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SOUTHWESTERN OREGON COLLEGE

GENERAL CATALOG 1961-1962



Southwestern Oregon College

GENERAL CATALOG

1961-1962

AN
ACCREDITED
PUBLIC
TWO-YEAR
COEDUCATIONAL
COMMUNITY
COLLEGE

BOX 509
NORTH BEND, OREGON

Southwestern Oregon Area Education District

ADMINISTRATION

BOARD OF DIRECTORS: Henry F. Hansen, Chairman
Leslie King
Orville Robert Adams
G. E. Albertson
Wilfred A. Jordan

PRESIDENT OF THE COLLEGE: Wendell L. Van Loan, Ed. D.

Southwestern Oregon College

FACULTY

- *Anthony Arrambide, Modern Languages, M. A. (1961) College of Idaho
Wayne Andrews, Automotive Technology. Certified Vocational Instructor.
- *James A. Becker, Electrician Apprentice Training. Certified Vocational Instructor.
- *Maurine Bayes, Business Education, Certified Vocational Instructor.
- Robert C. Croft, College Librarian; Social Science, B. S. (1950), M. S. (1951), Additional Graduate Work, University of Oregon.
Certified Vocational Instructor.
- *Clara M. Eickworth, Home Economics B. S. (1930), M. S. (1937) Oregon State University, Certified Vocational Instructor.
- *Helen W. Ferguson, Business Education, Certified Vocational Instructor.
- William J. Holmes, Physical Education and Health; B. S. (1958), Kansas State College, M. S. (1959) University of Colorado.
- Tom Humphrey, English & Literature; B. S. (1959), M. S. (1961), University of Oregon.

- Charles W. Koburger, Jr., Director of Collegiate Division, B. S. in F. S. Georgetown University (1943); M. A. Niagara University (1956), additional graduate work, University of Oregon, Certified Vocational Instructor.
- *Ellsworth J. Leegard, Welding, Certified Vocational Instructor.
- Ronald Lilienthal, Science; B. S. (1958); University of Oregon, M. S. (1961, Oregon State University.
- Donald R. Moffitt, Chairman of Business Education Department; Comptroller, B. S. in Commerce, Ferris Institute (1960). Certified Vocational Instructor.
- William L. Orr, M. S., Business Administration, University of Oregon, Certified Vocational Instructor in Business.
- Robert A. Osborne, Mathematics B. S. (1956), University of Washington; Grad. work, U. of O.
- Maurice M. Romig, Director of Technical-Vocational Education & Gen. Adult Evening School. B. S. (1929), Ed. M. (1960), Oregon State University; Certified Vocational Director. Administrative Assistant.
- *Lyle Shibley, Driver Training, B. S. (1950) University of Oregon; M. S. (1952) University of Oregon.
- Roger Spaugh, Electronics Technology, Certified Vocational Instructor.
- *Veneita Stender, Home Economics, B. S. (1955) University of Idaho; Certified Vocational Instructor.
- *David L. Trembley, Electronics, B. S. (1958) Colorado State University.
- Margaret E. Trussell, Social Science, A. B. (1949 University of California; M. A. in Educ. (1959) Long Beach State College; M. A. in Geog. (1961) U. of California.
- Wendell L. Van Loan, Ed. D., Education, President of the College; B. S. (1928), M. S. (1933), University of Oregon; Ed. D. (1942), Stanford.
- Lillian Schroeder Van Loan, Ed. D. Psychology; B. A. (1950), Oregon College of Education; Ed. M. (1951), Ed. D. (1959), Oregon State U.
- *Elisabeth VanRyckevorsel, Languages, University of Cambridge.
- Larry J. Whitney, Chairman, Technical Division, B. S. (1958), Oregon State University.
- *Theodore R. Willard, Business Education, Certified Vocational Instructor.
- *Visiting Specialists.

SCHOOL CALENDAR

FALL TERM, 1961-62

- September 11, Monday Last day to apply for fall term admission
by regular curriculum students
- September 18-23, Monday to Saturday New registration
and Student Week
- *September 23, Saturday Last day for payment of fees without penalty
- September 25, Monday Classes begin
- *October 6, Friday Last day for registration or for addition of courses
- *November 10, Friday Last day for withdrawal from courses
- November 11, Saturday Veterans' Day, Holiday
- November 23-26, Thursday to Sunday Thanksgiving Vacation
- November 27, Monday Winter Term preregistration advising begins
- December 11-16, Monday to Saturday Fall Term Examinations

WINTER TERM, 1961-62

- January 2, Tuesday Registration
- January 3, Wednesday Classes Begin
- *January 6, Saturday Last day for payment of fees without penalty
- *January 15, Monday Last day for registration or for addition of courses
- *February 9, Friday Last day for withdrawal from courses
- February 26, Monday Spring Term preregistration advising begins
- March 12-17, Monday to Saturday Winter Term Examination

SPRING TERM, 1961-62

- March 26, Monday Registration
- March 27, Tuesday Classes begin
- *March 31, Saturday Last day for payment of fees without penalty
- *April 9, Monday Last day for registration or for addition of courses
- *May 4, Friday Last day for withdrawal from courses
- May 30, Wednesday Memorial Day, Holiday
- June 4-9, Monday to Saturday Spring Term examinations

- * Applies only to regular curriculum programs (Technical or Liberal Arts).
Special classes in individual subjects such as trade extension, apprentice,
general cultural will be scheduled separately.

GENERAL INFORMATION

THE COLLEGE LOCATION

Administration Office: North Bend Campus. Telephone 756-4261
President of the College, Registrar, Business Manager, Bursar, Director
of Lower Division Collegiate Division, Day Classes.

General Evening School & Technical-Vocational Division: Coos Bay Campus
Director; Chairman, Technical Division; Chairman, Business Division.
Telephone 267-7731. 1:00 P.M. to 9:00 P.M.

MAILING ADDRESS: SOUTHWESTERN OREGON COLLEGE

Box 509, North Bend, Oregon

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ORGANIZATION

Southwestern Oregon College was established in 1961 as a successor to the Coos Bay Education Center, under various provisions of the laws of the State of Oregon and after approval by the people of the Southwestern Oregon Area Education District. Overall supervision is exercised by an elected district board, which acts through the President of the College. The College is an accredited, public, two-year, coeducational community college, with three major components: the General Collegiate Division, the Business Division, and the Technical-Vocational Division.

Support for the College is derived from the Federal government, and from state appropriations, district taxes, and student fees.

The College is designed to meet the post high school needs of Southwestern Oregon, a community in the process of rapid growth, a community stretching from the towns of Florence in the north to Port Orford in the south, and reaching as far east as Powers and Sitkum. Its instructional program is designed to provide all citizens of this community with the best possible opportunity to develop their capabilities and interests within the framework of an adult college situation.

ACCREDITATION:

The College is recognized by the Oregon State Board of Higher Education, and all instructors meet State Department of Education certification requirements. Its transfer courses parallel freshman and sophomore courses offered by major universities and four-year colleges, and are fully transferable within Oregon. Students normally may transfer to upper-division (third year, junior) standing upon completion of the second year, at whatever school they choose to continue.

FUNCTIONS

1. Training in vocational skills to qualify the younger student for entering or advancing in his chosen occupation, which in some programs leads to the Associate in Applied Science degree;

2. The first two years of a four-year college or university program ('junior college') leading to the Junior Certificate;

3. A liberal two-year terminal program leading to the Associate in Arts degree;

4. General Community Service education, to enrich the life of the individual and help him to function more effectively as a person, as a member of his family, as an employee, and as a citizen;

5. Counseling services and exploratory experience which will help the student to choose realistic goals and to work effectively toward their achievement.

CAMPUS AND OTHER FACILITIES

The College is temporarily divided into two campuses: the Coos Bay campus, in the East Branch of Marshfield High School, where the Business and Technical-Vocational Divisions are located; and the North Bend campus, at Sunset School, where the General Collegiate Division is situated. Avail-

able are all the facilities of large and well-established school plants, as well as those offered by a large and growing industrial community. Overall administration for the College—the President, vice-President, Registrar, Bursar and Dean of Instruction—is also located on the North Bend campus, as is the main library and a small snack bar. Both campuses can operate from 8 AM to 10 PM, offering any courses for which enough students can be found.

The bookstore is located on the North Bend campus, providing textbooks, workbooks, and other necessary class supplies as a service to the students. Textbooks are also made available at the Coos Bay campus at the beginning of each school term.

A permanent site for the whole College is in the process of being chosen, and it is expected that the College will be housed in its entirety on one campus somewhere in its District by September, 1963.

LIBRARY

Convinced that a school can be no better than the limitations of its library, the College has an expanding, well-selected collection of materials to inform, excite and challenge the mind. The new library is designed to house a balanced collection of the latest books in the business, liberal arts and technical fields as well as a complete set of basic reference matter. It contains, in addition, an extensive selection of current popular and professional periodicals. It subscribes to a representative selection of metropolitan newspapers. Reserve shelves are regularly established by the librarian at instructor request to facilitate student reading and research, in the reserve room for easy access. A small branch—principally technical—is located at the Coos Bay campus.

EDUCATIONAL PROGRAM

The College regularly offers courses leading to an Associate in Arts Degree, an Associate in Applied Science Degree, a Certificate in Practical Nursing, an Oregon State Junior Certificate, Certificates of Proficiency in commercial and business subjects, and many specialized courses.

Full or part-time schedules may be arranged in any of the divisions of the College, as desired. Schedules may be arranged in two or more simultaneously, if desired.

GENERAL EDUCATION

The College encourages all of its general collegiate students to choose those courses and to participate in those campus activities which will help most to develop understandings and skills essential to the students' most effective performance as whole persons. Two courses are considered so fundamental that they are required of all general collegiate graduates: English Composition and Physical Education. On the other hand, a relatively wide offering of elective courses help to give breadth and scope to the instructional program. Participation in the extracurricular activities program is also recommended to each student, as being a necessary part of a liberal education.

Students at the College study in classrooms and laboratories designed and equipped to provide the most effective environment for learning. The latest in audio and visual aids are used widely. Classes are kept small

(ordinarily 12-15 students), and the maximum attention is paid to the individual student.

INDUSTRY AND BUSINESS EDUCATION

To the students who wish training in vocational skills to qualify for entering or advancing in a chosen profession the College offers a variety of occupational programs. The courses in these programs are selected because they will adequately qualify the student in a period of one or two years. In certain cases the Associate in Applied Science degree may be earned during the period of study. The College develops its occupational curricula in close cooperation with representatives of the business and industrial interests of the area, with whose guidance and counsel new programs are added as the need for them becomes apparent. Occupational curricula now offered include the following:

Automotive Mechanics	Practical Nursing
Electronics	Stenography
General Office Science	General Drafting
Engineering Technology (civil)	

EXTENSION CLASSES

The College makes available its facilities to the General Extension Division of the Oregon State Board of Higher Education, which, thereby, makes many college upper-division and graduate courses available upon request. These courses are open to all qualified adults.

Courses organized in this manner may follow a different fee schedule from that of the College. Since these courses are not a part of the regular college program, the fees are charged separately, and may not be combined with regular College fees. The cost of each course will be announced at the time it is organized.

CORRESPONDENCE STUDY

The General Extension Division also offers a number of correspondence courses, open to all qualified adults. Further information on these courses may be obtained either from the Registrar of the College or by writing the Office of Correspondence Study, General Extension Division, Eugene, Oregon.

COMMUNITY SERVICE EDUCATION

Much of the effort of the College is directed to providing a wide variety of informal, or semi-formal, educational opportunities to the adult community of southwestern Oregon. The College cooperates with other community and educational agencies and offers its full facilities, leadership, and staff to the community. Opportunities are provided for experience and other education leading toward increased personal, vocational and civic adequacy. The program may include classes, forums, lectures, workshops, and on-the-job training, in all liberal and vocational fields.

Any group of twelve or more interested students may request the assistance of the College in establishing such a course or program. If there is an organized body of knowledge, and if an instructor can be found, the College will cooperate enthusiastically in the activity.

REGULAR ADMISSION

The College accepts students of good moral character who provide evidence of suitable preparation for work at college level. In practice, this means that a student may enroll at the College if he (or she) is (1) a high school graduate, or (2) a mature person, at least 18 years of age, who is prepared to undertake college work, as evidenced by satisfactory completion of educational equivalency tests or through evaluation of work experience.

To be admitted for any regular term, a new applicant must present to the Registrar (1) a formal application and (2) an official record of all high school credits and other academic work whether the student has graduated or not. Old students should submit an application for re-admission. These records all become the property of the College.

All applications should be completed not less than one week prior to expected date of registration. The Registrar will examine the records submitted, and will then notify the applicant of his acceptance or other status.

SPECIAL ADMISSIONS

Persons qualified by maturity and ability to do satisfactory college work but who fail in some respect to meet the requirements for regular standing may apply for admission as special students until such entrance deficiencies are removed.

Persons enrolled on a non-credit or non-program basis or those enrolled for six term hours (six units) or less shall be classified as special students.

Special students may not become candidates for degrees without first qualifying as regular students.

APPRENTICESHIP TRAINING

Admission requirements for this program are set up by the State Apprenticeship Council. For further information concerning its special requirements, or for any other matter concerning this program, contact the Registrar.

DEGREES AND CERTIFICATES

Specific requirements for the degrees and certificates awarded by the College are listed in this catalog under the appropriate division. Candidates must apply for degrees and certificates through the Registrar's office at least one month prior to their expected date of issue.

REGISTRATION

All students should register in person and should complete registration on the days assigned and before the opening day of each term. Registration dates for the three regular academic terms are listed in the college calendar and should be observed. A fee for late registration is charged.

Each new student is assigned a faculty adviser who assists him in planning a program. Detailed registration instructions are contained in the schedule of classes; students should not proceed with registration without a copy of the schedule.

Returning students are expected to informally pre-register in advance of the beginning of each term by consulting with their faculty advisers on course programming.

Students are completely registered and entitled to attend classes for credit only when they have completed prescribed procedures including the payment of term fees.

A student may enter the College at the beginning of any term, but is advised to enter fall term when at all possible because of course sequence requirements.

CREDIT HOUR LOAD

A full two-year program should result in 96 term hours (credits) in the general collegiate areas, or 16 term hours per term for 6 terms. A full two-year program should result in 90 units (credits) for business and technical-vocational students, or 15 units per term. However, these credits are not always exactly comparable, and must be examined in each case.

In order to obtain 96 term hours (90 units) within the normal 6 terms, a full-time student should enroll for an average of 16 hours (15 units) per term.

Employed students should, however, be aware of the fact that these class hours involve about 50 clock hours of scholastic productivity each week during the term. Students who must work, therefore, are advised to fit their job schedules into the term-hour equation and to plan on a period in excess of 6 terms in which to complete two years work if necessary.

For example, a General Collegiate Division student who is employed 40 hours per week should enroll for not more than 10 total hours per term and take 9 terms or so to complete two years' work.

No more than 19 term hours (18 units) may be taken in any one term. This regulation may be waived upon petition to the Registrar.

AUDITORS

Students who do not wish college credit may register as auditors in any of the courses offered. Auditors are not required to meet any specific academic requirements but should expect to participate fully in the activities of the class. If audit is desired, it should be so indicated at the time of registration. See schedule of fees, p. 8.

COURSE CHANGES

Any registration day, any student desiring to make course changes—such as changing from credit to audit, audit to credit, drop courses, or add courses—must do so by means of a formal request on a form secured from the College office. Students are encouraged to check the academic calendar for regulations governing course changes at other times. See schedule of fees, p. 9.

WITHDRAWALS

Students may withdraw from courses within certain periods without prejudice, but only by filing official withdrawal forms with the Registrar.

A student who registers for a course is considered to be in attendance; if he discontinues without filing official withdrawal forms, he may receive a grade of F in the course. Students are encouraged to check the academic calendar for regulations.

