception of patients, understanding business practices and medical record keeping, and the technical aspects of medical procedures.

The one year curriculum includes general education subjects, orientation to the health occupations, basic sciences, and technically oriented courses in medical and office procedures. The third term makes provisions for supervised clinical experience in clinics, physicians' offices and selected areas of the hospitals. Instruction is given by a qualified staff and a registered nurse coordinates the program. Physicians, clinical pathologists, nurses, medical assistants and teachers of commercial and general education subjects will constitute the faculty and Advisory Committee.

Applicants for the Medical Assistant Program must be at least 17 years of age, be a graduate of an accredited high school or the equivalent as determined by test, be in good health and have suitable personal traits and character as to be accepted in such an important occupation.

Final selection of students for this program will be made in conjunction with an Advisory Committee representative of the occupation.

A Certificate of Completion will be given upon satisfactory completion of the program. After a suitable period of successful employment the American Association of Medical Assistants certifies graduates by examination.

Medical Assistant Curriculum

Term 1

Hours Work Class	Lab.	Course Title	Course No.	Term Units
3		Introduction to Medical Assisting	5.600	3
3		Communication Skills	1.101	3
3		Introduction to Psychology	1.606	3
3		Business Mathematics	2.650	3
1	4	Typing	2.633	3
2	4	Basic Sciences for Health Occupations	5.601	4

Term 2

2	6	Medical Assisting, Basic Procedures	5.602	4
3		Communication Skills	1.104	3
2	3	Medical Office Procedures	5.604	3
1	4	Typing	2.634	3
3		Human Anatomy and Physiology	5.608	3
1	2	Nutrition for Health Occupations	5.430	2

Term 3

2		Medical Science	5.605	2
2	16	Medical Assisting, Advanced Procedures	5.606	4
3		Psychology of Human Relations	1.608	3
3		Medical Office Management	5.607	3
3		Business Correspondence	2.672	3
1		First Aid	5.513	1

Practical Nursing Program

The Practical Nurse is a person prepared by an approved educational program and is qualified for nursing practice by licensure of a state board of nursing. She participates in direct patient care as a nursing team member independently functioning in simple, relatively stable nursing situations and is an assistant to the registered nurse and/or licensed physician. The adequately prepared and properly utilized Practical Nurse contributes inmeasurably to quality patient care.

The Practical Nursing curriculum is an occupational preparatory program offered by Salem Technical Vocational Community College under the provisions of the Community College law as administered by the Oregon State Department of Education.

The purpose of the Practical Nursing program is to prepare selected people for a career in practical nursing, who are able to perform the functions of a practical nurse, and who help fulfill the need of health services in Oregon, and to prepare the student for examination given by the Oregon State Board of Nursing for licensing practical nurses.

The one year curriculum is based on principles of education and organized around the nurse's defined functions. Subjects included are practical nursing, basic sciences, and communication skills. Clinical laboratory experience is provided in the hospitals in Salem with emphasis on patient-family centered care. Nursing faculty are responsible for planning and selecting student learning opportunities, instructing, and evaluating student learning.

Applicants for the Practical Nursing program must be at least 17 years of age, be a graduate of an accredited high school or the equivalent as determined by test, be in good health as determined by examination, and have suitable personal traits and character to be accepted in such an important occupation.

The Certificate of Completion is awarded to those individuals who have completed the requirements for the Certificate as outlined in the general information section of this catalog.

Practical Nursing Curriculum

Hours Work Class	Lab.	Course Title	Course No.	Term Units
Term 1				
5	12	Practical Nursing	5.520	9
3	3	Basic Sciences	5.526	4
3		Communication Skills	1.101	3
Term 2				
2	21	Practical Nursing	5.521	9
3	3	Basic Sciences	5.527	4
Term 3				
2	21	Practical Nursing	5.522	9
3	3	Basic Sciences	5.528	4

Technical Nursing Program

The purpose of the program is to prepare nurse practitioners who will be eligible for licensure as registered nurses in the State of Oregon. The graduate will earn an Associate Science Degree in nursing.

The Technical Nursing program offers preparation for nursing within the fabric of general education. The selected content in general and nursing education courses prepares the graduate to give direct patient-family centered nursing care of high quality on the semi-professional technical level in beginning general duty nursing positions.

The graduate of this program will have acquired knowledge and understanding of fundamental principles of the natural, biological, and social sciences; of basic human needs that can be appropriately met through nursing care, and of the manifestations of physical, mental, social health and illness.

The graduate will be competent to function independently in nursing situations involving hygienic and comfort measures, safety principles and measures, human relations skills, observational and reporting skills and will perform delegated medical activities.

In nursing situations of extreme complexity, involved with individual or many problems, the graduate will seek guidance of a professional person for professional judgment.

The Technical Nursing program will start Winter Term, 1968. Applications are now being taken.

Industrial Supervisory Program

This program is a planned series of courses in Supervisory Methods and Techniques. The courses are available to individuals who are currently involved in supervisory duties or personnel who will assume supervisory duties eventually.

An interested individual may elect to follow one of three planned programs, depending upon his ultimate needs, culminating in a Certificate or an Associate Degree.

Instructors for these courses are selected from industry. These instructors are selected on the basis of experience in industry and special competence in the course to be taught. The instructor also must have a State teaching certificate in Industrial Supervision as the result of 60 hours of teacher training which is provided in cooperation with Oregon State University, School of Education.

The following gives an example of a suggested planned program of study.

TYPICAL COURSE SEQUENCE

I. FOR CERTIFICATE IN BASIC SUPERVISORY PRACTICES

(Limited Certificate)	*Term Units
Elements of Supervision	3
Basic Psychology for Supervisors	3
Developing the Employee Through Training	3
Written Communications, or Oral Communications	3
(Restricted elective from Supervisory Courses)	3
Elective, or credit evaluation for supervisory experience	3
Total	18

II. FOR CERTIFICATE IN PRINCIPLES AND PRACTICES (Special Certificate)

(Courses required beyond those included in Limited Certificate)

Human Relations	3
Labor Management Relations	3
Oral Communications, or Written Communications	3
(Restricted elective from General Education courses)	3
(Occupational elective course)	3
(Occupational elective course)	3
(Occupational elective course)	3
Electives or credit evaluation for supervisory experience	6
Cumulative Total	45

III. FOR DIPLOMA OR ASSOCIATE DEGREE

(Courses required beyond Limited and Special Certification)

Methods of Improvement for Supervisors	3
Cost Control for Supervisors	3
Industrial Economics	3
(Restricted elective from Supervision courses)	3
(Restricted elective from General Education courses)	3
(Restricted elective from General Education courses)	3
(Restricted elective from General Education courses)	3
(Occupational elective course)	3
(Occupational elective course)	3
Electives, or credit for supervisory experience	18
Cumulative Total	90

*(A term unit represents 10 clock hours in class)

ALLOWANCE OF CREDIT FOR SUPERVISORY EXPERIENCE

Supervisory experience may be credited for General Elective courses up to a maximum of 24 hours.

CONTEMPORARY CORRECTIONS PROGRAM

A program developed as a basic orientation to the humanities and processes that apply in the corrections field. The courses are designed for the further development of those persons presently involved in corrections work, and for those who wish to prepare for entry into this field of employment.

The following gives an example of the planned program of study.

I. BASIC CERTIFICATE IN CORRECTIONS (Limited Certificate)

	Term Units
*Communications Skills 1.101	3
*Introduction to Psychology 1.606	3
*Introduction to Sociology	3
*Social Disorganization	3
Approved Elective (See II B)	3
Elective, or credit evaluation for correctional experience	3
Total	18

II. CERTIFICATE IN CONTEMPORARY CORRECTIONS (Special Certificate)

A.	Courses required beyond those of Basic Certificate:	
	*American Institutions 1.600	3
	*Communication Skills 1.104	3
	*Correctional Processes	3
B.	Approved Electives:	12
	Correctional Communities	(3)
	*Developmental Psychology	(3)
	*Criminology	(3)
	*Juvenile Delinquency	(3)
	Introduction to Law Enforcement	(3)
	Psychology of Adolescence	(3)
C.	Elective, or credit evaluation for correctional experience	6
	Cumulative Total	45

III. ASSOCIATE DECREE IN CORRECTIONS

A.	Courses required beyond Special Certificate from approved electives (II B and following)	27
	Personality and Character Disorders	(3)
	Psychology of Adjustment	(3)
	Group Behavior	(3)
	Small Group Dynamics	(3)
	Parole and Probation	(3)
	Correctional Administration	(3)
	Analysis of Criminal Careers	(3)
	Introduction to Abnormal Psychology	(3)
	Introduction to Counseling	(3)
B.	Electives, or credit for experience and inservice training in corrections	18
	Cumulative Total	90

*Courses available 1967-1968.

Real Estate Program

This evening program is designed to serve the needs of persons who are already employed in the field of real estate and who wish to increase their professional acumen, develop their judgment skills, and deepen their perception of real estate problems.