Students who wish to withdraw completely from the College during the term should effect this through the Registrar. Students are expected to process their withdrawals in person, but under exceptional circumstances may do so in writing.

Proper withdrawal is reflected on the student's transcript and protects his academic record.

COURSE NUMBERING

General collegiate courses in the College catalog are numbered in accordance with courses throughout the State System of Higher Education.

- 1- 49 Courses which carry no credit toward a degree, or terminal courses that may not be used as transfer credits.
- 50- 99 Courses in the first year of foreign language, elementary algebra, remedial courses, or courses of similar grade.
- 100-110 Survey or foundation courses that satisfy group requirements in
- 200-210 the language and literature, science, and social science groups.
- 111-199 Other courses offered at first-year and second-year level. Normally, 100-199 numbers are considered freshman courses and 200-299 are considered sophomore.

Upper-division and graduate courses are provided through the General Extension Division, Department of State-Wide Services, and are not a part of regular Southwestern Oregon College offerings.

- 300-399 Upper-division courses primarily for juniors for which no graduate credit is granted.
- 400-499 Upper-division courses primarily for seniors; but certain of these courses may be taken for graduate credit, in which case the course is designated (G) if approved for graduate major or (g) if approved for graduate minor credit.
- 500-599 Courses primarily for graduate students.

GRADING SYSTEM

The quality of student work is measured by a system of grades and by computed grade-point averages.

GRADES

The grading system consists of four passing grades: A, B, C, D; failure, F; incomplete, Inc. Students ordinarily receive one of the four passing grades or failure. Exceptional accomplishment is denoted by the grade of A, superior by B, average by C, inferior by D, unsatisfactory by F.

When the quality of the work is satisfactory but the course has not been completed for reasons acceptable to the instructor, a record of incomplete, (Inc.) is made and additional time is granted. Incompletes must be made up within one term. Students are officially withdrawn (W) from a course on filing the proper completed forms with the College office.

NO-GRADE COURSES

Certain courses are designated no-grade courses. Students in these courses are rated "pass" or "not pass" in the term grade reports.

POINTS

Grade points are computed on the basis of 4 points for each term hour of A grade, 3 for each term hour of B, 2 for each term hour of C, 1 for each term hour of D, and 0 for each term hour of F. Marks of Inc. and W are disregarded in the computation of points. The grade-point average (GPA) is the quotient of total points divided by total term hours in which grades A, B, C, D, and F are received.

ACADEMIC STANDING

A student's work is considered satisfactory or he is considered in good standing when he maintains an average of "C" (GPA of 2.00) on both his term and cumulative grade record.

TUITION AND FEES

Fees are payable in full at the time of registration. The right is reserved to make changes without notice in the rates quoted; however, no change which would be effective within a term will be made after the term begins. This does not affect the right of the president of the College to levy special charges at any time should conditions warrant.

Payment of the stipulated fees entitles all students registered for academic credit, full-time and part-time, to all services maintained by the College for the benefit of students. These services include use of the library, use of laboratory and course equipment and materials in connection with courses for which the student is registered, subscription to the student newspaper, and admission to special events sponsored by the College. No reduction in fees is made to students who do not intend to avail themselves of these services.

REGULAR FEES: Lower Division Collegiate

Regular fees (7 term hours or 7 units, or more) are as follows:

Resident students	\$ 65.00 per term
Non-resident students	89.00 per term

PART-TIME FEES

Students, including auditors, carrying fewer than 7 credit hours are charged at the following rates:

Resident students	\$ 9.00 per credit hour
Non-resident students	10.00 per credit hour

REGULAR FEES: Technical - Vocation and General Adult

Technical-Vocation and Business Curricula

Resident full time (19 clock hours per week)\$65.00 per term

Non-resident full time\$89.00 per term

Part time (less than 19 hours per week)\$ 3.00 per wk/hr.

(Non-residents add \$1.00 per Wk/Hr.)

Trade Apprentice courses (60 Hr's per term) \$10.00

Trade Extension courses; per Hr. per Wk. 3.50

Home Extension or homemaking (30 hour term)\$ 7.50

Miscellaneous community service, etc.; class hour30

(Term fee schedule available each term)

SPECIAL FEES

The following special fees are paid by students under the conditions indicated:

Laboratory Fees per term vary

Laboratory fees for some courses are assessed by the office in varying amounts and are payable at time of registration. Check Schedule of Classes each term for course laboratory fees.

Special Course Fees per term vary

Some courses are not charged for on the regular fee schedule but carry special fees, at rates roughly proportionate to those for regular fees. Check Schedule of Class each term for special course fees.

Late Registration Fee (\$5.00 Maximum) per class meeting \$1.00

Check Irregularity Fee per day \$1.00

If institutional charges are met by a check which is returned because of any irregularity—NSF, illegible signature, etc. — a fine of \$1.00 per day will be charged, maximum \$5.00.

Change of Program Fee per change \$1.00

Assessed after scheduled last day for changing courses.

Reinstatement Fee \$2.00

If for any reason a student has his registration canceled during a term but is later allowed to re-enter, he must pay the reinstatement fee.

Transcript Fee \$1.00 and \$1.50

Each student is entitled to his first transcript free. Subsequent copies will be furnished at the rate of \$1.00, first copy and \$1.50 additional copies furnished simultaneously.

Special Exam Fees Vary

A fee is charged for some special examinations. The charges vary depending upon the nature of the exam.

FEE REFUNDS

Students who withdraw from the College and who have complied with regulations governing withdrawals are entitled to certain refunds of fees paid, depending on the time of withdrawal. All refunds are subject to the following regulations:

1. Any claim for refund must be made in writing and must be made before the close of the term in which the claim originates.
2. Refunds in all cases are calculated from the date of application for the refund and not from the date when the student ceased attending classes, except in unusual cases when it can be shown that formal withdrawal was delayed for reasons beyond the student's control.
3. Schedule of rates:

prior to first class session	Full refund
during first week	90%
second week	70%
third week	50%
fourth week	30%
after fourth week	no refund

STUDENT SERVICES

COUNSELING AND GUIDANCE

The College, through the Office of the Dean of Students and the Chief of Counseling Services, offers counseling and guidance services to every student to assist him in planning an academic and occupational future commensurate with his abilities and interests. These services are also made available to the community at large upon arrangement.

The College devotes a significant part of its effort to providing these individual counseling and group guidance services. A professionally trained staff of counsellors assists students in the selection of appropriate vocational and education objectives, and courses of study to help reach those objectives. The latest available personnel methods are used to help counselors analyze abilities, interests, and personality traits.

All students are encouraged to take placement examinations, although no one is denied admission to the College on the basis of these tests alone.

After completing formal application for admission, each student is assigned a permanent program adviser. Although the student is ultimately responsible for his program of courses, the adviser will assist the student in selecting a program which will lead to the student's professional or occupational objectives. Unless there is a major change in program, the adviser first assigned will remain the same throughout the time the student attends the College. The adviser is always glad to discuss educational plans and help analyze interests, abilities, failures, and successes. If he cannot answer a question directly, he will know how and where to help find the answer.

Students who have special difficulty in choosing a major and/or who have serious educational or personal problems may seek assistance from the College counselor. This assistance consists of individual testing beyond that provided for all students, counseling, and referral to community agencies. The College also makes available to students a library of occupational, educational, and vocational information, as well as catalogs from many senior educational institutions.

HOUSING ASSISTANCE

The College assists those students who must live away from home in finding suitable living accommodations at reasonable rates. Housing is handled by the office of the Dean of Students upon request.

The College administration does not, however, set up an approved list of homes and does not operate a dormitory. Parents of out-of-town students must assume full final responsibility for approval of any housing arrangements.

TRANSPORTATION

Students who live in the outlying areas of the College district—beyond a 30-mile radius from the College—may be reimbursed for excess transportation costs. This rate is currently set at five cents a mile for every mile over 30, both ways, by the most direct main-traveled road. Since it is primarily intended to equalize educational opportunity throughout the district, this allowance is paid for every day of attendance whether there was actual travel or not. Further information regarding such reimbursement may be obtained from the office of the Dean of Students.

SCHOLARSHIPS AND GRANTS

Southwestern Oregon College will accept financial-aid awards. Several types of scholarships and grants are available and may be applied for through the Registrar.

GENERAL QUALIFICATIONS

All applicants must be accepted for admission or enrolled as a student before a scholarship or grant can be awarded. All scholarship recipients are expected to carry a minimum class load of 12 term hours (12 units) and to maintain a grade point average of at least 2.00. Any exceptions must meet with the approval of the donor and the College.

Three main factors are considered in the awarding of most scholarships and grants.

1. **An Acceptable Academic Record.** Every applicant must have an academic record which meets the minimum standard requirements for a particular scholarship or grant. Since the requirements vary with the scholarship or grant, each applicant is considered only for those awards for which he is qualified.
2. **A Need for Financial Aid.** Every applicant must answer questions concerning his financial status or that of his immediate family. Each individual's need has important bearing upon the award.
3. **Participation in school and community activities.** Students whose records indicate a well-rounded life, including participation in school and community activities, are given preference if other factors are equal.

HOW TO APPLY

Students may apply for scholarships and grants either in person or by mailing an application to the Registrar. Application forms may be obtained through his office. High school students may also use the standard application form which is distributed through the high schools.

Students who are already enrolled or who have been admitted may apply for scholarships or grants at any time during the academic year.

WHEN TO APPLY

Scholarships and grants may be awarded at any time during the academic year, but most of them are awarded in the spring or summer.

High school students should apply for scholarships and grants by April 15 if they desire consideration for the fall term.

College students who are transferring to the College from another institution must complete one term's work before they are eligible for awards. These students may apply for scholarships and grants at any time during the first term; however, they should not expect to be notified of action taken on their application until after their first term's grades have been recorded.

Students who have completed a term or more of work, may apply for scholarships and grants at any time during the academic year. These students should apply, however, as early as possible during the term immediately preceding the term that they wish the scholarship or grant to become effective.

RENEWALS AND TERMINATION

Almost all scholarships and grants are awarded on an annual basis and are automatically renewed at the end of the year if the required minimum grade average has been maintained. A student who holds such a scholarship or grant should, however, reapply each year so that information on his original application may be brought up to date.

Any scholarship or grant may be terminated at the end of any term if the student has not maintained the standards established by the College.

LIST OF AVAILABLE SCHOLARSHIPS AND GRANTS

A list of those scholarships and grants currently available at the College may be obtained from the Registrar on request.

STUDENT LOANS

The College has money available for student loans, for which students may apply in case of real need. At the present time, these funds are as follows:

Kiwanis Club (Coos Bay) Fund—\$400.00 to be loaned to needy students regularly enrolled in the Business Division of the College.

For details of the conditions of these loans, and for applications therefore, contact the office of the Dean of Students.

Various localities in the district have also set up incorporated student loan funds, monies of which are available to graduates of the local high schools, under certain conditions. Students are encouraged to survey these resources, in case of need. It is suggested that officials of the local high school are the best means of establishing contact with these funds.

EMPLOYMENT SERVICE

The College offers an employment service, available without charge both to students and to graduates. It works closely with all local and state employment services and with local employers to help students obtain full or part-time jobs. It helps place students in part-time positions throughout the year and in full-time positions during the Christmas holidays and summer vacation.

Many students hold part-time positions either on the campus or in business and industrial firms in the area. Many firms and individuals list job openings with the College and hire students part-time or full-time.

Students work an average of 18 or 30 hours per week. Some students (particularly those with dependents) find it advantageous to work a full 40-hour week during vacations. Employers in general are most cooperative in arranging work schedules to coincide with a student's free hours.

APPLICATION FOR EMPLOYMENT

The job applicant is asked to complete application forms in the office of the Dean of Students. These applications are kept on file, and the applicant is notified as soon as a job is listed for which he is qualified.

A student who has gained employment through the Office is encouraged to notify that office when he terminates the employment so that another student may be referred to the job. He also should report promptly to the office when he accepts a position.

JOB OPPORTUNITIES

Job opportunities occur in wide varieties throughout the area. Positions pay from \$1.00 to \$2.50 per hour depending upon the degree of skill required. There is a demand for typists, stenographers, baby-sitters, waitresses, service station attendants, bus boys, salesmen, recreation attendants and laborers, and a periodic demand for engineering and management trainees, artists, photographers, models, and retail sales clerks.

The College employs students in campus positions whenever possible.

GENERAL COLLEGIATE DIVISION

Charles W. Koburger, Jr., M.A., Director

The General Collegiate Division and its courses represent the ancient and continuing effort of men to extend the range of their experience beyond the narrow limits of the time and place in which they find themselves at birth. To enjoy such a freedom, men must know all they can about themselves and their environment, both physical and social. The liberal arts and sciences are a group of studies designed to assist and direct the exploration of man's nature and his position in the world around him.

By the help of some of these studies, Western man is able to compare his own experiences with those of men in other times, places, and circumstances, and thus share in the inherited wisdom and satisfaction of mankind. Through others, we deepen and extend our knowledge of our physical environment. Knowledge—scientific, historical, and literary—is the indispensable condition of the good life of free men, of "the good society."

ENTRANCE REQUIREMENTS

There are no official entrance requirements, beyond the general entrance requirements of the College, for students intending to choose a major field of study within the G.C.D.

Students intending to major in any of the natural sciences are, however, advised to present at least two units of high school mathematics and two units of high school science. Experience has proved that students who lack this preparation are handicapped in college work in science.

TRANSFER EDUCATION

Recognized by the Oregon State Board of Higher Education, the first two years of regular college work may be completed at the College. Transfer (lower-division) courses parallel freshman and sophomore courses offered by major Oregon universities and four-year colleges and lead to the Oregon State Junior Certificate. Students normally transfer to upper division (junior) standing at the end of the sophomore year, at whatever school they choose to continue. Students may arrange a general education program in the liberal arts, or they may plan a special course of study to meet particular needs. Curricula now offered include the following:

Accounting	Journalism
Art	Literature
Biology	Mathematics
Business Administration	Music
Chemistry	Physics
Economics	Political Science
English	Psychology
Foreign Languages	Sociology
Geography	Speech
History	

THE JUNIOR CERTIFICATE

The Junior Certificate admits the student to upper division standing and the opportunity to pursue a major curriculum leading to a degree at institutions of higher learning. The requirements are as follows:

1. Term Hours: minimum of 93 (96 for those graduating in 1964 or later)
2. Grade Point Average: minimum of 2.00
3. English Composition: 9 term hours
4. Physical and Health Education: 6 term hours
5. Health Education: may be substituted for one term of PE
6. Group Requirements: A prescribed amount of work selected from the three groups representing comprehensive fields of knowledge. These are: languages and literature, science and mathematics, and social science. (At least 9 approved term hours in each of the three groups and at least 9 additional term hours in courses numbered 200-210 in any one of the same three groups.)

TERMINAL EDUCATION

The Associate in Arts Degree is a nationally recognized award that is conferred upon those who complete the general requirements of a terminal lower-division liberal arts program.

General requirements for the Associate in Arts Degree:

1. Not less than 93 term hours of credit in the G.C.D.
2. Grade point average minimum of 2.00 (C average).
3. English Composition; 9 term hours.
4. Health Education: HE 150, 1 term hour for men; HE 250, 3 term hours for women.
5. Physical Education: 6 term hours unless excused.
6. Required year sequence in each of the following groups:
Language and literature, science, and social science. A second year sequence must be chosen in one of the three groups. For a list of sequences that satisfy these requirements, see "Group Requirements" below.
7. At least one of the sequences must be numbered 200 to 210.
8. At least one sequence in language and literature must be in literature. Only one sequence in a survey course will apply in fulfilling this group requirement.
9. The second sequence in either science or social science must be taken in a different department.
10. A student must attend S.W.O.C. at least two terms (including the last term) before the Associate in Arts Degree is awarded, and must have completed 24 term hours at the College.