Experienced salesmen and brokers may wish to have their occupational experience equated with certain courses, thereby reducing the total hours of class work necessary for completion of the program.

The Certificate of Completion is awarded to those individuals who satisfactorily complete the required courses within the curriculum.

Requirements for the Certificate of Completion:

18 term units of required courses.
9 term units of recommended electives.

Course No.	Courses Required	Term Units
9.262	Real Estate Principles	3
9.263	Real Estate Principles	3
9.264	Real Estate Practice	3
9.265	Real Estate Law	3
9.266	Real Estate Appraisal	3
9.267	Real Estate Finance	3

Course No.	Courses Required	Term Units
9.268	Real Estate Trends and Development	3
9.270	Real Estate Salesmanship	3
9.271	Fund. of Real Estate Taxation	4
9.272	Fundamentals of Exchanging	3
9.274	Elements of Design and Construction	3
9.275	Commercial and Investment Property	4
9.276	Real Estate Sales Promotion	3
9.277	Property Management	2
9.278	Subdividing and Community Planning	2
9.280	Real Estate Appraisal	3
9.284	Real Estate Counseling	5

Index to Course Descriptions

PART TIME EXTENSION COURSES

Occupational Extension

Home Economics Adult Education Courses

Fireman Training Courses

Industrial Supervisory Program Courses

Real Estate Program Courses

Part Time Extension Courses

OCCUPATIONAL EXTENSION

Advanced Ac Welding **9.151** **30 Hrs.**

A course designed to further develop the welding skills of the worker. Lab, vertical and corner welding techniques are stressed. Brazing and bronze welding with oxy-acetylene equipment is introduced. Overhead welding with electric arc is demonstrated and practiced.

Prerequisite: Ability to benefit from instruction, basic welding experience, and consent of instructor.

Basic A.C. Theory **9.681** **36 Hrs.**

The course consists of the study of basic A.C. theory. The material is viewed both from the theoretical and practical usage necessary for understanding. Laboratory work is provided as needed to develop greater understanding of principles involved.

Prerequisite: Ability to benefit from instruction and an interest in the field of electronics for bettering one's position.

Basic Arc Welding **9.150** **30 Hrs.**

Demonstration and practice of the basic techniques used in welding ferrous metals and alloys. Set-up and operation of oxy-acetylene and electric arc welding equipment is demonstrated and practiced.

Prerequisite: Ability to benefit from instruction.

Basic D.C. Theory **9.680** **36 Hrs.**

The course consists of the study of basic D.C. theory. The material is viewed both from the theoretical and practical usage necessary for understanding. Laboratory work is provided as needed to develop greater understanding of principles involved.

Prerequisite: Ability to benefit from instruction and an interest in the field of electronics for bettering one's position.

Blueprint Reading for the Building Trades **9.136** **30 Hrs.**

A beginning course designed to teach the fundamentals of blueprint reading including the interpretation and meaning of lines, views, elevations, conventions and symbols, and relationship of the various elements comprising architectural drawings and specifications.

Prerequisite: Employment in one of the building trades and a desire to upgrade occupational competency through extensive study.

Blueprint Reading for Welders **9.139** **30 Hrs.**

A course designed to teach the fundamentals of blueprint reading including basic sketching techniques and reading of three view drawings. Included will be: dimensioning practices, scaling, line alphabet, notes and symbols. Emphasis will be placed on developing an ability to read detail and weldment drawings.

Prerequisite: An ability to profit from instruction.

Building Construction Drafting **9.100** **30 Hrs.**

A beginning course designed to introduce the student to the fundamentals and techniques included in architectural planning procedures. From a study of the basic elements of house planning, the student progresses through the various design steps to a completed plan.

Building Construction Estimating **9.137** **30 Hrs.**

A practical course devoted to utilization of different sets of specifications and plans in the application of the functions of an estimator.

Prerequisite: A working knowledge of the general phases of building work, the ability to read and interpret plans and specifications and a working knowledge of basic mathematics.

Critical Path Scheduling **9.605** **30 Hrs.**

An introduction into the fundamentals of critical path scheduling as used in the construction and management field. Event time, activity time, network planning and construction, scheduling, cost control, precedence diagramming, pert, less, and mos are items and systems studied and discussed—the course concludes with a brief electronic computer application of critical path methods.

Electronic Diagram Interpretation **9.620** **30 Hrs.**

An introduction course to Electronics and the terminology of the field. A study is made of the components and their symbols; basic diagrams are introduced and circuit tracing practiced. Actual working circuits are traced and drawn out to familiarize the student for on-the-job situations.

Heliarc Welding **9.154** **30 Hrs.**

A course in the fundamentals of tungsten inert gas welding processes, machine setting, application, and development of inert gas welding skills.

Prerequisite: Satisfactory completion of basic and advanced welding or equivalent experience and knowledge.

Industrial Control Devices Theory and Application **9.190** **36 Hrs.**

The course consists of a study of the various instruments used in industry to control manufacturing processes. Care and maintenance, trouble shooting, standards and calibration of instruments is investigated. The theory and principles of application of the basic instruments will be discussed.

Prerequisite: Work experience in the installation and/or maintenance of industrial equipment.

Machine Tool Operations **9.230** **30 Hrs.**

A basic machine shop course for technicians. Class time is devoted to theories of: measuring tools and measurement; cutting speeds and feeds of various materials; bench tools and use; function and design of machine tools; decimal equivalents, etc. Laboratory time is provided to acquaint the student with basic operations such as: straight turning; shoulder turning; facing and shoulder facing; boring; reaming, shaping; flat surfaces; drill press work and milling machine fundamentals.

Machine Tool Operations **9.231** **30 Hrs.**

A continuation of the Machine Operation series. Class hours are spent on subjects such as: cutting tools and use; thread forms; tapers, grinding wheel structure; simple indexing, etc. Laboratory time will be devoted to operations on lathe, shaper, milling machine, drill press and grinder. The operations included will be threading; taper turning, serrating and slotting; slag and face milling, spot facing, counterboring and offhand grinding.

Machine Tool Operations **9.232** **30 Hrs.**

The course will cover such subjects as compound indexing, machine grinding (surface and cylindrical) gears and gearing; multi lead screws; fits; splines and splinging, etc. Shop practices include advanced machine tool operations such as: surface grinding, cylinderical grinding; jig boring; angular and contour milling; advanced shaper work and other areas.

Mechanical Blueprint Reading and Sketching **9.138** **30 Hrs.**

A course designed to develop the ability of the student in the field of blueprints. Special attention is given to the development of visualization and to the conventions used in blueprints.

Mechanical Principles **9.191** **30 Hrs.**

A course designed to acquaint the student with the mechanical principles in use in industrial equipment. The material is presented in such a manner that will connect general mechanical principles to the machines to which they apply, with examples of specific applications wherever appropriate.

Prerequisite: Ability to benefit from instruction, and consent of instructor.

Practical Engineering Applications **9.606** **48 Hrs.**

A review course for those persons preparing for the Professional Engineer examination. The course consists of 12 weeks of study of the science of hydraulics with special emphasis placed upon hydrology. An additional 12 weeks is spent in a study of the science of structural analysis.

Preparation for Welding Certification **9.152** **36 Hrs.**

A review and further development of those welding skills required for welder certification. Emphasis is placed upon simulated tests required for certification.

Prerequisite: Satisfactory completion of Basic and Advanced Welding or equivalent experience and knowledge.

Review in Engineering Fundamentals **9.602** **48 Hrs.**

A review course for those persons preparing for the Engineer-In-Training examination. The course consists of a broad study of the appropriate sciences necessary to the engineering field.

Prerequisite: Minimum qualifications in accordance with O.R.S. 672.083 which are briefly as follows:

(1) Graduation in an approved engineering curriculum of four years or more from a school or college approved by the Board . . . or (2) a specific record of four years or more of active practice in engineering work of a character satisfactory to the Board.

Sheet Metal Patterns and Layout **9.145** **30 Hrs.**

An introductory course covering the basic concepts and skills needed to develop simple sheet metal forms; drafting table techniques and benchwork techniques to be equally employed.

Prerequisite: Ability to benefit from the training.

Transistor Theory and Application 9.684 36 Hrs.

A course of study in the basic principles of solid state device theory. Including electron physics, two element devices, NP & PN Junctions, the make-up of a transistor, the three basic transistor configurations, small signal amplifiers, transistor parameters and the transistor in resistive networks.

Transistor Theory and Application 9.685 36 Hrs.

A continuation of the study of the transistor and its applications. Applying it to large signal amplifiers, RF circuits, oscillators, wideband amplifiers, transistor substitution, and uses in practical circuits, also new types and specialized types of solid state devices are studied.

Use of Electronic Test Instruments 9.608 30 Hrs.

A course of study in the use of various types of test equipment. Assorted types and brands of test equipment is brought into the classroom and the uses and operation of the equipment are studied. New equipment is loaned by the manufacturers for demonstration and comparison in this course.