GROUP REQUIREMENTS

A complete list of sequences approved for the satisfaction of requirements 6 through 9 above are listed below. These may be taken as electives also.

Language and Literature**English**

Eng 101, 102, 103	Survey of English Literature	3 hrs. each
Eng 107, 108, 109	World Literature	3 hrs. each
Eng 201, 202, 203	Shakespeare	3 hrs. each
Eng 253, 254, 255	Survey of American Literature	3 hrs. each

Languages

RL 101, 102, 103	Second-Year French	4 hrs. each
GL 101, 102, 103	Second-Year German (applicable as a second literature sequence)	4 hrs. each

Science**General Science**

GS 104, 105, 106	Physical Science Survey	4 hrs. each
GS 101, 102, 103	General Biology	4 hrs. each

Chemistry

Ch 201, 202, 203	General Chemistry	3 hrs. each
Ch 204, 205, 206	General Chemistry Laboratory	2 hrs. each

Mathematics

Mth 100	Intermediate Algebra	4 hrs.
Mth 101	College Algebra	4 hrs.
Mth 102	Trigonometry	4 hrs.
Mth 200, 201, 202, 203	Calculus with Analytic Geometry	4 hrs. each
(any three of this group)		

Social Science**General Social Science**

SSc 101, 102, 103	Survey of the Social Sciences	3 hrs. each
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Economics

Ec 201, 202, 203	Principles of Economics	3 hrs. each
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History

Hst 101, 102, 103	History of Western Civilization	3 hrs. each
Hst 201, 202, 203	History of the United States	3 hrs. each

Political Science

PS 201, 202, 203	American Government	3 hrs. each
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Psychology

Psy 201, 202	General Psychology	3 hrs. each
Psy 204	Psychology of Adjustment	3 hrs. each
Psy 205	Applied Psychology	3 hrs. each

Sociology

Soc 204, 205, 206	General Sociology	3 hrs. each
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CURRICULA PROGRAMS

Many different curricula are organized at the College to care for the varying needs of the students. Among them are a lower-division general education curriculum, which may be either terminal or transfer, and a variety of pre-professional and semi-professional work.

LOWER-DIVISION GENERAL EDUCATION

Lower-division years of work in liberal art and science are intended to be broad and general in scope. Students completing two years' work and fulfilling all requirements normally select a major in a specialized field only at the end of the sophomore year.

For students who plan to complete work for a bachelor's degree, the two lower-division years provide a general education and a foundation for specialization during the junior and senior years in some field in the liberal arts and sciences or in a professional or technical curriculum.

For students uncertain about their educational or professional goals, the lower-division offers the opportunity to explore several fields of study to help determine special interests and aptitudes.

For students who plan to complete no more than two years of college, the lower-division offers a terminal program suited to the needs of the individual, balancing cultural and vocational courses as preparation for intelligent and useful citizenship.

Freshman Year	Term Hours
Year sequence in any one of the three groups	9-12
Year sequence in another of the three groups	9-12
English Composition (Wr 111, 112, 113)	9
Physical Education	3
Health Education	1
Departmental or exploratory electives	12-18
	Total 49

Sophomore Year	Term Hours
Sophomore year sequence in one of the groups begun in the freshman year	9-12
Year sequence in third group	9-12
Physical Education	3
Departmental or exploratory electives	21-27
Total	48

PROFESSIONAL CURRICULA

The following are professional and semi-professional freshman and sophomore year course programs offered in the G.C.D. of the College. These professional and semi-professional courses prepare for later specialization in the junior and senior years.

Providing the basis for the student to transfer to the professional school of his choice without loss of time, these professional and semi-professional courses of study are closely coordinated with the professional schools within the Oregon State System of Higher Education.

Some of the following professional and semi-professional programs at S.W.O.C., depending upon the purpose of the student, may be used to serve a specific vocational end in themselves. In any case, however, students are required to meet the same level of academic performances as are candidates for degrees.

Students planning to transfer to schools other than those within the State System of Higher Education upon completion of their professional or semi-professional programs should check lower-division course requirements by contacting the Registrar of the institution to which they intend to transfer.

BUSINESS ADMINISTRATION

Freshman Year	Term Hours	Sophomore Year	Term Hours
English Composition (Wr 111, 112, 113)	9	Fundamentals of Accounting (AC 211, 212, 213)	9
Business Environment (MPM 125, 126, 127)	6	Business Law (BA 254, 255)	6
Year Sequence in Literature	9	Principles of Economics (EC 201, 202, 203)	9
Year Sequence in Science	12	History of the United States (HST 201, 202, 203)	9
Extempore Speech (Sp 111, 112)	6	American Government (PS 201, 202, 203)	9
Physical Education	3	Physical Education (PE 180 - 190)	3
Health Education	1	Elective	3
Electives	3		
TOTAL	49	TOTAL	48

ENGLISH

Freshman Year	Term Hours	Sophomore Year	Term Hours
English Composition (Wr 111, 112, 113)	9	Shakespeare (Eng 201, 202, 203)	9
Survey of English Literature (Eng 101, 102, 103)	9	Survey of American Literature (Eng 253, 254, 255)	9
World Literature (Eng 107, 108, 109)	9	Extempore Speech (Sp 111, 112)	6
Year sequence in science or social science	9-12	Introduction to Journalism (J 211, 212, 213)	6
Physical Education	3	Year sequence in science or social science (whichever was not taken as a freshman)	9-12
Health Education	1	Physical Education	3
Electives	9	Elective	3-6
TOTAL	49-52	TOTAL	48-51

GENERAL SCIENCE

Freshman Year	Term Hours	Sophomore Year	Term Hours
General Biology (GS 101, 102, 103)	12	General Chemistry (CH 201, 202, 203)	9
English Composition (Wr 111, 112, 113)	9	General Chemistry Laboratory (CH 204, 205, 206)	6
Mathematics (Mth 101, 102, 200)	12	Calculus with Analytic Geometry (Mth 201, 202, 203)	12
Physical Education	3	Physical Education	3
Health Education	1	Year sequence in literature or social science (whichever was not taken as a freshman)	9
Year sequence in literature or social science	9	Approved electives	9
Approved electives	3		
	TOTAL		48
	49		

GENERAL SOCIAL SCIENCE

Freshman Year	Term Hours	Sophomore Year	Term Hours
English Composition (Wr 111, 112, 113)	9	Principles of Economics (Ec 201, 202, 203)	9
Survey of the Social Sciences (SSc 101, 102, 103)	9	History of the United States (Hst 201, 202, 203)	9
General Psychology (Psy 201, 202)	6	American Government (PS 201, 202, 203)	9
History of Western Civilization (Hst 101, 102, 103)	9	General Sociology (Soc 204, 205, 206)	9
Year sequence in literature or science	9-12	Year sequence in literature or science (whichever was not taken as a freshman)	9-12
Physical Education	3	Physical Education	3
Health Education	1		
Approved electives	0-3		
	TOTAL		48-51
	49-51		

LAW

NOTE: The minimum requirements for admission to the School of Law, University of Oregon, is three-fourth of the total credit required for a bachelor's degree from the institution at which the student completes his prelegal work—but not less than 140 term hours.

The prelegal program must include: (1) courses satisfying all lower-division requirements of the University and the liberal arts and sciences lower-division curriculum at the College; (2) the first-year basic college course in accounting (Ac 211, 212, 213) or equivalent; (3) a minimum of 36 term hours of credit in courses in the general field of social science.

For admission to the School of Law a student must have for all prelegal work a cumulative grade-point average of at least 2.25. Applicants for admission to the School of Law must take such entrance or aptitude examinations as may be required by the faculty of the school.

All students intending to enter the School of Law must file a formal application for admission with the dean of the school. Official application forms may be obtained from the School of Law.

MATHEMATICS

Freshman Year	Term Hours	Sophomore Year	Term Hours
Mathematics (Mth 101, 102, 200)	12	Calculus with Analytic Geometry (Mth 201, 202, 203)	12
English Composition (Wr 111, 112, 113)	9	Year sequence in literature or social science (whichever was not taken as a freshman)	9
Physical Education	3	Approved physical science sequence	12-15
Health Education	1	Physical Education	3
Year sequence in literature or social science	9	Electives	12
Electives	15		
	TOTAL		48-51
	49		

TEACHER EDUCATION (Elementary)

Freshman Year	Term Hours	Sophomore Year	Term Hours
English Composition (Wr 111, 112, 113)	9	General Psychology (Psy 201, 202)	6
General Biology (Bi 101, 102, 103)	12	Physical Science Survey (GS 104, 105, 106)	12
Background of Social Science (SSc 101, 102, 103)	9	History of the United States (Hst 201, 202, 203)	9
History of Western Civilization (HST 101, 102, 103)	9	World Literature (Eng 107, 108, 109)	9
Mathematics for Elementary Teachers (Mth 111)	3	Fundamentals of Speech (Sp 111)	3
Physical Education	3	Physical Education	3
Health Education	1	Electives	6
Electives	3		
TOTAL	49	TOTAL	48

TEACHER EDUCATION (Secondary)

Freshman Year	Term Hours	Sophomore Year	Term Hours
English Composition (Wr 111, 112, 113)	9	General Psychology (Psy 201, 202)	6
Science sequence, specific courses to be determined by choice of first and second teaching field	12	Science sequence, specific courses to be determined by choice of first and second teaching field	12
Social Science sequence, specific courses to be determined by choice of first and second teaching field	9	History of the United States (Hst 201, 202, 203)	9
* Survey of Visual Arts (AA 201)	3	Physical Education	3
* Introduction to Music and Its Literature (Mus 201)	3	World Literature (Eng 107, 108, 109)	9
Fundamentals of Speech (Sp 111)	3	Electives in teaching field or other electives	9
Physical Education	3		
Health Education	1	TOTAL	48
Electives in teaching field or other electives	6		
TOTAL	49		

COURSE DESCRIPTIONS

BUSINESS ADMINISTRATION

BA 211, 212, 213 ~~Ac 211, 212, 213~~ *CONSTRUCTIVE*
~~Fundamentals of Accounting~~ **3 hours each term**

Study of the function of accounting as a tool for the planning and administration of business enterprise. Primary emphasis on analysis and interpretation. Fall: position and income statements, conceptual bases for collecting and presenting data, flows of cost, the accounting cycle, depreciation, formation of working capital. Winter: inventory and its control, risk-equity relationships, interest and annuities, analysis of position and income statements, fund statements, manufacturing costs, organization for and administration of cost and budgetary control. Spring: application of cost concepts to decision making, taxation and its effect on planning, break-even analysis, internal control, capital budgeting, information theory applied to accounting reports, the impact of price-level changes on accounting data. Prerequisite: sophomore standing or consent of instructor.

BA 254, 255 Business Law **3 hours each term**

Application of fundamental legal principles to typical business situations, illustrated by selected cases. Emphasis is placed on legal principles as they relate to agency, contracts, partnerships, corporations. Required of all business administration majors.

MPM 125, 126, 127 Business Environment **2 hours each term**

The social, political and economic environment within which business functions in the United States; emphasis on the groups confronting business, their attitudes and behavior, and on the social, political, and economic responsibilities of business.

BS 232 **Business Statistics** **5 hours**

Introduction to the applications of statistics to decision making in the functional areas of business administration; compilation of data for managerial use, index numbers, time-series analysis; elements of probability and introduction to statistical inference. 4 lectures; 1 two-hour laboratory period.

FINE ARTS

AA 201, 202, 203 Survey of Visual Arts **3 hours each term**

Cultivation of understanding and intelligent enjoyment of the visual arts through a study of historical and contemporary works; consideration of motives, media, and forms.

AA 290 Painting **2 to 3 hours any term**

Instruction in the use of oil color, water color, and other media. Registration permitted any term, but it is desirable that the work be started in the fall. 12 term hours required for upper-division standing.

AA 291 Drawing **1 to 3 hours any term**

Training in observation and selection of significant elements. Registration permitted any term, but it is desirable that the work be started in the fall. 6 term hours required for upper-division standing.

AA 292 Water Color **2 to 3 hours**

The technique and use of water color, with special attention to its characteristics as a painting medium. Emphasis on landscape material. May be substituted for third term of AA 291 to meet lower-division major requirement. Open to non-majors with four hours of work in AA 291 or with consent of instructor.

AA 295 Basic Design **2 hours each term**

No-grade course. Studio participation exercises involving the basic principles of design; a three-term introductory sequence. Open to non-majors.

Mus 111, 112, 113 Music Theory I **4 hours each term**

Theory I and II are basic courses for all majors in the School of Music. They provide a thorough groundwork in the elements of music science—melodic, harmonic, and rhythmic—taught through analysis of the styles of Bach, Haydn, Mozart, Beethoven, and other eighteenth and nineteenth century composers.

Mus 211, 212, 213 Music Theory II 3 hours each term
For description, see Mus 111, 112, 113. Prerequisite: Mus 111, 112, 113.

Mus 201, 202, 203 Introduction to Music and Its Literature 3 hours each term
Cultivation of understanding and intelligent enjoyment of music through a study of its elements, forms, and historical styles.

HEALTH AND PHYSICAL EDUCATION

HE 150 Health Education 1 hour any term
Study of personal health problems which confront the college student; the basic scientific principles of healthful living. Meets the health-education requirement for men.

HE 250 Personal Health 3 hours any term
Study of the personal health problems of University men and women, with emphasis on implications for family life. Mental health, communicable diseases, degenerative diseases, nutrition. Satisfies the University requirement in health education for men and women.

HE 251 Community Health 3 hours winter
Study of methods of handling health and sanitation problems in the community, with special reference to water supply, food and milk, sanitation, sewage disposal, insect and rodent control; state and county health departments.

HE 252 First Aid 3 hours winter or spring
Study of first aid and safety procedures—for the individual, schools, athletic, and civilian defense; meets certification standards of the American Red Cross.

PE 180 Physical Education (Women) 1 hour each term, 6 terms
A variety of activities taught for physiological and recreational values. Special sections for restricted and corrective work. A total of five terms required for all lower-division women students. 3 hours a week.

PE 190 Physical Education (Men) 1 hour each term, 6 terms
A variety of activities taught for physiological and recreational values. Special sections for restricted and corrective work. A total of five terms required for all lower-division men students. 3 hours a week.

PE 194 Professional Activities (Women) 1 to 2 hours each term, 3 terms
For professional students. Instruction and practice. Fall: intermediate contemporary dance, sports. Winter: folk dance, social dance, square dance. Spring: bowling and small-court games, swimming, or intermediate-advanced contemporary dance.

PE 195 Professional Activities (Men) 2 hours each term, 3 terms
For professional students. Methods, teaching techniques, and basic skills. Fall: baseball, basketball. Winter: folk, social dance, square dance. Spring: team sports.

LANGUAGE AND LITERATURE

Wr 50 Corrective English 1 hour any term
No-grade course. One term course in the mechanics of English, required of freshmen who receive low ratings in an entrance placement examination. For such students Wr 50 is a prerequisite for any other course in written English.

Wr 111, 112, 113 English Composition 3 hours any term
The fundamentals of English composition; frequent written themes. Special attention to correctness in fundamentals and to the organization of papers.

Eng 52 Corrective Reading 1 hour any term
No-grade course. Designed for students who have difficulties in reading at the college level. Methods for increasing speed and comprehension.