Vacuum Tube Theory and Application 9.612 36 Hrs.

This is an introductory course into the study of vacuum tubes and basic allied circuits. The vacuum tube is looked at according to its construction and the purpose for each element within the tube. The various load lines are taken up and constructed and their uses applied to practical applications. Classes of amplifiers and the coupling of them and their frequency response are discussed with applications to various commercial and industrial circuits. Power supplies and filter networks studied are the basic types used in the field. The laboratory sessions of the course are designed to apply the knowledge gained in class and to clear up concepts discussed in theory sessions.

Prerequisite: A basic knowledge of DC and AC Theory with the desire and ability to benefit from the course, and with the permission of the instructor.

Home Economic Adult Education Courses

Accessories for the Wardrobe **9.915** **30 Hrs.**

Accessories to complement the costume will include remodeling and designing hats, recovering shoes and purses, creating other appropriate accessories, with attention to line, color, and fabrics, emphasizing wardrobe coordination for different family members.

Active Sportswear **9.912** **15 Hrs.**

Selection, fitting, and construction of slacks and capris for women and girls.

Basic Bishop Sewing **9.907** **30 Hrs.**

A professional approach to the sewing techniques used in construction of a coordinated two-piece cotton dress, fitted wool skirt, and jumper taught by demonstrations.

Bishop Dressmaking **9.908** **30 Hrs.**

Basic Bishop Sewing is a prerequisite. Includes additional techniques used in "better" dresses. Correct fitting is stressed.

Bishop Method for Children's Clothing **9.906** **30 Hrs.**

Construction of different kinds of children's garments using sewing techniques with a professional approach and a variety of fabrics.

Bishop Tailoring **9.909** **30 Hrs.**

The latest tailoring techniques will be learned as student constructs a suit, short or full length coat.

Dressmaking **9.903** **30 Hrs.**

There is no prerequisite for this course which includes a variety of techniques used in the construction of different garments, with special problems of fitting.

Family Mealtime Magic **9.913** **30 Hrs.**

Meal planning and management with emphasis on wise buying, careful planning, creative meal preparation for greater family satisfaction and enjoyment.

Fashion and Fabric **9.919** **30 Hrs.**

Basic Bishop Sewing and Bishop Tailoring are prerequisites for this course which is designed to assist each individual in suitable pattern and style selection. An ensemble will be planned and constructed.

Homemaking Time and Money Savers **9.917** **20 Hrs.**

Planning for and managing countless details of the home and family to meet present-day living. Consideration of family money planning needs, credit buying and shopping tips.

Landscaping and Plant Materials for Home Grounds **9.801** **30 Hrs.**

A study of the more common shrubs and trees used in Northwest gardens, with each student's "home grounds" as an individual project. Field trips and guest lecturers to be included.

Tailoring **9.904** **30 Hrs.**

Designed to aid in the development of tailoring techniques as a wool suit or coat is constructed.

The Homemaker's Assistant **9.922** **180 Hrs.**

This course is designed to prepare women for the world of work, involving jobs related to Home Economics knowledge and skills. A wide background will be provided in fundamental skills related to homemaking with consideration to the dual role of homemakers working outside of the home.

The House—Its Design and Construction **9.921** **30 Hrs.**

This course is designed for couples and individuals interested in studying how good design of space can be accomplished by conscientious planning for family activities, needs, furnishings, budgets and site.

Understanding the Child and Providing Day Care **9.923** **30 Hrs.**

Planned to increase understanding and care of children from infancy through five years of age; of special help to those interested in employment in day care centers and nursery schools. Field trips and resource persons are included.

You Can Learn to Sew **9.901** **30 Hrs.**

Planned for those with little or no experience in sewing. Construction of simple garment, using basic techniques.

Firemen Training Courses

Communications **9.115** **20 Hrs.**

Effective radio procedures, tone activated and telephone alerting systems, running cards, alarm systems, and communication command centers.

Fire Apparatus Maintenance **9.110** **20 Hrs.**

Inspection, service, maintenance and regular checking procedures necessary to maintaining fire apparatus in a "ready" condition.

Fire Department Administration **9.106** **30 Hrs.**

A course designed for chief administrators of fire departments and for command officers. Topics include: organization, personnel management, alarm and signal systems, insurance ratings and relationship with other departments.

Prerequisite: Approval of local Fire Training Coordinator.

Fire District Organization **9.107** **30 Hrs.**

The scope of authority of directors, election laws, legal frame work and court decisions affecting districts, relative merits of contracting and mutual aid organization. This course is designed primarily for directors of rural fire protection districts and small municipalities.