- Eng 101, 102, 103 Survey of English Literature** 3 hours each term
Study of the principal works of English literature based on reading selected to represent great writers, literary forms, and significant currents of thought. Provides both an introduction to literature and a background that will be useful in the study of other literatures and other fields of cultural history. Fall: Anglo-Saxon beginnings to the Renaissance; Winter: Milton to Wordsworth; Spring: Byron to the present.
- Eng 107, 108, 109 World Literature** 3 hours each term
Study of the literary and cultural foundations of the Western world through the analysis of a selection of masterpieces of literature, ancient and modern, read in chronological order. The readings include continental, English, and American works.
- Eng 201, 202, 203 Shakespeare** 3 hours each term
Study of the important plays—comedies, histories, and tragedies. Required for majors.
- Eng 253, 254, 255 Survey of American Literature** 3 hours each term
American literature from its beginning to the present day.
- Sp/11, 112 Extempore Speaking** 3 hours each term
Original speeches; analysis and synthesis of material, adaptation to audience, outline construction; development of confidence and release on platform; voice, enunciation, gesture, and bearing in delivery; speeches for special occasions; the extended address. Must be taken in sequence.
- J 211, 212, 213 Introduction to Journalism** 2 hours each term
Required of prejournalism majors; open to non-majors. Survey of journalistic fields; instruction in the fundamentals of reporting, copyediting, advertising, and technical processes. The terms need not be taken in sequence.
- GL 50, 51, 52 First-Year German** 4 hours each term
Designed to provide a thorough grammatical foundation and an elementary reading knowledge of German, as well as an understanding of the spoken language.
- GL 101, 102, 103 Second-Year German** 4 hours each term
Review of grammar and composition; reading of selections from representative authors; conversation.
- GL 201, 202, 203 Survey of German Literature** 3 hours each term
German literature from the Middle Ages to the present; readings from representative authors. Same as GL 343, 344, 345, but may not be counted for upper-division credit. One section conducted in German. Prerequisite: two years of college German.
- RL 50, 51, 52 First-Year French** 4 hours each term
An introduction to French, stressing reading and speaking. Exercises in elementary composition and grammar.
- RL 101, 102, 103 Second-Year French** 4 hours each term
Study of selections from representative authors; review of grammar; considerable attention to oral use of the language.
- RL 201, 202, 203 Survey of French Literature** 3 hours each term
French literature from the Middle Ages to the present; readings from representative authors. Same as RL 311, 312, 313, but may not be counted for upper-division credit. One section conducted in French. Prerequisites: two years of college French or equivalent.
- RL 60, 61, 62 First-Year Spanish** 4 hours each term
An introduction to Spanish, stressing speaking and reading. Exercises in elementary composition.
- SL 50, 51, 52 First-Year Russian** 4 hours each term
The elements of the Russian language. Elementary reading, composition, and conversation.

SCIENCE AND MATHEMATICS

GS 104, 205, 106 Physical Science Survey 4 hours each term

General introduction to the physical sciences; principles of physics and chemistry, geologic processes, and man's relation to them. Special emphasis on scientific method. 3 lectures; 1 quiz period.

BI 101, 102, 103 General Biology 4 hours each term

Principles of life science, illustrated by studies of selected organisms. 3 lectures; 1 three hour laboratory period.

Mth 10 Elements of Algebra No credit

A remedial course intended primarily for students entering with less than one year of elementary algebra. 4 class meetings a week.

Mth 51, 52 Mathematics for Elementary Teachers 3 hours each term

Basic concepts of arithmetic, elementary algebra, and plane geometry; applications to statistics and mathematics of finance. For prospective elementary teachers; not open to other students. 4 recitations.

Mth 100 Intermediate Algebra 4 hours

Functions and graphs, linear equations in two unknowns, quadratic equations, negative and fractional exponents, radicals, progressions, binomial theorem, logarithmic computation. Prerequisite: Math 10 or equivalent.

Mth 101 College Algebra 4 hours

Review of high school algebra emphasizing number system, logarithms, progressions, binomial series, theory of equations, determinants. Prerequisite: Mth 100 or equivalent.

Mth 102 Trigonometry 4 hours

Trigonometric functions for general angles, solution of triangles, addition formulas, trigonometric equations, graphs, complex numbers, and De Moivre's theorem. Prerequisite: Mth 101 or equivalent.

Mth 200, 201, 202, 203 Calculus with Analytic Geometry 4 hours each term

Mth 200: differentiation and integration: applications to rates, area, volumes. Mth 201: Applications in mechanics; plane analytic geometry, elementary transcendental functions. Mth 202: Techniques of integration, vectors, solid analytic geometry. Mth 203: Partial differentiation, multiple integration, infinite series. Prerequisite: Mth 102.

Mth 108 Mathematics and Finance 4 hours

Simple and compound interest and discount, annuities, periodic payment plans, bonds, depreciation, mathematics of insurance, and other topics related to business. Prerequisite: Mth 101, 102 or Mth 105.

Ch 201, 202, 203 General Chemistry 3 hours each term

An introduction to the field of chemistry, providing an understanding of the structures of atoms, molecules, and ions and their interactions, and a foundation for further study of chemistry. 3 lectures. Prerequisite: Mth 10 or equivalent.

Ch 204, 205, 206 General Chemistry Laboratory 2 hours each term

Planned to accompany Ch 201, 202, 203. Required for chemistry majors and for premedical and pre dental students. 1 three hour laboratory period; 1 quiz period. 205, 206. 1 three hour laboratory period; 1 quiz period.

SOCIAL SCIENCE

Ssc 101, 102, 103 Background of Social Science 3 hours each term

Orientation in social sciences emphasizing the integration of all the social sciences into a discipline of learning; general influences on human behavior; scientific method in social sciences. Open to freshmen and sophomores only.

Hst 101, 102, 103 History of Western Civilization 3 hours each term

Origins and development of Western Civilization from ancient times to the present.

2 Sec

5 Sec

His 201, 202, 203 History of the United States 3 hours each term *2 sec*
 From colonial times to the present.

~~His 201, 202, 203~~
~~Ec 111 True American Economy~~ 3 hours fall

~~Introduces the economic institutions in the United States; living standards, employment, income distribution, economic resources, form of business enterprise, and role of government. Emphasis on position and problems of consumer in market economy.~~

Ec 201, 202, 203 Principles of Economics 3 hours each term *1 sec*
 Principles that underlie production, exchange, distribution, etc. Prerequisite: sophomore standing.

Soc 204, 205, 206 General Sociology 3 hours each term *1 sec*
 The basic findings of sociology concerning the individual, culture, group life, social institutions, and factors of social change. Prerequisite: sophomore standing or consent of instructor.

Soc 214
 Psy 111 Personality and Development 3 hours *2 sec*
 Self-understanding and development; emphasis upon habits, attitudes, emotional problems, and efficient learning techniques.

Psy 201, 202 General Psychology 3 hours each term *2 sec*
 Introductory study of behavior and conscious processes. Survey of experimental studies of motivation, learning, thinking, perceiving, and individual difference.

Psy 204 Psychology of Adjustment 3 hours *1 sec*
 The nature and origins of differences in personality; means of making desired changes.

Psy 205 Applied Psychology 3 hours *1 sec*
 Applications of psychology in personal selection and training; human factors in equipment design. Prerequisite: Psy 201, 202.

Psy 208, 209, 210 General Psychology Laboratory 1 hour each term *1 sec*
 Introduction to research methods. Designed to familiarize the student with scientific approaches to problems in psychology. 1 laboratory period.

Psy 212
 PS 201, 202, 203 American Government 3 hours each term *1 sec*
 Fall and winter: national government; spring: state and local governments.

PS 212
~~PS 205 International Relations~~ 3 hours *1 sec*
 Analysis of the nature of relations among states, with particular reference to the contemporary international issues; a study of motivating factors, including nationalism, imperialism, economic rivalries, quest for security, etc.; study of the problem of national sovereignty and its relation to international cooperation.

Geog 105, 106, 107 Introductory Geography 3 hours each term *1 sec*
 Elements and implications of geography. Geog 105, World Regions: analysis of the patterns of world environment; man and his activities. Geog 106, Economic Geography: world commodity production. Geog 107, Political Geography: implications of geography on world political entities. To be taken in sequence.

201-202-203
~~Introduction to Philosophy~~ *1 sec*

Psy 212 - Practical Psych - 1 sec

ENST 208-209 English ENST 31-

ENST 230, 231, 232 Great Americans in thought & action 2 hrs

ENST 207, 208, 209 Anthropology 3

TECHNICAL-VOCATIONAL & GENERAL ADULT

Maurice M. Romig, B.S., Ed.M., Director

Technical Curricula	—	Licensed Practical Nursing
Occupational Extension	—	Business Education
Appretice Training	—	General Cultural (Adult)

TECHNICAL EDUCATION

Larry J. Whitney, B.S., Chairman

Technical education includes selected and organized experiences which will prepare an individual for satisfying and effective employment and for membership in a community, according to his capacity. This preparation involves related technical education together with the specific training necessary for entry into an occupational field. It also includes additional training for qualified persons already employed who wish to improve their competency.

Since the majority of American youth do not continue formal education beyond the secondary school, technical education attempts to meet the demands of this group by centering education around the immediate needs of the individual. This plan of technical education assures the young person the means of supporting himself and prepares him for making a contribution to the world's work. It enables him to obtain through his own efforts the higher standard of living possible in a democratic society.

Technical education curricula are all post high school and are terminal. Associate in Applied Science Degrees and Certificates of Completion will be issued for satisfactory completion of these programs or parts thereof.

The College is one of eight school systems giving technical training in Oregon. Astoria, Bend, Eugene, Medford, Pendleton, Portland, and Salem are also giving vocational-technical instruction. This will enable students to transfer to other localities and continue their education with a minimum of transfer problems.

ENTRANCE REQUIREMENTS

There are no entrance requirements beyond the general entrance requirements of the College for students intending to choose a course of study within the Technical Vocational Division. Eligibility may be established through an evaluation of previous education, work experience, and appropriate testing.

DEGREE AND CERTIFICATE REQUIREMENTS

The Associate in Applied Science degree is offered by many technical schools in all parts of the United States. It is attaining status in higher education and recognition in business and industry.

General requirements for the Associate in Applied Science degree:

1. Minimum of 90 units of specified courses (see particular curriculum)
2. Grade point average minimum of 2.00 (C average).
3. Required courses: See major curriculum.

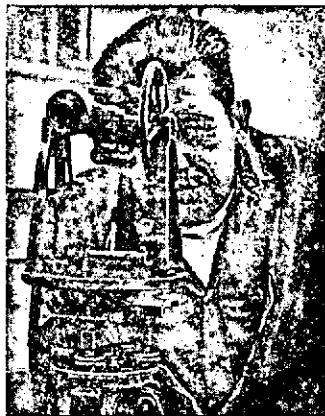
4. Must attend S.W.O.C. at least two terms (including the last term) before degree is awarded, and must have completed 24 units at S.W.O.C. Technical units are not necessarily equivalent to collegiate term hours.

A Certificate of Completion is awarded to those who successfully complete a non-degree technical curriculum according to the standards of the College.

Certificates of attainment will be issued on request for individual courses completed, and these may be credited toward obtaining a curriculum diploma. Previous training or work experience will be evaluated for credit toward receiving a diploma by tests covering the training involved, upon request by the individual.



Testing an Analog computer built as a science laboratory project.



Practical work in engineering.

CURRICULA

ELECTRONIC ENGINEERING TECHNICIAN

Minimum requirements for the Associate of Applied Science Degree.

First Term			Fourth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Applied Physics I	5	4	Industrial Economics	2	2
Communication Skills I	3	3	Electrical Mathematics I	3	3
Drafting I	4	2	Oscillator Circuits & Design	2	2
Engineering Problems I	2	1	Oscillator Circuits and Design Lab	6	2
Technical Mathematics I	3	3	Servo Systems	4	2
Electrical Theory (DC)	5	4	Wave Generation & Shaping	5	3
TOTAL	22	17	TOTAL	22	14
Second Term			Fifth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Applied Physics II	5	4	Amplifier Circuits & Design	3	3
Communication Skills II	3	3	Amplifier Circuits & Design Lab ..	6	2
Electrical Drafting	4	2	Industrial Electronics I	5	3
Engineering Problems II	2	1	Industrial Television I	5	3
Technical Mathematics II	3	3	Electronic Data Processing	3	3
Electrical Theory (AC)	5	4	TOTAL	22	14
TOTAL	22	27	TOTAL	22	14
Third Term			Sixth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Practical Descriptive Geometry	4	2	Advanced Electronic Circuits	5	3
Technical Mathematics III	3	3	Automation Systems	3	3
Electrical Circuits	3	3	Industrial Television II	3	1
Electrical Circuits Lab	6	2	Industrial Electronics I	3	3
Vacuum Tube and Transistor Analysis	3	3	Industrial Electronics Lab II	3	1
Vacuum Tube and Transistor Analysis Lab	3	1	Microwaves	5	3
TOTAL	22	14	TOTAL	22	14

AUTOMOTIVE AND DIESEL MECHANICS

Minimum requirements for graduation.

First Term			Second Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Automotive Chassis I	2	2	Automotive Chassis II	2	2
Automotive Chassis Lab I	6	2	Automotive Chassis Lab II	6	2
Internal Combustion Engines I	2	2	Internal Combustion Engines II	2	2
Internal Combustion Engines Lab I	3	1	Internal Combustion Engines Lab II	6	2
Welding I—A	4	2	Fuel Systems & Carburetion I	2	2
Practical Physics I	5	4	Fuel Systems & Carburetion Lab I	3	1
Mathematics II	3	3	Practical Physics II	5	4
TOTAL	25	16	TOTAL	26	15
Third Term			Hrs/Wk Units		
	Hrs/Wk	Units		Hrs/Wk	Units
Power Trains	2	2			
Power Trains Lab	6	2			
Automotive Electricity I	3	3			
Automotive Electricity Lab I	3	1			
Fuel Systems and Carburetion II	2	2			
Fuel Systems and Carburetion Lab II	3	1			
Practical Physics III	5	4			
TOTAL	24	15			

Automotive Mechanics Option

Fourth Term			Fifth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Automotive Electricity II	3	3	Automatic Transmissions	3	3
Automotive Electricity Lab II	3	1	Automatic Transmissions Lab ..	3	1
Front End Alignment	2	2	Power Steering	4	2
Front End Alignment Lab	3	1	Automotive Repair II	9	3
Automotive Repair I	9	3	Communication Skills II	3	3
Applied Fluid Mechanics	2	2	Automotive Materials	2	2
Communication Skills I	3	3			
TOTAL	25	15	TOTAL	24	14

Sixth Term		
	Hrs/Wk	Units
Tune-Up and Diagnosis	2	2
Tune-Up and Diagnosis Lab	6	2
Automotive Repair III	9	3
Automotive Fuels & Lubricants	2	2
Automotive Repairs Estimating ..	2	2
Employer-Employee Relations ..	2	2
Automotive Service Management ..	2	2
TOTAL	25	15

Diesel Mechanics Option—(Not offered 1961-62)

Fourth Term			Fifth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Applied Fluid Mechanics	2	2	Power Steering	4	2
Front End Alignment	2	2	Fuel Injection Systems II	2	2
Front End Alignment Lab	3	1	Fuel Injection Systems Lab II ..	6	2
Fuel Injection Systems I	2	2	Diesel Engines II	2	2
Fuel Injection Systems Lab I	3	1	Diesel Engines Lab II	6	2
Diesel Engines I	2	2	Welding I-B	4	2
Diesel Engines Lab I	6	2	Communication Skills II	3	3
Communication Skills I	3	3			
TOTAL	23	15	TOTAL	27	15

Sixth Term		
	Hrs/Wk	Units
Diesel Tune-Up & Diagnosis	2	2
Diesel Tune-Up & Diagnosis Lab	6	2
Diesel Engine Repair I	9	3
Auxiliary Systems	2	2
Auxiliary Systems Lab	3	1
Automotive Service Management ..	2	2
Employer-Employee Relations ..	2	2
TOTAL	26	14

CIVIL AND STRUCTURAL ENGINEERING TECHNICIAN

Minimum requirements for the Associate of Applied Science Degree.