Prerequisite: Approval of Fire Training Coordinator.

Firefighting "A" **9.101** **30 Hrs.**

A beginning course to acquaint the student with fire behavior; the organization of his department, how he should conduct himself in the department; responding to alarms; and training to develop skills in the use of small tools, ropes, knots, hose lines and ladders.

Firefighting "B" **9.102** **30 Hrs.**

A continuation of Firefighting 9.101, designed to train the student in the use of portable fire extinguishers, in methods of overhaul and salvage, in the principles of fire control in natural cover crops, in forcible entry tactics and in ventilation and rescue procedures.

Prerequisite: Firefighting 9.101.

Firefighting "C" **9.103** **30 Hrs.**

A continuation of Firefighting 9.102. The study of fire streams, fire apparatus, pre-fire planning, flammable liquids and gasses, structure fire problems and practice evolutions. Emphasis is placed on demonstration, practice and drill.

Prerequisite: Firefighting 9.102.

Firefighting "D" **9.104** **30 Hrs.**

A continuation of Firefighting 9.103, intended to review for the student fire control tactics, then apply these principles to specific types of buildings and hazards. Included are: air crash and rescue, mills, factories and large structure fires, and motor vehicle fires.

Fire Investigation **9.112** **30 Hrs.**

A study of the burning characteristics of combustibles, burn patterns leading to the point of origin, incendiary indications and the preservation of evidence. A course for Fire Marshals, Inspectors and Chief Officers.

Fire Pump Construction and Operation **9.108** **30 Hrs.**

A basic course for instructors and pump operators presenting theory of pumps, water supply, principles of drafting and pumping from hydrant. Actual practice using local department's apparatus included.

Fire Scene Problems **9.113** **20 Hrs.**

Practical experience in handling actual building fires including the application of size-up, attack, extinguishment, ventilation, rescue, overhaul, salvage and other fire control techniques that may be applicable.

Flammable Liquids and L.P.G. **9.114** **20 Hrs.**

A comparison of the characteristics—flash point, explosive range, etc.—of the more common petroleum products followed by practice extinguishment or control.

Hydraulics and Water Measurement **9.109** **34 Hrs.**

A course for instructors, command officers and pump operators presenting fire pump hydraulics and measurement including velocity of flow, friction loss, engine and nozzle pressure, discharge, stream range, drafting water, pumping from hydrant and relaying, service testing and measuring water in mains and supply.

Prerequisite: Pump Construction and Operation 9.108.

Inspection and Codes **9.111** **20 Hrs.**

A survey of building exit, flammable liquid and other fire prevention codes followed by supervised building inspection field trips. Designed primarily for department inspectors.

Introduction and Orientation **9.100** **30 Hrs.**

The course is designed for newly formed fire departments. It consists of a familiarization of personnel with the available

fire-fighting apparatus and tools. The objective is to give untrained persons in the briefest time possible the necessary training to respond to fires. Content varies according to needs and equipment of the department.

Officer Training **9.105** **30 Hrs.**

A course for company officers outlining responsibilities to the department and to the men, leadership requirements, discipline, station maintenance, etc.

Peacetime Radiation Hazards **9.116** **20 Hrs.**

A study of the effect of the atomic age on the fire service, the handling of radioactive materials involved in fire, the use of monitoring equipment and personnel safety practices.

Special Hazards **9.117** **20 Hrs.**

A study of electrical, chemical, exotic metal and space age fuel fires.

Industrial Supervisory Program Courses

		Term Units
Basic Psychology for Supervisors	**9.502**	**3 Units**

Course to assist the supervisor in understanding the people with whom he works, with emphasis on the psychological aspects, perceptions, learning processes, emotions, attitudes and personalities, etc.

Cost Control for Supervisors	**9.514**	**3 Units**

How costs are determined in industry. Cost control and its functions. The supervisor's responsibility for costs. Factors in cost control: costs, materials, waste, salvage, quality control, quantity control, control of time.

Developing the Employees Through Training (Teacher Training)	**9.504**	**3 Units**

The supervisor's responsibility for developing employees through training. Orientation and induction. Vestibule and on-the-job techniques. Job instruction principles. Apprenticeship training. Technical training. Supervisory training and management development. Use of outside agencies. Advisory committees.

Elements of Supervision	**9.500**	**1 Unit**

A basic introductory course covering in general terms the total responsibilities of a supervisor in industry such as organization, duties and responsibilities, human relations, grievances, training, rating, promotion, quality-quantity control, management-employee relations, etc.

Human Relations (Developing Supervisory Leadership)	**9.506**	**3 Units**

To show the practical application of basic psychology in building better employer-employee relationships by studying human relations techniques.

Prerequisite: Basic Psychology for Supervisors.

Industrial Economics	**1.506**	**3 Units**

Significant economic facts. Development of a critical attitude toward industrial economics. Institutions and practices that determine our social environment. Management-supervisory-employee relationships to economics and local industry.

		Term Units
Job Analysis for Wage Administration	**9.520**	**3 Units**

The history of wages. Inequalities in rates of pay. Management and union movement toward a "fair wage" plan. The supervisor and job description, job specifications, job evaluations, and job classifications. The wage plan laid down by the Department of Labor. The Federal Employment Service. Wage administration and the line organization.

Labor-Management Relations	**9.508**	**3 Units**

The history and development of the Labor Movement-Development of the National Labor Relations Acts, the Wagner Act, the Taft-Hartley Act. The supervisor's responsibility for good labor relations. The union contract and grievance procedure.

Management Controls and the Supervisor	**9.524**	**3 Units**

Basic principles of controls. Delegation of responsibility through the use of controls. The purpose and objectives of controls, manufacturing costs, quality control, quantity control, production control, control over materials, control over personnel organization, etc.

Methods Improvement for Supervisors (Work Simplification)	**9.512**	**3 Units**

The supervisor's responsibility for job methods improvement. The basic principles of work simplification. Administration and the problems involved. Motion study fundamentals for supervisors. Time study techniques.

Oral Communications for Supervisors	**9.503**	**3 Units**

How we communicate. Effective speaking and listening. Kinds of supervisory communications. Saying what we mean, which covers oral versus written communications. Understanding what is communicated as related to intent and effect. Conference leading and practice for supervisors.

Organization and Management	**9.518**	**3 Units**

The supervisor's responsibility for planning, organizing, directing, controlling, and coordinating. Acquaints the supervisor with these basic functions of an organization and his responsibility in carrying them out in accordance with the organization's plan. Establishing lines of authority, functions of departments or units, duties and responsibilities, policies and procedures, rules and regulations, etc.

Term Units

Reading Improvement for Supervisors **9.507** **3 Units**

General approach to better reading through the proper use of text material, reading films, tachistoscope, and practice. Benefits of better reading, primary considerations in reading, evaluating and analyzing what is read, vocabulary improvement, advanced reading tips.

Report Writing for Supervisors **9.505** **3 Units**

Types of reports: statistical, financial, narrative, technical. Steps in preparing the report. Gathering and sorting information. Designing and organizing the report. Parts of the report. Techniques of writing. Format, style, and organization. Illustrating the report. Practice in writing and evaluating reports in the occupational field of the individual enrollees.

Prerequisite: Written Communications for Supervisors or equivalent.

Safety Training and Fire Prevention 9.522 **3 Units**

Problems of accidents and fire in industry. Management and supervisory responsibility for fire and accident prevention. Accident reports and the supervisor. Good housekeeping and fire prevention. Machine guarding and personnel protective equipment. State Industrial Accident Code and fire regulations. The First Aid department and the line supervisor's responsibility. Job instruction and safety instruction. Company rules and enforcement. Use of safety committees. Your insurance carrier and the Insurance Rating Bureau. Advertising and promoting a good safety and fire prevention program.

Supervisor's Responsibility for Management of Personnel **9.516** **3 Units**

Personnel techniques for which the supervisor is partially responsible and for which he should have some training in carrying out his responsibility. Selection, placement, testing, orientation, training, counseling, merit rating, promotion, transfer, and training for responsibility.

Written Communications for Supervisors **9.501** **3 Units**

Review of writing mechanics covering grammer, punctuation, sentence structure, and paragraph structure. Business letter-writing involving the principles, planning, and dictating of letters. Memorandum and bulletin writing with emphasis on format, content, structure, tone, and style. Manual writing covering format, content, and structure.

Real Estate Program Courses

		Term Units
Commercial and Investment Properties	**9.275**	**4 Units**

A course designed to provide information for licensed brokers and real estate salesmen. Empasis is placed on process of selecting commercial property of all types for investment purposes. All factors of influence are analyzed. Determination of actual net income is stressed.

Elements of Design and Construction 9.274 2 Units

A comprehensive non-technical course given primarily for real estate licensees to familiarize them with building construction and materials, costs, building codes, terminology used in construction.