First Term			Fourth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Applied Physics I	5	4	Industrial Economics	2	2
Communication Skills I	3	3	Mapping and Computing I	4	2
Drafting I	4	2	Strength of Materials II	5	3
Engineering Problems I	2	1	Applied Mechanics II	5	3
Plane Surveying I	5	3	Structural Analysis & Design I	4	2
Technical Mathematics I	3	3	Materials of Construction	2	2
TOTAL	22	16	TOTAL	22	14

Second Term			Fifth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Applied Physics II	5	4	Hydraulics I	3	3
Communication Skills II	3	3	Mapping and Computing II	6	2
Drafting II	4	2	Soil Mechanics I	5	3
Engineering Problems II	2	1	Timber & Steel Construction	6	4
Plane Surveying II	5	3	Construction Codes	2	2
Technical Mathematics II	3	3			
TOTAL	22	16	TOTAL	22	14

Third Term			Sixth Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Applied Mechanics I	5	3	Concrete Construction and Design	7	3
Practical Descriptive Geometry	4	2	Foundations of Structures	3	3
Surveying Computations	5	3	Hydraulics II	3	3
Strength of Materials I	2	2	Structural Drafting	4	2
Strength of Materials Lab I	3	1	Contracts and Specifications	3	3
Technical Mathematics III	3	3	Construction Estimating	2	2
TOTAL	22	14	TOTAL	22	16

GENERAL DRAFTING

Minimum requirements for graduation.

First Term			Second Term		
	Hrs/Wk	Units		Hrs/Wk	Units
Drafting I	4	2	Drafting II	4	2
Mathematics II	3	3	Mathematics III	3	3
Practical Physics I	5	4	Practical Physics II	5	4
Intro. to Fabrication Practices	7	3	Project Drafting I	9	3
Communication Skills I	3	3	Communication Skills II	3	3
Industrial Economics	2	2			
TOTAL	24	17	TOTAL	24	15

Third Term		
	Hrs/Wk	Units
Advanced Drafting Problems	3	3
Practical Physics III	5	4
Project Drafting II	8	3
Technical Report Writing	3	3
Mechanical Drafting	4	2
Employer-Employee Relations	2	2
TOTAL	25	17

LICENSED PRACTICAL NURSING

The purpose of this program is to prepare suitable applicants to give nursing care to patients in those instances where nursing needs do not require the constant attention of the professional nurse and to establish and maintain good standards of nursing service. Always under the supervision of a professional registered nurse or licensed physician, the student is taught to assist in the care of medical and surgical patients, care of mothers and newborn babies, care of children, care of the aged, and care of the chronically ill and convalescent patient.

Graduates of the practical nursing program are eligible to take the State licensing examination given by the Oregon State Board of Nursing. Those who pass this examination become licensed practical nurses in Oregon and are eligible for licensing in other states by endorsement.

The program covers a 12-month curriculum consisting of a minimum of 1944 hours of class and clinical experience. Six hundred hours of class work are given in a specially prepared classroom and laboratory. Thirteen hundred forty-four hours of clinical experience are given. Seventy-two hours of ward classes are given on the floors of the cooperating hospitals of the area under the supervision of the instructor-coordinator of the practical nursing program, Southwestern Oregon College, and in cooperation with the professional registered supervisory nurses of each department.

Minimum requirements for graduation.

	Clock Hours	Lab. Hrs.	Class Units	Lab. Units
Introduction to Nursing	24		2	
Normal Nutrition and Diet Therapy	36		3	
Anatomy and Physiology	60		5	
Fundamentals of Nursing	12	72	1	2
Pharmacology	36		3	
Communicable Disease	12		1	
Medical and Surgical Nursing	84		7	
Maternal and Child Care	84		7	
Advanced Nursing Procedures	24	36	2	1
First Aid and Disaster Nursing	12		1	
Psychiatric Nursing and Mental Hygiene	24		2	
Professional Adjustments	12			1
Ward Conferences	72			2
Clinical Lab:				
Medical and Surgical Nursing		672		14
Maternal and Child Care		384		8
Supplemental and Electives		288		6
TOTAL	492	1452	34	34

Starting date to be announced.

OCCUPATIONAL EXTENSION

These courses are designed to provide practical training for employed people to help them upgrade present skills, develop new skills, and acquire related technical knowledge for job competency and advancement.

The popular courses are offered each year. Many additional courses can and will be offered subject to sufficient numbers to form classes. Inquiry is invited.

JOB OPPORTUNITIES (A few examples)

Automotive Mechanics

Automotive Mechanic	Brake Specialist
Tractor Mechanic	Auto Starter Specialist
Motorboat Mechanic	Vehicle Inspector
Heavy Equipment Mechanic	Wheel Alignment Specialist
Farm Equipment Mechanic	Automotive Electrician

Civil and Structural Engineering Technology

Construction Estimator	Job Clerk
Superintendent of Construction	Draftsman, Map
Highway Foreman	Inspector
Engineer Aide	Assistant City Engineer
Instrument Man (Surveying)	Chainman

Electronics Engineering Technology

Electronics Technician	Instrumentation Technician
Microwave Technician	Technical Writer
Computer Technician	Production Technician
Assistant Engineer	Communications Technician
Guided Missile Technician	Radar Technician
Radio and Television Lab Tech.	Electronics Draftsman

General Drafting

Electrical Draftsman	Architectural Draftsman
Structural Draftsman	Mapping Draftsman
Machine Draftsman	Engineering Graphics Draftsman
Welding Draftsman	Sheet Metal Layout Draftsman
Aeronautical Draftsman	Technical Illustrator

Licensed Practical Nursing

Hospitals	Medical Centers
Private Practice	Industrial and
Medical Clinics	Public Health Offices

COURSE DESCRIPTIONS

COMMUNICATIONS

Communication Skills I (3 Class Hrs/Wk) Term Units 3

This course is designed to improve the student's speaking and writing skills and help him grow in language power through the development of correct habits of careful, forceful expression. The course material covering the four basic skills,—reading, speaking, writing, and listening—has been correlated so that the methods used in these four areas are complimentary parts of the communication process. The practical phase of communication problems is kept in the foreground, and every effort is made to lead the student through industrial and business experiences that are thoroughly practical in nature. Problems in the field of oral communication include individual speech analysis, business and social conversation, group speaking in business and industry, information talks, demonstrations, explanations, etc. Cultivating the student's powers of analysis and evaluation of contemporary communication is an important objective in this course, therefore, contemporary speeches, books, magazines, and newspapers are the source materials for oral and written assignments. Problems in outlining, note-taking, summarizing, report making, and in conventional usages in mechanics and grammar are considered. Prerequisite: High school English or equivalent.

Communication Skills II (3 Class Hrs/Wk) Term Units 3

This course presents the next steps in the process of improving the student's speaking, reading, writing, and listening skills. Problems in these areas are on a graduated basis and have been so selected as to help the student proceed in an orderly fashion to achieve greater competency of expression and a stronger sense of security in communicating his ideas and thoughts to others. Practice is provided for the student in developing reports; giving talks; taking part in conferences; reading, analyzing, and discussing both general and technical periodicals; and handling representative forms of business writing. The general objective is to provide a graduated scale of activities which will help the student grow in confidence so that he will be able to perform adequately in those social, business, and industrial situations which he must face in his later life. Prerequisite: Communication Skills I or equivalent.

Drafting I (4 Laboratory Hrs/Wk) Term Units 2

This is a fundamental course in drafting designed to give the student a basic understanding of drawing techniques. Emphasis will be placed on the application of drafting instruments, standard orthographic projection, layout procedures, and ASA approved lettering techniques. Drawing techniques such as geometric construction, selection of views, sectional and auxiliary views, revolutions, threads, and standard dimensioning practices will be covered. Prerequisite: High school algebra or approval of department head. Mathematics II may be taken concurrently.

Drafting II (4 Laboratory Hrs/Wk) Term Units 2

This is an intermediate course designed to prepare students to enter mechanical, structural, civil, and architectural drafting. It includes isometric projection, perspective drawings. Emphasis is placed on the concept, technique of inking, and the development of working drawings as used in industry. Limitations of general shop equipment are discussed. Prerequisite: Drafting I or equivalent.

Engineering Problems I (2 Laboratory Hrs/Wk) Term Unit 1

This course of study in engineering problems is one in which the student is instructed in the development of accurate, effective, and efficient work and study habits. The course is intended to train the student to organize his analysis and record them in clear, concise form so that they can be interpreted. Prerequisites: One year of high school algebra or equivalent.

Engineering Problems II (2 laboratory Hrs/Wk) Term Unit 1

This course aims to develop the skill of gathering together and sorting research results and problems solving records into logical summation. Mathematical and graphical analysis of data will be emphasized in the presentation of information in the report. Prerequisites: Engineering Problems I.

Practical Descriptive Geometry (4 Laboratory Hrs/Wk) Term Units 2

This course gives a brief view of advanced drafting problems and takes the student further into the field of descriptive geometry principles. In the production of detailed drawing from assembly drawing the principles of Descriptive Geometry are necessary to the skilled draftsman. Prerequisites: Third term standing or approval of department head.

Technical Report Writing (3 Class Hrs/Wk)**Term Units 3**

This is a course which supplies knowledge of the principles of composition and basic forms of writing reports. The subjects covered are: why reports are written, types of reports, make-up of reports, effectiveness of writing styles, gathering of facts for a report, planning a report, method of writing a report, layout and typing of a report, and visual aids in a report. Prerequisite: communication Skills I or equivalent.

MATHEMATICS**Electrical Mathematics**

See Electronics course descriptions.

Mathematics II (3 Class Hrs/Wk)**Term Units 3**

This is a course in practical mathematics including the fundamentals of applied algebra and applied geometry, including symbols, equations, ratio and proportion, exponents, radicals, formulas, geometric lines and shapes, common geometric constructions, and introductory applied trigonometry. Prerequisite: Mathematics, general high school, or equivalent.

Mathematics III (3 Class Hrs/Wk)**Term Units 3**

This course concentrates on problems encountered by workers in industrial occupations. It applies arithmetic, algebra, geometry, trigonometry, and their various phases to jobs encountered. Emphasis on actual problem solving aspects. Prerequisites: Mathematics II or equivalent.

Pre-Technical Mathematics**Non-Credit**

This course consists primarily of beginning algebra, given to those who wish to pursue Electronics or Civil-Structural Engineering Technology, who have had an inadequate background in mathematics.

Technical Mathematics I (3 Class Hrs./Wk)**Term Units 3**

This is an applied course in mathematics on the technician level, covering the slide rule, tables and interpolation, additional applications in geometry, a review of fundamental algebraic operations, system of linear equations, functions and graphs, advanced applications of exponents and radicals, and quadratic equations in one unknown. Prerequisites: High school algebra or equivalent.

Technical Mathematics II (3 Class Hrs/Wk)**Term Units 3**

This is an applied course in mathematics on the technician level, including logarithms, right and oblique triangle problem solving, trigonometric applications and review, vectors, trigonometric formulas, identities and equations and graphs of trigonometric functions. Prerequisites: Technical Mathematics I or equivalent.

Technical Mathematics III (3 Class Hrs/Wk)**Term Units 3**

This is an applied course in mathematics on the technician level, covering simultaneous quadratic equations, ration and proportion, binomial theorem, arithmetic and geometric progressions, mathematics of investment, exponential functions, complex notation and vector algebra. Prerequisites: Technical Mathematics II or equivalent.

RELATED SUBJECTS**Employer-Employee Relations (2 Class Hrs/Wk)****Term Units 2**

The objective of this course is to provide an understanding of the rights and responsibilities of employees. As a guide to making adequate decisions, a study of population, economic and employment trends, and hours and working conditions is included. The development of and the role played by labor organizations, how labor representatives and management bargain, government laws and regulations covering collective bargaining, other state and federal labor laws, and how labor disputes are negotiated and given consideration. Information on government programs for old age and unemployment assistance and additional information on the problems faced by individuals applying for work and the individual's associations with fellow workers and company representatives are covered.

Industrial Economics (3 Class Hrs/Wk)**Term Units 3**

Industrial Economics deals with the principles involved in the operation of the American economic system. The role of business and industry in the total economy is studied. Basic economic principles are applied to the relationship of employer and employee. Topics considered are: historic trends, business organization, prices and competition, imperfect competition and monopoly, price levels, business cycles, taxation, labor unions, management associations, labor-management relations, labor legislation, and social and private security.

SCIENCE**Applied Physics I (3 Class, 2 Laboratory Hrs/Wk)****Term Units 4**

This course in applied physics is on the post high school level. Physical laws and theories and mechanical principles, including mechanics of measurement, properties and structure of matter, solids, liquids, and gases, simple machines, work, power, and energy are studied. Laboratory time is provided for demonstrations and experiments to clarify principles and procedures covered in class. Prerequisites: Technical Mathematics I or equivalent. May be taken concurrently.

Applied Physics II (3 Class, 2 Laboratory Hrs/Wk)**Term Units 4**

Covers principles of heat, light, and sound, including the study of temperature and the effects of heat, heat and change of state, heat transfer, heat engines, refrigeration, air conditioning, sound, application of sound, and nature of light. Laboratory time is provided for demonstrations and experiments to clarify principles and procedures covered in class. Prerequisites: Applied Physics I or equivalent.

Practical Physics I (3 Class, 2 Laboratory Hrs/Wk)**Term Units 4**

This is an introductory course in practical physics covering matter, measurements, mechanics, and machines. Laboratory time is provided for demonstrations and experiments to help clarify the principles and procedures covered in class. Prerequisites: General high school mathematics or equivalent.

Practical Physics II (3 Class, 2 Laboratory Hrs/Wk)**Term Units 4**

This is an introductory course in practical physics covering heat, light, and sound. Laboratory time is provided for demonstrations and experiments to help clarify the principles and procedures covered in class. Prerequisites: Mathematics II or equivalent.

Practical Physics III (3 Class, 2 Laboratory Hrs/Wk)**Term Units 4**

This is an introductory course in practical physics covering magnetism and electricity. Laboratory time is provided for demonstrations and experiments to help clarify the principles and procedures covered in class. Prerequisite: Mathematics II or equivalent.

AUTOMOTIVE MECHANICS**Applied Fluid Mechanics (2 Class Hrs/Wk)****Term Units 2**

A study of the practical uses of hydraulic power transmission and application. The fundamental principles are reviewed and the uses of hydraulic pressure and fluid flow in brakes, pumps, power steering units, fluid couplings, torque converters, and power accessories are covered thoroughly. Prerequisites: Practical Physics I and II.

Automotive Chassis I (2 Class Hrs/Wk)**Term Units 2**

This course is designed to give students an understanding of the principles of operation of automotive chassis components. Fundamentals of front suspension and steering geometry, diagnosis of steering and suspension troubles, and overhaul techniques of steering and suspension systems are studied. Prerequisite: Practical Physics I should be taken concurrently.

Automotive Chassis Laboratory I (6 Laboratory Hrs/Wk)**Term Units 2**

A course to develop the ability to use basic hand tools, measuring tools, and shop equipment in the process of overhauling and adjusting various types of suspension and steering systems. It is the practical application of the theory studied in Automotive Chassis I. Prerequisite: Automotive Chassis I should be taken concurrently.

Automotive Chassis II (2 Class Hrs/Wk) Term Units 2

The purpose of this course is to familiarize students with the functions and principles of operation used on all major types of automotive brake systems. The student should acquire knowledge of brake trouble shooting, procedures for overhauling both conventional and power brakes, and service techniques. Prerequisite: Automotive Chassis I or equivalent. Practical Physics II should be taken concurrently.

Automotive Chassis Laboratory II (6 Laboratory Hrs/Wk) Term Units 2

This is the practical application of the theory studied in Automotive Chassis II. Prerequisite: Automotive Chassis II should be taken concurrently.

Automotive Electricity I (3 Class Hrs/Wk) Term Units 3

This course is designed to provide the student with an understanding of the fundamental principles of electricity as used by the auto mechanic. Construction and function of automotive electrical components, including storage batteries, switches, ignition, and cranking systems are studied in detail with the aid of demonstrations, cutaway, and mock-up equipment. Prerequisite: Practical Physics III, may be taken concurrently.

Automotive Electricity Laboratory I (3 Laboratory Hrs/Wk) Term Unit 1

This is the practical application of the theory studied in Automotive Electricity I. Prerequisites: Practical Physics III and Automotive Electricity I must be taken concurrently.

Automotive Electricity II (3 Class Hrs/Wk) Term Units 3

This course is a continuation of Automotive Electricity I covering automotive lighting, charging, and indicating systems. Students will acquire the ability to diagnose minor troubles in these systems as well as be able to interpret and trace automotive wiring diagrams. Common types of minor electrical accessories are studied. Prerequisite: Automotive Electricity I or equivalent.

Automotive Electricity Laboratory II (3 Lab Hrs/Wk) Term Unit 1

This is a practical application of the theory studied in Automotive Electricity II. Prerequisite: Automotive Electricity II to be taken concurrently.

Automotive Fuels and Lubricants (2 Class Hrs/Wk) Term Units 2

This is a theory course covering the nature and origin of petroleum products and of manufacturing processes involved in development and perfection of fuels and lubricants. The students study problems involved in the conditions under which these products are used and the tasks they are called upon to perform. Prerequisite: Second year standing or equivalent or approval of instructor.

Automotive Materials (2 Class Hrs/Wk) Term Units 2

This course is designed to give the student an understanding of the use of iron, steel, aluminum and light alloys, copper and its alloys, as well as plastics, fibers, rubber, and synthetics. Information concerning various body finishes is also covered.

Automotive Repair I (9 Laboratory Hrs/Wk) Term Units 3

This is a shop course in which the students can develop additional abilities and understanding through diagnosis and repair of operating automotive equipment. Conditions and practices similar to automotive repair shops in industry. It will include overhaul and maintenance procedures and practices on suspension systems, brakes, power trains, and engines. Students will develop skills in analyzing typical problems outlining job procedures, conservation of working time, and following up with actual overhaul of the defective units. Prerequisites: Second year standing or instructor's approval. Automotive Electricity II to be taken concurrently.

Automotive Repair II (9 Laboratory Hrs/Wk) Term Units 3

This course is a continuation of Automotive Repair I in further developing the students' abilities and knowledges. Skills developed in previous courses will be improved, with emphasis on automotive electricity and automatic transmission units. Diagnosis, testing, and overhauling of units will be practiced under industrial conditions. Prerequisite: Automotive Repair I or equivalent. Automatic Transmissions to be taken concurrently.

Automotive Repair III (9 Laboratory Hrs/Wk) Term Units 3

This course is a continuation of Automotive Repair II to further develop the students' abilities in diagnosis and repair of automotive units, with emphasis on power steering and tune-up procedures. Power accessories are serviced as time and availability permit. Prerequisite: Automotive Repair II or equivalent.

Automotive Repair Estimating (2 Class Hrs/Wk) Term Units 2

This course is designed to give the student an understanding of proper diagnosing and estimating of labor and material costs involved in the repair and service of automotive equipment. Emphasis will be on the use of typical manuals and price lists used in the industry. The students will make practical application of the theories studied in this course on units to be repaired in the shop. Prerequisite: Second year standing or equivalent.

Automotive Service Management (2 Class Hrs/Wk) Term Units 2

This course outlines the duties and responsibilities of the service manager. The students study methods of organizing service personnel, shop facilities, and an introduction to shop layout and building facilities. Appreciation of good relationship with customers, labor and management groups, and individuals is emphasized. Prerequisite: Second year standing or equivalent.

Automatic Transmissions (3 Class Hrs/Wk) Term Units 3

This course covers automatic transmission work, including principles of operation, trouble shooting and overhaul procedures on hydraulically operated transmissions, torque converters, and full couplings used with automatic transmissions common to the automotive field. Prerequisites: Applied Fluid Mechanics and Power Train or equivalent.

Automatic Transmissions Laboratory (3 Lab Hrs/Wk) Term Unit 1

This course is a practical application of the theory studied in Automatic Transmissions, using the various types of automatic transmissions found in automotive equipment. Prerequisite: Automatic Transmissions must be taken concurrently.

Front End Alignment (2 Class Hrs/Wk) Term Units 2

This course provides a detailed study of wheel alignment. Wheel alignment factors, equipment, and procedures are covered in detail. Wheel balance methods and machines are studied, as well as alignment troubles. Prerequisite: Automotive Chassis I or equivalent.

Front End Alignment Laboratory (3 Lab Hrs/Wk) Term Unit 1

This is a practical application of the theories studied in Front End Alignment. The student should become skilled in the manipulations of different styles of alignment equipment, as well as familiar with the front end systems of various makes of automobiles. Prerequisites: Automotive Chassis Laboratory I or equivalent. Front End Alignment must be taken concurrently.

Fuel Systems and Carburetion I (2 Class Hrs/Wk) Term Units 2

A course designed to give the students an understanding of the fundamental principles of carburetion, an overview of principles of engine fuel systems and fuels, operation and function of all types of fuel systems, and an understanding of the simple automotive carburetor. The student should acquire a basic knowledge of carburetor circuits. Prerequisites: Internal Combustion Engines I. Practical Physics II should be taken concurrently.

Fuel Systems and Carburetion Laboratory I (3 Lab Hrs/Wk) Term Unit 1

This course is designed to enable the student to develop skill and understanding in overhaul of all types of simple automotive fuel systems and carburetors, analyzing the function of each component and circuit. Diesel and LPG fuel systems are disassembled by the student for study of construction and function of components and reassembled. A companion course of Fuel Systems and Carburetion. Prerequisites: Internal Combustion Engines I; Fuel Systems and Carburetion I should be taken concurrently.

Fuel Systems and Carburetion II (2 Class Hrs/Wk) Term Units 2

An advanced course in techniques and procedures for overhaul and service of carburetors and carburetion accessories, including all types of single and multiple throat models. Principles of operation and special carburetion equipment, such as supercharger and automotive fuel injection, are studied. Diagnosis and testing procedures involving carburetion systems are covered. Prerequisites: Fuel Systems and Carburetion I.

Fuel Systems and Carburetion Lab II (3 Lab Hrs/Wk) Term Unit 1

Developing skills in service and overhaul of all types of single and multiple throat carburetion systems. Detailed servicing procedures on various types of carburetor circuits, using laboratory equipment. Basic trouble-shooting procedures are practiced on operating engine components. Prerequisites: Fuel Systems and Carburetion I. Fuel Systems and Carburetion II should be taken concurrently.

Internal Combustion Engines I (2 Class Hrs/Wk) Term Units 2

This course is designed to give the student an understanding of the principles of operation of various types of internal combustion engines. Students should acquire a knowledge of the construction and operation of the automotive engine, all components, and accessories. Prerequisites: Practical Physics I and Mathematics II should be taken concurrently.

Internal Combustion Engines Lab I (3 Lab Hrs/Wk) Term Unit 1

This is the practical application of Internal Combustion Engines I, consisting of basic service and overhaul techniques commonly used on automotive engines. Removal and replacement of all engine and accessory components, with a detailed study of the function of each part, is supervised by the instructor. Prerequisites: Practical Physics I, Mathematics II, and Internal Combustion Engines I should be taken concurrently.

Internal Combustion Engines II (2 Class Hrs/Wk) Term Units 2

This course is intended to provide the student with knowledge of overhaul methods, trouble shooting, general engine performance and testing, and service techniques covering valve, cylinder, and bearing systems. Prerequisites: Internal Combustion Engines I. Practical Physics II should be taken concurrently.

Internal Combustion Engines Lab II (6 Lab Hrs/Wk) Term Units 2

A shop course designed to provide experience in practical engine reconditioning. Diagnosis of troubles directly related to the engine and its performance is practiced with the use of test instruments. A companion course for Internal Combustion Engines II. Prerequisites: Practical Physics I, Internal Combustion Engines II. Practical Physics II should be taken concurrently.

Power Steering (Class, 3 Laboratory Hrs/Wk) Term Units 2

This is a course in practical power steering work covering trouble shooting, dismantling, inspection of parts, reassembly, and adjustments to cover principal repair procedure on those power steering units common to the automotive trade. Principles of operation will be studied in the classroom and applied directly to power steering units in the laboratory. Prerequisite: Second year standing or instructor's approval and Applied Fluid Mechanics.

Power Trains (2 Class Hrs/Wk) Term Units 2

This is a course covering all components of the power train, including clutch, standard and overdrive type transmissions, drive line, and final drive. These components will be studied in detail in the classroom, using lecture and visual aids, to determine the function and operation of each unit to form a basis for subsequent overhaul procedures. Prerequisite: Automotive Chassis II or equivalent.

Power Trains Laboratory (6 Lab Hrs/Wk) Term Units 2

This course is designed for building skill and utilizing practical work covering overhaul and trouble shooting all units of the automotive power train. All work is performed on laboratory units in conjunction with concurrent attendance in the Power Trains course. Prerequisite: Power Trains should be taken concurrently.

Tune-Up and Diagnosis (2 Class Hrs/Wk) Term Units 2

This course is designed to give students the ability to recognize and diagnosis malfunctions in the automotive engine and its accessory systems. Advanced methods of testing electrical and carburetion systems are studied. The students should develop the ability to analyze the operation of all engine accessories directly to engine performance. Prerequisites: Second year standing and Automotive Electricity II or equivalent.

Tune-Up and Diagnosis Laboratory (6 Lab Hrs/Wk) Term Units 2

This course is a practical application of the theory studied in the Tune-Up and Diagnosis course. Live automotive or laboratory equipment will be used by students in diagnosing and correcting troubles. Various types of tune-up equipment are used, enabling the students to develop skill in their use. Prerequisites: Second year standing. Tune-Up and Diagnosis should be taken concurrently.

Welding I (2 Class, 6 Laboratory Hrs/Wk) Term Units 4

This course may be taken in two terms of 1 class and 3 laboratory hours per week as Welding I-A (2 Term Units) and Welding I-B (2 Term Units). Setup and operation of oxy-acetylene and electric arc welding equipment. Demonstrations and practice in welding, brazing, and soldering ferrous and non-ferrous metals and their alloys. Various types of welds are made and tested. Technical information is correlated with actual practice to provide the student with an understanding of the composition of the various metals and methods of fabrication used in construction, maintenance, and repair industries.

CIVIL AND STRUCTURAL ENGINEERING TECHNOLOGY

- Applied Mechanics I (2 Class Hrs/Wk) Term Units 2**
 The course consists of a study of energy at rest (equilibrium). This includes resolution of forces, equilibrants of forces in one plane, simple machines, and equilibrants of nonconcurrent forces. Time is provided for demonstrations and experiments to help clarify the principles and procedures covered. Prerequisite: Technical Mathematics II and Applied Physics II or equivalent.
- Applied Mechanics II (2 Class Hrs/Wk) Term Units 2**
 A study of energy in motion. The course covers the principles of friction, centroids, inertial characteristics, motion and velocity, force and acceleration, curvilinear motion and rotation, and advanced concepts of work, power and energy. Time is provided for demonstrations and experiments to help clarify the principles and procedures covered. Prerequisite: Applied Mechanics I or equivalent.
- Concrete Construction and Design (5 Class Hrs/Wk) Term Units 4**
 Theory of designing; retaining walls, combined irregular and pile footings; combined direct stress and bending; short span concrete bridges; ultimate strength design; structural elements of combined steels and concrete. Prerequisite: Applied Mechanics I and Technical Mathematics III or equivalent.
- Construction Codes (2 Class Hrs/Wk) Term Units 2**
 A study of the required practices as stated in local, state and federal construction codes.
- Construction Estimating (2 Class Hrs/Wk) Term Units 2**
 The student is helped to develop skills in estimating the amount and cost of materials required, and labor cost involved in various types of construction. An opportunity is provided for the application of these skills by requiring the student to make estimates of material and labor quantities and costs for representative type of construction. Prerequisite: Fifth term standing or permission of instructor.
- Contracts and Specifications (3 Class Hrs/Wk) Term Units 3**
 This is a course designed to acquaint the student with common usage and practice in the preparation of contracts and attendant specifications. Examination of existing contracts covering current jobs will be used whenever possible with practical problems designed to teach the application of theory learned. Prerequisite: Second year standing or approval of instructor. Technical Report Writing or equivalent is recommended.
- Foundations of Structures (2 Class Hrs/Wk) Term Units 2**
 A study of various materials, devices, and designs used in structural foundations such as footings, cofferdams, caissons, abutments, piers, and underpinning. Prerequisite: Applied Mechanics III and Technical Mathematics III or equivalent.
- Hydraulics I (3 Class Hrs/Wk) Term Units 3**
 The first course in the study of hydraulics covers the fundamental properties of fluids, principles of hydrostatic pressure—including Pascal's Law, the hydro-static paradox, the Archimede's principle—measurement by manometer, the measurement of fluid properties. The relationship of hydrostatic pressure and center of gravity and the effect of hydrostatic pressure exerted against plane surfaces will also be discussed. Time is provided for demonstrations and experiments to help clarify the principles and procedures covered. Prerequisite: Applied Physics II and Technical Mathematics III or equivalent.
- Hydraulics II (3 Class Hrs/Wk) Term Units 3**
 The second course in hydraulics consists of the fundamentals of fluid flow, Bernoulli's theorem, flow profiles, stream restrictions (such as weirs, flumes, metering runs), distribution of energy in the stream, flow through pipe, Reynold's Law, Newton's Laws of hydrodynamics, vector representation, hydraulic similitude, and dimensional analysis. Time is provided for demonstration and experiments to help clarify the principles and procedures covered. Prerequisite: Hydraulics I or equivalent.
- Mapping and Computing I (4 Lab Hrs/Wk) Term Units 2**
 Advanced map plotting, earthwork computation, field surveying from maps; legal description; subdivision planning and simulated problems of construction are used. Prerequisite: Plane Surveying III and Technical Mathematics III or equivalent.