Fundamentals of Exchanging 9.272 3 Units

The principles involved and practices followed in exchanging of real property for like property. Analyze tax situations involved, and advantages accruing from certain exchanges.

Prerequisite: Real Estate Principles 9.262 and 9.263.

Fundamentals of Real Estate Taxation 9.271 3 Units

An advanced and intensive study of tax principles governing the acquisition, ownership, operation, and disposition of real property with special emphasis on tax planning, and integration of tax concepts with procedural aspects.

Prerequisite: Real Estate Principles 9.262 and 9.263.

Property Management 9.277 2 Units

A study of the business practices and principles of managing the property of others for a fee. Includes such factors as maintenance and repairs, personnel supervision.

Prerequisite: Real Estate Principles 9.262 and 9.263.

Real Estate Appraisal 9.266 3 Units

Theories, functions and purposes of appraisal. Residential, income property and land appraisal; principles of valuation, including cost, market and income approach; techniques for determining condemnation, insurance, loan, purchase and sales values.

Prerequisite: Real Estate Principles 9.262 and 9.263.

Term Units

Real Estate Appraisal **9.280** **3 Units**

Continuation of Real Estate Appraisal 9.266 with emphasis on specific problem areas such as commercial appraisals, farm appraisals, industrial appraisals.

Prerequisite: Real Estate Appraisal 9.266.

Real Estate Counseling **9.284** **5 Units**

A case study approach to the problems of counseling with clients on real estate purchases, exchanges, speculation, and investment.

Real Estate Finance **9.267** **3 Units**

Policies, problems and risks involved in financing and investing in various types of real property. Includes analysis of taxation, exchanges, sources of loan funds, institutional and government policies, and instruments and methods of loan processing.

Prerequisite: Real Estate Principles 9.262 and 9.263. May be taken concurrently with Real Estate Principles 9.263.

Real Estate Law **9.265** **3 Units**

A practical study of Oregon Real Estate Law emphasizing the more complex aspects of ownership, use and transferability of real estate as encountered by brokers and others who deal with real property. Covers contracts, titles, deeds, leases, liens, covenants, conditions, restrictions, easements, estates, probate, and landlord-tenant relationships. Includes a review of significant Oregon cases.

Prerequisite: Real Estate Principles 9.262 and 9.263. May be taken concurrently with Real Estate Principles 9.263.

Real Estate Practices **9.264** **3 Units**

Covers the phases of day-to-day operations in real estate sales and brokerage such as procedures of listing, prospecting, advertising, and financing. The closing process, escrow, and sales methods and techniques are treated, with emphasis on the ethics, legal responsibility and function of the broker and salesman.

Prerequisite: Real Estate Principles 9.262 and 9.263. May be taken concurrently.

Real Estate Principles **9.262** **3 Units**

A fundamental course to prepare for entry into the real estate industry. Includes economic, social, and legal bases of real estate transactions, factors of property rights, taxation, real estate instruments, finance, and property ownership.

		Term Units
Real Estate Principles	**9.263**	**3 Units**

A continuation of Real Estate Principles 9.262 to further prepare for entry into the real estate industry. Includes a basic approach to brokerage and licensing as applied to the State of Oregon covering operating an office, selling, and advertising. Introduces student to accepted standards of ethical conducts, property management, titles, valuation, planning zoning, urban renewal, public housing and developments.

Prerequisite: Real Estate Principles 9.262.

Real Estate Salesmanship	**9.270**	**3 Units**

A course which covers the characteristics and qualifications of successful real estate salesmen. Includes prospecting for sales, sales aids and tools, sales letters, records and reports, handling objections, and public relations for salesmen.

Real Estate Sales Promotion	**9.276**	**3 Units**

In this course, consideration is given to all factors involved in promoting increased sales, including the analysis of advertising points, writing of realty ads, general promotion of sales, brochures, mail advertising.

Real Estate Trends and Developments	**9.268**	**3 Units**

A study of the economic aspects of real estate land use and patterns of growth in Oregon. Provides a grasp of the dynamic factors that create values and an analysis of residential and urban planning, zoning and governmental control factors that influence development and market. Especially valuable as a background course and preparation for more specialized courses.

Prerequisite: Real Estate Principles 9.262 and 9.263.

Subdividing and Community Planning	**9.278**	**2 Units**

Includes a study of the methods by which land is divided for more intensive utilization and the placing of restrictions on this land use. Covers provisions for water and sewage.

Prerequisite: Real Estate Principles 9.262 and 9.263, and approval of the instructor.

To

4389 SATTER DRIVE N. E., SALEM, OREGON 97303