- Mapping and Computing II (6 Lab Hrs/Wk) Term Units 2**
Advanced earthwork computation; office procedure; government surveys; surveying laws; professional practices. Simulated problems are used. Prerequisite: Mapping and Computing I or equivalent.
- Materials of Construction (2 Class Hrs/Wk) Term Units 2**
Comparisons of various materials, their source, method of manufacture, physical and chemical properties; grading under a variety of conditions; soil and terrain as encountered in construction work.
- Plane Surveying I (1 Class, 4 Lab Hrs/Wk) Term Units 3**
A beginning course in surveying techniques designed to give the student an understanding of the fundamentals of chaining and leveling, care and adjustment of surveying instruments and office procedures. Provision is made by appropriate field work for practical application of the techniques learned. Prerequisite: Mathematics II or equivalent.
- Plane Surveying II (1 Class, 4 Lab Hrs/Wk) Term Units 3**
A continuation of Plane Surveying I designed to familiarize students completely with the engineer's transit. Uses of the transit are considered and practical problems put the theory into practice. Prerequisite: Technical Mathematics II and Plane Surveying I or equivalent. Technical Mathematics II may be taken concurrently.
- Soil Mechanics I (2 Class, 3 Lab Hrs/Wk) Term Units 3**
Physical and mechanical properties of soil; specific gravity, grain size distribution, plasticity, shrinkage, permeability, compressibility, consolidation, and shear characteristics. Analysis with respect to stability of slopes, earth pressures, stress distribution, and settlement carrying capacity. Prerequisite: Second year standing or approval of instructor.
- Strength of Materials I (2 Class Hrs/Wk) Term Units 2**
A study of the stresses and strains that occur in bodies when subjected to tensile, compressive and shearing forces, including the common theory of beams. The distribution and magnitude of stresses are examined in welded and riveted joints, thin wall cylinders, torsional members and beams. Practice problems emphasize the materials studied. Prerequisite: Applied Mechanics II and Technical Mathematics III or equivalent.
- Strength of Materials Laboratory I (3 Lab Hrs/Wk) Term Unit 1**
The course covers: Testing of principal construction materials; the major testing machines and their calibration. Prerequisite: Must be taken concurrently with strength of Materials I.
- Strength of Materials II (2 Class, 3 Lab Hrs/Wk) Term Units 3**
This is a continuation of Strength of Materials I. In addition to advanced theory in the area of materials characteristics, field trips will be taken to enable the student to observe use of different materials in actual installations. A continuation of material testing is included in the laboratory. Prerequisite: Strength of Materials I or equivalent.
- Structural Analysis and Design I (1 Class, 3 Lab Hrs/Wk) Term Units 2**
The course deals with the determination of stresses induced by loads on structures of wood, steel, concrete, selections of appropriate structural members and suitable connections; loading conditions causing compression, tension, shear, torsion, and bending; practical design procedures, relating to various structural members, beams, girders, columns and footings. Prerequisite: Applied Mechanics II and Technical Mathematics III or equivalent.
- Structural Drafting (6 Lab Hrs/Wk) Term Units 2**
An advanced course emphasizing civil and structural drafting procedures. It includes the function and design of; the general plan, stress diagrams, shop drawings, foundation or masonry plans, erection diagrams, falsework plans, and sheet metal layout. Also, bill of materials, rivet lists, drawing indexes, design considerations, and strength of joints will be covered. The student will become acquainted with structural shapes, and principles of bridge building, dam and earthwork constructions. Prerequisites: Drafting II and Applied Physics I or equivalent.
- Surveying Computations (1 Class, 4 Lab Hrs/Wk) Term Units 3**
A review of trigonometry and logarithms with application to surveying. The course includes: Computing machines, planimeters in application to irregular areas, calculations relating to traverses, subdivision of land and stadia. Survey plotting is also covered. Prerequisites: Plane Surveying I and II and Technical Mathematics II.

Technical Mathematics IV (3 Class Hrs/Wk) Term Units 3

This is an introduction to differential and integral calculus. It is an applied course covering graphical methods, differentiation, and integration. Prerequisite: Technical Mathematics III.

Timber and Steel Construction (3 Class, 3 Lab Hrs/Wk) Term Units 4

Elementary design principles of steel and wooden structures. The course includes fasteners and connectors, and physical and chemical characteristics of materials. Prerequisites: Structural Analysis and Design I or equivalent.

ELECTRONICS TECHNOLOGY**Advanced Electronic Circuits (2 Class, 3 Lab Hrs/Wk) Term Units 3**

A course designed to simulate problems in industry. Covers six electronic areas including computers, communications, industrial controls, electronics, microwaves, and radar. Class meetings involve overview of each area and study of current problems and opportunities. Lab involves construction, testing, and reporting performances of assigned circuits. Prerequisites: Sixth term standing or approval of department head.

Amplifier Circuits and Design (3 Class Hrs/Wk) Term Units 3

A continuation of oscillator circuits and design. Covers the application of vacuum tubes and transistors in amplifier circuits. Analyzes the vacuum tube amplifier into its basic and equivalent circuit. Includes load-lines, distortion, and pentode and beam-power tube consideration. Analyzes transistor amplifiers in various circuit configurations and covers biasing methods. Also includes transformer analysis, transformer-coupled amplifiers, and R-C coupled amplifiers. Special amplifiers using vacuum tubes and transistors are studied. Includes push-pull circuit analysis and phase inversion, Class-C amplifier analysis, and high-frequency amplifiers. Prerequisite: Fifth term standing or approval of department head.

Amplifier Circuits and Design Lab (6 Lab Hrs/Wk) Term Units 2

The application of theory studied in Amplifier Circuits and Design. Involves the design, construction, and testing of various types of vacuum tube and transistor amplifiers employing direct, transformer, and R-C coupling. Several push-pull circuits utilizing different types of phase inverters are built and tested and the principle of complementary symmetry is demonstrated in the operation of transistors in push-pull. Class-C power amplifiers are constructed and adjusted for proper operation and different types of high-frequency amplifiers are also built and tested. Prerequisites: Fifth term standing or approval of department head.

Automation Systems (3 Class Hrs/Wk) Term Units 3

This course is devoted to the study of the techniques of automation. Introduces the basic concepts of automation and covers automatic controls, pneumatic control devices, hydraulic control devices, and electronic and electric control devices. The application of automation is studied from examples in the areas of materials handling and assembling, production of metals, metal casting processes, mechanical working of metals, pressworking of metals, metal cutting operations, heat treating of metals, metal joining operations, and inspection and quality control. Prerequisite: Sixth term standing or approval of department head.

Electrical Circuits (3 Class Hrs/Wk) Term Units 3

A continuation of electrical theory with an emphasis on the analysis of the characteristics of complex waveform circuits. Covers passive filter networks, bi-directional waveforms, complex waveform analysis of series R-C circuits, waveform analysis of series R-L circuits, and waveform analysis of combined networks. Prerequisite: Third term standing or approval of department head.

Electrical Circuits Laboratory (6 Lab Hrs/Wk) Term Units 2

Practical application of the theory studied in Electrical Circuits. Involves the construction and testing of passive filter networks including the constant k , the series m -derived, and the shunt m -derived types. Response of simple circuits involving diodes, resistance, inductance, and capacitance to square-wave, triangular-wave, saw-tooth-wave, and rectangular-wave pulses is analyzed. Various R-L-C combinations are designed and tested for low and high-frequency response, rise and fall times are measured, and integrator and differentiator circuits are constructed and analyzed. Prerequisites: Third term standing or approval of department head.

Electrical Drafting (4 Lab Hrs/Wk)**Term Units 2**

This course covers the techniques required for the electrical and electronic fields. It includes charts, graphs, chassis layout, schematic and pictorial wiring diagrams, routing diagrams (power distribution, lighting, conduit and ducts, underground wiring and ducts), and location drawings. Standard Schematics such as motor starters, annunciators, AM receivers, and other typical industrial circuits will be covered. ASA and EEIA approved symbols will be used. Prerequisites: Drafting I or equivalent.

Electrical Mathematics (3 Class Hrs/Wk)**Term Units 3**

An applied course in mathematics for electronic engineering technicians. Includes an introduction to calculus, covers graphical methods, differentiation, and integrates with direct application to electronic and electrical circuits. Prerequisites: Technical Mathematics III or equivalent.

Electrical Theory (DC) (3 Class, 2 Lab Hrs/Wk)**Term Units 4**

Presents an introduction to electronics on the basis of direct currents with an emphasis on contemporary techniques as a supplement to basic concepts. Covers the principles of electron physics, unidirectional current and factors affecting its magnitude, series-circuit analysis, parallel-circuit analysis, series-parallel circuit analysis, complex unidirectional-current circuits, the phenomena of magnetism and electro-magnetism, inductance and its characteristics of capacitance, and electrical measurement instruments. Prerequisites: High school algebra or equivalent.

Electrical Theory (AC) 3 Class, 2 Lab Hrs/Wk)**Term Units 4**

A continuation of electrical theory on the basis of alternating currents with an emphasis on contemporary techniques as a supplement to basic concepts. Covers the analysis of the sine wave, series circuits with a sine wave input, series resonance, parallel circuits with a sine wave input, parallel resonance, the non-resonant and the resonant transformer and attenuators and pads. Prerequisites: Second term standing or approval of the department head.

Electronic Data Processing (3 Class Hrs/Wk)**Term Units 3**

An introduction to the principles of electronic digital computers. Covers the application and programming of computers in business, industrial, and scientific organizations. Reviews the decimal and binary numbering systems as they relate to computers; analyzes computer circuitry with emphasis on transistor and diode switching circuits; presents the fundamentals of logical design with an introduction to Boolean Algebra and the use of block diagrams; analyzes the major divisions of a digital computer in terms of the arithmetic element, the memory element, input and output devices, and the control element. Prerequisites: Fifth term standing or approval of department head.

Industrial Electronics I (2 Class, 3 Lab Hrs/Wk)**Term Units 3**

An introductory class and laboratory course covering the principles and applications of electronics in industry. Involves a review of the principles of D-C motors and generators, and covers D-C motor controls with emphasis on electronic controls. Also covers relays and time-relay circuits; industrial photo-electric control and typical applications; electronic power-control with saturable-core reactors and the amplidyne; and the electronic control of welding. Prerequisites: Fifth term standing or approval of department head.

Industrial Electronics II (3 Class Hrs/Wk)**Term Units 3**

A continuation of industrial electronics with emphasis on A-C principles and applications in industry. Covers alternating current characteristics, generation of A-C, vector diagram analysis, properties of electric circuits, and graphical representation of resistance, reactance and impedance. Single-phase circuits are analyzed in terms of power factor, and three-phase wye and delta combinations are studied. Also includes transformers and regulators, alternating-current generators, polyphase induction motors, synchronous motors and self-synchronous devices, single-phase motors, circuit-protective and switching equipment, electrical instruments and electrical measurement. Prerequisites: Sixth term standing or approval of department head.

Industrial Electronics Laboratory II (3 Lab Hrs/Wk)**Term Unit 1**

The practical application of the theory studied in Industrial Electronics II. Alternating-current theory and principles are verified by the construction and testing of circuits involving series resistance, inductance, and capacitance. Phase-angle, reactance, and impedance are calculated and checked, and vector diagrams are drawn to show current and voltage relationships. Three-phase transformers are wired in various delta-wye combinations and output voltages are calculated and verified. Small transformers are designed to deliver specified outputs. Alternating-current generators, poly-phase induction motors, synchronous motors, selsyn transmitters and receivers, and single-phase motors of all types are disassembled and their construction studied. Various circuit-protective and switching equipment are con-

nected from a test panel to motors and tested. All types of electrical measuring equipment are tested by application and a D-C, A-C vacuum tube voltmeter is constructed and tested. Prerequisites: Sixth term standing or approval of department head.

Industrial Television I (2 Class, 3 Lab Hrs/Wk) Term Units 3

A theory and lab course designed to cover television systems, scanning and synchronization, composite video signal, frequency-modulation, television receivers and monitors, picture tubes, power supplies, video amplification, practical design of video amplifiers, brightness-control and d-c reinsertion video dection, automatic gain-control and sync-separation, and deflection oscillator and amplifier circuits. Prerequisites: Fifth term standing or approval of department head.

Industrial Television II (1 Class, 2 Lab Hrs/Wk) Term Unit 1

A theory and labor course covering closed-circuit television systems, picture transmission, scanning process and the composite signal, camera tubes and circuits, camera video amplifier systems, camera sync and deflection generators, and several types of commercial industrial cameras with emphasis on circuit anlysis, set-up procedure, operation and adjustment. Prerequisites: Sixth term standing or approval of department head.

Microwaves (2 Class, 2 Lab Hrs/Wk) Term Units 3

A theory and laboratory course designed as an introduction to microwaves. Begins with the study of ultra-high frequencies to develop a good foundation for the development of waveguides and microwave circuitry. Covers UHF transmission lines, the application of quarter-wave lines, matching stubs, and standing-wave measurements. Transmission of microwave energy through waveguides is analyzed and the TE and TM modes of transmission are studied. Various types of waveguide plumbing including choke joints, directional couplers, flap-attenuators, horns, guide partitions, and flexible waveguides are studied. Includes also cavity resonators, high-frequency oscillators, magnetron and klystron oscillators, the resnatron, traveling wave tubes, and other high-frequency tubes and devicas. Various types of UHF and microwave antennas and receiver circuitry are included. Microwave measurements involve the use of thermocouple voltmeters, bolometers, cavity wavemeters, slotted lines, and directional couplers. Prerequisites: Sixth term standing or approval of department head.

Oscillator Circuits and Design (2 Class Hrs/Wk) Term Units 2

A continuation of vacuum tube and transistor analysis. Involves the study of single-phase rectifier circuits and filters with calculation of the ripple-factor. Introduces the fundamental feedback equation and covers positive and negative feedback. Various types of feedback oscillators including the Hartley and Colpitts are analyzed. Covers negative-resistance oscillators, miscellaneous sine-wave oscillators, non-sinusoidal oscillators including various multivibrator circuits. The principles of AM and FM modulation and detection are studied and the theory and application of the cathode-ray oscilloscope is included. Prerequisites: Fourth term standing or approval of department head.

Oscillator Circuits and Design Lab (6 Lab Hrs/Wk) Term Units 2

Practical application of the theory studied in Oscillator Circuits and Design. Involves the testing of half-wave and full-wave single-phase rectifier circuits and measurement of the D-C output and ripple-voltage. Includes the construction and testing of Hartley, Colpitts, Armstrong, elcton-coupled, crystal, tri-tet, phase-shift, Wain-bridge, and other types of feedback and negative-resistance oscillators. Grid, cathode, screen and plate AM modulation are tested and checked for percentage by means of an oscilloscope. The reactance-tube modulator is constructed and tested for FM modulation. The cathode-ray oscilloscope circuits are analyzed. Frequency-comparisons are made with 'Lissajous' patterns and Z-axis modulation. Applications and proper techniques for use of the oscilloscope are also included. Prerequisites: Fourth term standing or approval of department head.

Servo Systems (1 Class, 3 Lab Hrs/Wk) Term Units 2

Presents the principles of servo and data transmission systems with emphasis on fundamentals. Covers control systems and servo-mechanisms, elementary forms of control systems, servo systems, synchros, servo element, electronic and magnetic amplifier, direct current servomotors, performance improvers, methods for servos and measurement, and examples of servos and servo systems. Prerequisites: Fourth term standing or approval of department head.

Vacuum Tube and Transistor Analysis (3 Class Hrs/Wk) Term Units 3

An introductory course to the anlysis of the electrical characteristics of vacuum tubes and transistors. Includes a review of electron physics with emphasis on electron devices including hot and cold-cathode vacuum and gas diodes and semi-conductor diodes; three-ament vacuum tubes and transistors; multi-grid tubes including tetrodes, pentodes, and beam-power tubes; special transistors and diodes.

includes a review of auxiliary electronic components including potentiometers, transformers, and relays, and a review of several electronic circuits involving series and parallel resonance, bandwidth, and coupled-circuit theory. Also covers elementary filter design, harmonic analysis, network theorems, and four-terminal networks. Prerequisites: Third term standing or approval of department head.

Vacuum Tube & Transistor Analysis Lab (3 Lab Hrs/Wk) Term Unit 1

Practical application of the theory studied in Vacuum Tubes and Transistor Analysis. Involves the disassembling of diodes, triodes, terodes, pentodes, and multigrid tubes, and transistors to observe their construction. Also includes the plotting of the electrical characteristic curves of vacuum tubes and transistors. The plotted curves are used to determine the transconductance, the amplification factor, and the plate-resistance of vacuum tubes and the current-gain of junction transistors in various circuit configurations. The operation of the Thyatron is tested with A-C and D-C plate voltages, using a phase-shifter for grid-control. Includes the testing of Zener and double-based diodes and special transistors such as the PNP. Transformer-coupled theory is verified by testing out under-coupled, optimum-coupled, and over-coupled coils. Gain of amplifiers is computed in decibels and auxiliary audio elements such as microphones, speakers, and tape-recorders are reviewed. Prerequisites: Third term standing or approval of department head.

Wave Generation and Shaping (2 Class, 3 Lab Hrs/Wk) Term Units 3

A class and laboratory course designed as an introduction to pulse techniques. Begins with an introduction to pulses, giving their historical development, typical applications, nomenclature, importance of pulse shapes, and responses of frequency-selective circuits to pulses. Includes the theory and operation of limiter and clipper circuits, differentiating and integrating circuits, and D-C restoration. Various multi-vibrator circuits, synchronization circuits, and applications of multivibrators are studied. Also covers blocking oscillators of several types, their principles of operation, and application. Prerequisites: Fourth term standing or approval of department head.

GENERAL DRAFTING

Advanced Drafting Problems (3 Class Hrs/Wk) Term Units 3

Introduction to practical descriptive geometry used by the draftsman. Theory of auxiliary views, true length, shape, angle, and point of intersection developed from point-line-plane through the use of revolution. Introduction to graphical solution of simple vector problems. Emphasis on application of principles to problems commonly encountered by draftsmen. Prerequisite: Drafting II-A and Mathematics III.

Intro. to Fabrication Practices (1 Class, 6 Lab Hrs/Wk) Term Units 3

An introductory course of observation and drafting. Students will be assigned drawing projects and will normally view the physical object of the drawing in order to develop their visualization of the subject on the drafting board. Frequent field trips should be made to observe modern methods of manufacturing, casting, forging, construction, and assembly at local industry. Emphasis will be placed on materials, methods of fabrication, glossary, scaling for drawing, and visualization of fabricated objects or assemblies. Prerequisite: Drafting I-A may be taken concurrently.

Mechanical Drafting (4 Laboratory Hrs/Wk) Term Units 2

An advanced course emphasizing mechanical design. It includes sketching, cam and gear layout, isometric drawings, welding drawings, tolerances and allowances, and tool jig drawings. Simplified drawing techniques will be covered and general shop procedures will be discussed. Emphasis will be placed on the industrial requirements of drawings. Prerequisite: Third term standing or approval of department head.

Project Drafting I (9 Laboratory Hrs/Wk) Term Units 3

This course emphasizes working conditions of the industrial drafting room. Students will be assigned projects that will include one or more drawings requiring all of the skills previously acquired. Instruction will include the methods for detail layout, reading specifications, common materials of fabrication, checking and back-checking drawings, and material take-offs. Discussion will cover the administration of the drafting room, issuing drawings, and revisions. Speed and accuracy will be considered of paramount importance. Prerequisite: Drafting II-A which may be taken concurrently.

Project Drafting II (8 Laboratory Hrs/Wk)**Term Units 3**

A continuation of the emphasis on industrial working conditions. Students will be assigned projects (requiring use of all previously learned skills and principles) that will familiarize them with many of the specialized fields of drafting. Instruction will include the basic methods for layout and detailing assemblies and sub-assemblies, reading specifications, common materials of fabrication, checking and back-checking drawings, and materials take-offs. Drafting room standards of various local industries will be discussed. Speed and accuracy will be considered of paramount importance. Prerequisite: Project Drafting I or equivalent.

PRACTICAL NURSING**Advanced Nursing Procedures****Term Unit 3**

A course designed to broaden the student's knowledge and understanding of the more complex nursing skills and principles in total patient care.

Anatomy and Physiology**Term Unit 5**

A study to assist the student in gaining an understanding and appreciation for the normal structure and function of the human body.

Communicable Disease**Term Unit 1**

From this learning experience the student will become aware of the common communicable diseases, their clinical picture and treatment. With special emphasis on prevention of disease and the effect of disease on the community.

First Aid and Disaster Nursing**Term Unit 1**

Includes a standard beginners Red Cross Course and prepares the individual to assist as part of a total team in the case of either natural or man made disaster.

Fundamentals of Nursing**Term Units 3**

An introduction to the basic nursing principles and skills considered necessary to perform good, individual nursing care for the patient in either the home or hospital environment.

Introduction to Nursing**Term Units 2**

An orientation of the student to the role of the practical nurse with special emphasis on: appearance, attitude, communications, legal aspects, professional organizations and literature.

Maternal and Child Care**Term Units 7**

A course to assist the student in acquiring an understanding of:
 a. the normal and abnormal phases of pregnancy, labor and delivery, puerperium.
 b. the basic nursing of the mother and newborn child.
 c. the normal growth, development, reaction to illness, medical and surgical conditions and principles of nursing care specific to children.

Medical and Surgical Nursing**Term Units 7**

A study of the basic principles associated with the nursing care of patients with common medical and surgical conditions.

Nutrition and Diet Therapy**Term Units 3**

A study of the classification, requirements and preparation of food for healthy individuals in different stages of development and in different occupations; includes time in assisting the student in adapting the kinds and preparation of foods to meet nutritional needs of the ill person.

Pharmacology**Term Units 3**

A study of the classification, purposes, dosage, reaction, special precautions and method of administration of the basic drugs.

Professional Adjustments**Term Unit 1**

This course will assist the student in making the transition from student to LPN.

Psychiatric Nursing and Mental Hygiene**Term Units 2**

Study of the basic psychiatric nursing principles, the available community assistance and the responsibility of the LPN in the total care of the mentally disturbed person. Will include a discussion of the causes, diagnosis, treatment and prevention of mental illness; promotion of mental health for the student, patient and general public.

Ward Conference**Term Units 2**

A weekly student presented, patient centered discussion with special emphasis on nursing care of the patient.

BUSINESS EDUCATION

Donald R. Moffitt, B.S. in Commerce, Chairman

Business is the activity through which our society provides itself with economic goods and services.

Man, in his pursuit of the better life, must sustain himself to this end. The great majority of occupational opportunities are to be found in the business field. Whatever your interest in the field may be, the opportunities are almost unlimited.

It is the purpose of the division of business to assist the student to prepare himself to take advantage of the opportunities that are available to him. A full-time Day School is scheduled. Certain courses will also be offered in the Evening School.

ENTRANCE REQUIREMENTS

The entrance requirements for admission to the Business Division Day School are the same as those of the College. No requirements for admission to evening business courses except minimum age and ability to do the work.

EVENING BUSINESS COURSES

Certain business subjects are offered in the evening school. These may, in some cases, be taken for credit toward a Business Certificate but only if the student has made application and been accepted as a curricular student at the time of registration.

GENERAL REQUIREMENTS FOR CERTIFICATE

1. Minimum of 48 units of specified courses (see curriculums)
2. Grade point average minimum of 2.00 (C average)
3. Must attend S.W.O.C. at least two terms (including the last term) before certificate is awarded, and must have completed 24 units of work at S.W.O.C.

CURRICULUM

A diploma will be awarded to those students who complete one of the following one year (3 term) programs.

General Office Curriculum

First Term	Units	Second Term	Units
Business English I	3	Business English II	3
Office Machines I	3	Office Machines II	3
Office Procedures I	3	Office Procedures II	3
Typing I	3	Typing II	3
Bookkeeping I	4	Bookkeeping II	4
TOTAL	16	TOTAL	16
		Third Term	Units
		Business English III	3
		Office Machines III	3
		Office Procedures III	3
		Typing III	3
		Accounting I	4
		TOTAL	16

Stenographic Curriculum

First Term	Units	Second Term	Units
Business English I	3	Business English II	3
Office Machines I	3	Office Machines II	3
Office Procedures I	3	Office Procedures II	3
Typing I	3	Typing II	3
Shorthand I	4	Shorthand II	4
TOTAL		TOTAL	
16		16	
		Third Term	Units
		Business English III	3
		Office Machines III	3
		Office Procedures III	3
		Typing III	3
		Shorthand III	4
		TOTAL	
		16	

Accounting I 2.550 (3 Class, 3 Lab Hrs/Wk)**Term Units 4**

This has two main purposes. Payroll accounting is the first concern. The student is taken from the initial hiring of an employee through government reports and requirements. Federal income tax, social security, unemployment insurance, and other payroll and employee accounting problems are covered. The second purpose is to cover most prevalent accounting problems not covered in Bookkeeping I and II. Handling accruals and pre-payments, distribution of sales and expenses, consignments, and special accounting problems encountered locally. Prerequisites: Bookkeeping I or equivalent.

Bookkeeping I 2.531R (3 Class, 3 Lab Hrs/Wk)**Term Units 4**

Bookkeeping I is a beginning course with the balance sheet approach. Extreme importance is given to basics to insure that each student has grasped beginning bookkeeping principles. A practice set is introduced. Emphasis is on actual problems. Attention is given to statements, accounts, ledgers, journals, banking procedures, purchases and sales, and general records.

Bookkeeping II 2.533R (3 Class, 3 Lab Hrs/Wk)**Term Units 4**

A continuation of Bookkeeping I, payroll, office routine; notes receivable and payable; periodic adjustments; costing and inventory; working sheet; adjusting, closing and readjusting entries; interpretation of financial statements; and types of business ownership are offered which will enable the student to step from the classroom into the business office. Practice set is concluded. Prerequisites: Bookkeeping I or equivalent.

Business English I 1.120R (3 Class Hrs/Wk)**Term Units 3**

Business English I is aimed at building the student's vocabulary, spelling ability, usage of words, and provides a thorough review of the principles of grammar while applying them in sentences. Written and oral communications as required in business situations are emphasized.

Business English I 1.120R-R (The above plus 2 Class Hrs/Wk)

Prerequisites: High school grammar or equivalent.

Business English II 1.122R (3 Class Hrs/Wk)**Term Units 3**

This course is intended to follow Business English I and will include continuation of the review of grammar, study of vocabulary building, spelling, punctuation, and penmanship. Writing of business letters will be introduced. Speech and the informal personal communications studied. Practical application in the writing of business letters will be stressed.

Business English II 1.122R-R (The above plus 2 Class Hrs/Wk)

Prerequisites: Business English I or equivalent.

Business English III 1.124R (3 Class Hrs/Wk)**Term Units 3**

In this term grammar, punctuation, spelling, penmanship, and personal communication will receive specialized coverage. Emphasis will be given to special types of business letters, forms, wire communications, and reports.

Business English III 1.124R-R (The above plus 2 Class Hrs/Wk)

Prerequisites: Business English II or equivalent.

Office Machines I 2.519R (2 Class, 2 Lab Hrs/Wk)**Term Units 3**

This course combines basic mathematics with instruction in the applications of office machines to bookkeeping and other office problems. A review of mathematics with particular emphasis on shortcuts and basic functions in the use of decimals, fractions, percentage and interest is covered in the early part of the term. The general functions of office machines and understanding their application in business and the acquiring of reasonable skills in their use is a major goal.

Office Machines II 2.521R (2 Class, 2 Lab Hrs/Wk)**Term Units 3**

This is a continuation of Office Machines I with attention given to basic mathematics and the use of machines in solving bookkeeping problems. Particular attention is given to stenographic dictating and transcribing machines. Practice in planning layouts and cutting stencils and masters for use in duplicating copy and the use of photographic and electronic reproductive devices is covered. Students study the use of letter guides, screening plates, and correction and patching devices. Prerequisites: Office Machines I or equivalent.

Office Machines III 2.523R (2 Class, 2 Lab Hrs/Wk)**Term Units 3**

This term emphasizes mathematical machines found in larger offices such as the full-key board adding-listing machine and the key-driven calculator. During the three terms of office machines, students will be rotated to receive practice on ten-key adding machines, full-keyboard adding-listing machines, key-driven calculator, and posting machines. Prerequisites: Office Machines II or equivalent.

Office Procedures I 2.512 (2 Class, 4 Lab Hrs/Wk)**Term Units 3**

First emphasis will be put on the student's entry into the business world. The general purpose will be to acquaint the student with personal grooming, conduct in the office and contact with the public. At all times the class will simulate an office situation. A thorough all-inclusive instruction in filing will complete the term.

Office Procedures II 2.514 (2 Class, 4 Lab Hrs/Wk)**Term Units 3**

General office duties are introduced. These include handling of office mail and freight shipments. Emphasis on telephone technique and services is stressed. Actual practice in records and report making including visual reports is given. Techniques in specific office duties are introduced such as receptionist, cashiering, credit office and sales office.

Office Procedures III 2.516 (2 Class, 4 Lab Hrs/Wk)**Term Units 3**

This is a continuation of Office Procedures II with additional emphasis on specific preparation for on-the-job training. The student will be briefly introduced to economic factors that affect the business world.

Shorthand I 2.541 (2 Class, 4 Lab Hrs/Wk)**Term Units 4**

This is a beginning course in Gregg Simplified Shorthand. It is a study of simplified principles which would enable the student to take simple dictation and transcribe it in the early part of the course; and while rhythm and good penmanship in forming shorthand characters are stressed more than speed, the student should progress to a satisfactory speed. Prerequisite: No previous shorthand experience. Business English I or equivalent. Business English I may be taken concurrently.

Shorthand II 2.543 (2 Class, 4 Lab Hrs/Wk)**Term Units 4**

This course is a continuation of Shorthand I. It deals principally with special and abbreviated forms, punctuation, and compound words, in conjunction with writing and transcribing exercises to build the student's speed in dictation and transcription. Prerequisites: Shorthand I and Business English I and II or equivalent. Business English II may be taken concurrently.

Shorthand III 2.545 (2 Class, 4 Lab Hrs/Wk)**Term Units 4**

This course is for the student who has learned the principles of shorthand covered in Shorthand I and II. It includes advanced vocabulary, phrase building, and word building principles. Practice included should develop the student's speed to acceptable levels in both dictation and transcription. Prerequisite: Shorthand II or equivalent.

Shorthand IV (Advanced) 2.547 (2 Class, 4 Lab Hrs/Wk)**Term Units 4**

An advanced course designed to train the student for stenographic work on a production basis while allowing specialization in professional and industrial fields such as legal, engineering, medical, etc. Dictation of unfamiliar matter should be taken at levels accepted by business. Prerequisite: Shorthand III or equivalent.

Typing I 2.501 (2 Class, 4 Lab Hrs/Wk) Term Units 3

This is a beginning course in typing for those with no previous typing instruction. It covers the parts and construction of the more common makes of typewriters, learning of the keyboard, and the basic techniques of the touch system. The student should develop rhythm in his movements and attain an acceptable typing speed. Prerequisite: No previous typing experience. Business English I should be taken concurrently.

Typing II 2.503 (2 Class, 4 Lab Hrs/Wk) Term Units 3

This is a continuation of Typing I with emphasis on increasing the typing speed to an acceptable level. Prerequisite: Typing I and Business English II or equivalent. Business English II may be taken concurrently.

Typing III 2.505 (2 Class, 4 Lab Hrs/Wk) Term Units 3

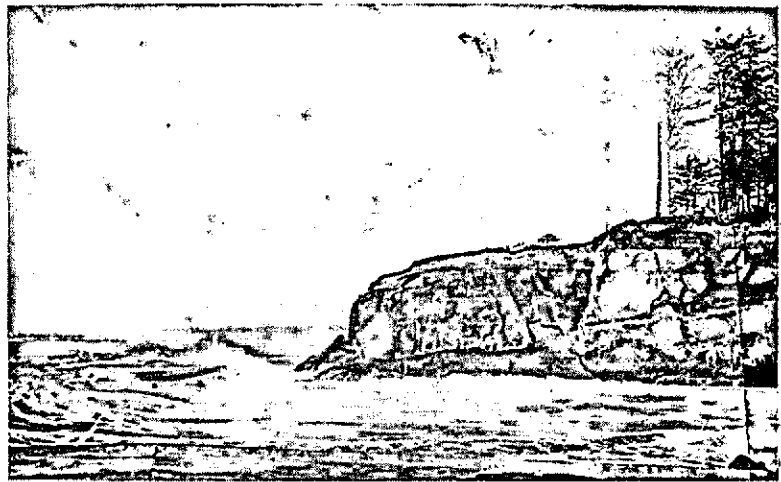
An intermediate course including corrective and acceleration drills to develop an acceptable typing speed. The student receives instruction in the various business papers encountered in the general office. Prerequisite: Typing II or equivalent.

Typing IV 2.507 (2 Class, 4 Lab Hrs/Wk) Term Units 3

An advanced course intended to increase the typing speed to an acceptable minimum while introducing the student to various types of specialized applications in industrial and professional fields such as legal, engineering, medical, sales and public relations communications, etc. Prerequisites: Typing III, Business English II, and Office Machines I or equivalent.

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